Abstract

Although older Canadians constitute a large portion of patients in hospital, many receive less-than-optimal drug care. Most registered nurses (RNs) and other health care professionals who provide older adults (OAs) with drug therapy lack pre-professional education about that practice. Concurrently, there is little research available about how RNs learn about drug therapy for OAs. Using a qualitative method, this thesis explores hospital RNs’ insights about their knowledge about drug therapy for OAs, their associated learning needs and strategies, and contextual influences on their learning. The findings illuminated RNs’ extensive knowledge, their learning needs and varied learning strategies, and constraints and facilitators of their learning. Drug therapy for OAs is a complex activity. RNs play a pivotal role in that care and have ample knowledge. RNs’ learning is holistic, ongoing, mostly informal, and reflective of many adult-learning theories. By learning, RNs build and transform their repertoires of knowledge to stay current with the quickly changing landscapes of health care, gerontological know-how, and drugs and drug practices. As a result, sometimes RNs protect not only OAs but also other hospital stakeholders from the negative effects of uninformed practice. Nurse educators should teach students about drug therapy for OAs and broaden their own views about RNs’ knowledge and learning strategies for that care. Nurse leaders should maximize chances for RNs to learn and prepare them to influence other stakeholders in ways that support learning. Hospital administrators and other stakeholders should recognize RNs’ pivotal role in drug care and
support their learning through organizational changes. Communities should design strategies that ease RNs’ learning. Policymakers should replace corporatism with innovations that champion learning. Researchers and RNs should collaborate on novel projects that bolster RNs’ learning.
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CHAPTER 1

Media coverage about inappropriate drug use with older adults (OAs) is growing. This coverage indicates that even though older Canadians make up a large portion of patients in hospitals, many of them receive less-than-optimal drug care and experience adverse drug-related outcomes, many that are preventable. Drug therapy for older patients is a complex endeavour, made so by intricacies in older patients themselves and by the often dynamic conditions both within and beyond hospitals that may affect their needs and care. Thus, many conditions may contribute to the suboptimal drug care evident in hospitals today. Conditions include the growing number of OAs (Institute of Medicine, 2008; Registered Nurses Association of Ontario, 2001), the higher complexity of their needs (Boltz, Capezuti, Fulmer, & Zwicker, 2012; Institute of Medicine, 2008), and the fact that most registered nurses (RNs) and other health care professionals (HCPs) lack knowledge about OAs’ care (Boltz et al.; Boult, Counsell, Leipzig, & Berenson, 2010; Forman, et al., 2011; Institute of Medicine; Lichtenberg & Hegde, 2009; Sinha, 2013), including drug therapy for OAs (Bernhofer & Sorrell, 2012; Finlayson et al., 2011; Gallagher, Barry, Ryan, Hartigan, & O’Mahoney, 2008; Mills, Edwards, Shofer, Holena, & Abbuhl, 2011; Rocchiccioli, Sanford, & Caplinger, 2007). Rapid changes in drugs and in drug practices with OAs and the dearth of research about drugs in that population also contribute to the problem with drug care. The enduring lack of gerontological content in programs for HCPs suggests that future graduates will similarly be unprepared.

Due to these and other complexities, hospital RNs who provide OAs with drug care may face myriad learning dilemmas, along with constraints on their abilities to acquire the knowledge that they need to make sense of those dilemmas and to address them. Even so, the evidence suggests that hospital RNs are responding in many ways to OAs’ drug-related needs. Varner
(2006) asserts that nurses play a pivotal role in ensuring that drug use is appropriate, safe, and effective. It is nurses who instigate assessment of drug use, evaluate outcomes, and provide the essential education. Further, they help to promote adherence and effective management of drugs by OAs and their caregivers. On that theme, “a vital nursing function” in all settings is to help OAs to adapt safely to their drug regimens to avert the possibly deadly problems linked to polypharmacy (p. 27). Many researchers and authors have stated that practicing RNs learn in diverse ways and have many learning needs about drug therapy for OAs (please see chapter 2). Yet, there is little research available about how RNs learn about that practice, about conditions that affect their learning, and about their current knowledge and learning needs. Thus, this study explores how hospital RNs learn about drug therapy for OAs. In this chapter, I describe the purpose of this study, the context for it, the study’s significance, and how the thesis is organized. Appendix A contains a list of the abbreviations used in the study and their meanings.

Purpose of the Study

This study explores how RNs in hospitals learn about drug therapy for OAs. The main research question is “How do hospital RNs learn about drug therapy for OAs?” The research sub-questions include:

1. What, if any, knowledge do RNs have about drug therapy for OAs?
2. What, if any, learning needs do they have with drug therapy?
3. What strategies do they employ to learn about drug therapy?
4. How are they constrained in their efforts to learn about drug therapy?
5. What facilitates their ability to learn about drug therapy?
The Context for the Study

In order to be relevant to readers, a study must be situated in a context of existing knowledge. The context for this study encompasses age demographics in Canada, OAs’ consumption of drugs, OAs’ use of hospitals and their drug therapy there, and RNs’ key role in drug therapy for OAs.

Age Demographics and OAs’ Consumption of Drugs

Who is an older person? Abeles et al. (1998) explain that the definition of an older person varies depending on diverse views and intents. For example, while gerontologists are interested in people who are 60 or more years old, age 65 is used for government benefits. Meanwhile, researchers categorize OAs as younger (65-75 years), older (75-85 years), and oldest (85+ years) (Abeles et al.). Other authors use over 65 years (Bowar-Ferres, 2008), age 75 and over (MacDonald & Hilton, 2001), 65 and older (Institute of Medicine, 2008), or 75 years as the start of old age and 85 years as very old (Forman et al., 2011). For the purpose of this study, OAs are people aged 65 years or more. However, aging is not a point-in-time event. Eliopoulos (2010) explains that although there are similarities in the patterns of aging among people, each person has his/her unique pattern in terms of the nature, speed, and degree of changes experienced; also, there is diversity in the aging of the body systems within a person.

According to the Registered Nurses Association of Ontario (2001), it is estimated that the number of older Canadians will grow from 3.5 million persons in the year 1996 to 6.9 million by 2021. Also, “since 1920, life expectancy has increased by an average of seven years for men, and 13 years for women” (p. 1). Due perhaps to the baby boom, to the organization of health services (e.g., commitment to the medical model, high rates of institutionalization for care and death),
and/or to having more health problems (Novak & Campbell, 2001), older persons use more health services than younger people (Bureau of Labor, 2009; Chappell, Gee, McDonald, & Stones, 2003; Denton, 1990; Gasmann, 1989; Kahl, Blandford, Krueger, & Zwick, 1992; Klein, 1995; Novak & Campbell). Thus RNs are already seeing, and new graduates will soon discover, how population aging dramatically changes Canadians’ demands for health care.

The Canadian Institute for Health Information (2009) estimated drug spending at $30 billion in 2009, the second largest portion after hospitals ($51 billion). Older (versus younger) adults consume more drugs (Varner, 2006). According to Health Canada, OAs (versus “the regular population”) consume more prescription medication and up to 40% of all drugs (Canadian Broadcasting Corporation, 2005). Although OAs constitute only 12% of Canadians, they use from 28-40% of prescription drugs (Tamblyn, 1997). Use of nonprescription drugs is more common in OAs (Wooley & Moylan, 2004). According to Lilley and Guanci (1996), estimates suggest that OAs consume 70% of all over-the-counter drugs. As consumption increases so does the potential for drug interactions and adverse affects.

Varner (2006) claims that on average, each person over the age of 65 years takes more than 7 drugs daily, and institutionalized OAs take more than 15 drugs daily. The potential for adverse effects is 6% with two drugs, “50% with five drugs and 100% with eight or more drugs” (p. 26). Also, “many drugs can produce distressing, and sometimes disabling or life-threatening, adverse reactions” (Kane, Ouslander, Abrass, & Resnick, 2009, p. 429). In fact, adverse drug reactions (ADRs) are the most prevalent forms of iatrogenic illness (Kane et al.). (Iatrogenic illnesses include complications due to health care interventions (Touhy, Jett, Boscart, & McCleary, 2012)). Older (versus younger) adults are more at risk for adverse drug events
(Tabloski, 2010). The unnecessary use of multiple drugs converts the OA into a human chemistry set (Kane et al.).

OAs’ Use of Hospitals and Their Drug Therapy There

In this section I overview OAs’ use of hospitals and their drug therapy in these institutions. Characteristics of the current health care environment include shorter stays in hospital, patients who are more acutely ill, a greater number of OAs with many chronic conditions, an increase in drug therapies, and rapid advances in technology (National League for Nursing, 2007). Other authors support these claims and point out some consequences. For example, Glass and Todd-Atkinson (1999) note the “rapid changes in health care”, including the “rapid proliferation” of new drugs and HCPs’ resulting difficulty keeping up to date about all of them (p. 226). Neafsey and Shellman (2002) highlight the greater availability of over-the-counter drugs for illnesses previously treated with prescription drugs, a sentiment that Bottomley and Lewis (2003) echo.

OAs’ health needs are diverse and complex (Timms, 1995). The complexity of OAs’ needs and care may be most evident to the approximately 64.9% of RNs in Ontario who work in hospitals (College of Nurses of Ontario, 2010, henceforth known as the College), where older persons constitute a large share of patients. Sixty percent of patients in hospital are 65 years of age or older (Felver & Van Son, 2007). OAs constitute the majority of nurses’ patients in every practice area but obstetrics and paediatrics (Scholder, Kagan, & Schumann, 2004). OAs account for 49% of hospital days (Palmer & Wyman, 2004), 35% of all hospital stays, and 38% of all emergency medical service responses (Institute of Medicine, 2008). Statistics suggest that OAs are “the most frequent users of hospital services”, that they have the longest durations of stay and
highest per person costs, and that OAs and their caregivers are receiving care throughout the whole hospital; hence, the growing demand on hospitals to attend to OAs’ unique needs (O’Keefe, 2004, p. 49).

Although acute-care hospitals play a vital role in geriatric care (Eliopoulos, 2010), iatrogenic illness -- illness resulting from a diagnostic test or therapeutic intervention, or any harmful event that is not a natural result of underlying illness (Palmer & Bolla, 1997; Steel, Gertman, Crescenzi, & Anderson, 1981) -- is a grave health hazard for OAs, especially during hospitalization (Gorbien et al., 1992). That notion has been supported by many other authors (Eliopoulos; Fletcher, 2000; Kane et al., 2009; Palmer & Bolla; Potts et al., 1993; Steel, 1987; Touhy et al., 2012). During the year 2000, Baker et al. (2004) studied patients in Canadian hospitals and found that those who experienced adverse events were significantly older. The most common adverse events were due to surgery (123/360) and to drug- or fluid-related events (85/360). MacDonald (2004) flags the need to learn from iatrogenic prescribing in hospitals and about the preventable nature of many of those scenarios. Zwicker and Fulmer (2008) assert that OAs are at serious risk for more adverse drug events while they are hospitalized and post-discharge. Many authors (Baker et al.; Bottomley & Lewis, 2003; Eliopoulos; Fletcher; Gorbien et al.; Kane et al.; Lexchin, 1991; Palmer & Bolla; Touhy et al.; Wanich, Sullivan-Marx, Gottlieb, & Johnson, 1992) include drug-related illness (DRI) and complications among the common risks and iatrogenic disorders experienced by older persons in hospital.

Permpongkosol (2011) includes drugs and hospitalization among risks for iatrogenic disease in OAs.²

The consequences of DRI for OAs and/or the health care system include injury,
functional decline, more visits for health-related services, emergency-room visits, hospital admissions, longer hospital stays, and death (Miller, 2012; Tamblyn, 1997). Other authors signal the possibility of death from ADRs (Lazarou, Pomeranz, & Corey, 1998; Lexchin, 1991). Twenty-nine hundred deaths in Ontario hospitals annually may be due to these reactions (Lexchin, 2001). According to a recent analysis of Health Canada’s ADR database, 3300 OAs die annually from this cause. Between 1999 and 2003, OAs accounted for 44.4% of reported deaths due to ADRs even though they constituted only 13% of Canadians (Canadian Broadcasting Corporation, 2005). Adverse drug interactions contribute to “23% of all hospital admissions and 1 in 1000 deaths annually in the United States”, while drug toxicity may contribute to up to 25% of calls to poison-control centres and more than 33% of hospital admissions (Varner, 2006, p. 26). In an ideal world, “no one should be in hospital because their drugs are making them sick” (Dundass, 1993, p. 132).

Polypharmacy is the use of many medications by the same person (Patel, 2003; Permpongkosol, 2011). Permpongkosol claims that multiple drugs that convert OAs into living ‘chemistry sets’ are likely the most pervasive threats for iatrogenic disease. Causes of polypharmacy include OAs’ use of drugs when there is no evident need, and the use of duplicated or contraindicated drugs, drugs that interact, inappropriate doses, and drugs to treat the adverse effects of other drugs (Varner, 2006). More causes are under-diagnosis, inadequate monitoring, failure to stop drugs when they are ineffective or unnecessary, insufficient patient education, the presence of many chronic diseases, admission to hospital or to a nursing home, an OA’s use of many pharmacies, and OAs’ ineffective management of their drugs (Varner).

Polypharmacy in hospitals may lead to drug interactions (Lilley & Guanci, 1996; Patel;
Thompson & Crome, 2002; Varner, 2006), drug-drug and drug-disease interactions (Page, Linnebur, Bryant, & Ruscin, 2010), adverse effects (Lilley & Guanci; Page et al.; Thompson & Crome; Varner; Wooley & Moylan, 2004), longer stays (Lilley & Guanci), grave injury (Lilley & Guanci), death (Lilley & Guanci; Varner), confusion (Lilley & Guanci), cognitive impairment and falls, (Wooley & Moylan), falls or trauma due to sedation (Lilley & Guanci), weakness (Lilley & Guanci), and lethargy from drug interactions (Lilley & Guanci). More outcomes of polypharmacy generally include a higher hospital admission rate (due to drug errors, to ADRs, or interactions alone) (Varner; also see Rocchiccoli, Sandord, & Caplinger, 2007), and drug-induced falls and trauma, depression, incontinence, decrements in taste and smell, and malabsorption (Varner). HCPs may misdiagnose ADRs and inappropriately prescribe more drugs (Varner; Thompson & Crome). Drug-related cognitive challenges may impede assessment and OAs’ abilities to manage their drugs well, leading to greater danger (Varner). Polypharmacy is costly for the health care system (Bushardt, Massey, Simpson, Ariail, & Simpson, 2008). Years ago, Gorbien et al. (1992) stated that drug-related complications in hospitalized OAs may contribute to longer stays, greater costs to the system, diminished function, and death. All told, the burden of drug-related harm in terms of human costs and system costs is enormous due to the harm to OAs, to HCPs’ need to intervene, to the ongoing costs for any residual harm, and to the negative effects on the person’s quality of life (Canadian Broadcasting Corporation, 2005).

Evidence of the effects of hospitalization on OAs’ use of drugs seems to suggest that not all RNs (or other HCPs) know about the risks for DRI. MacDonald (2004) asserts that “prescribing drugs for older adults is fraught with potential for adverse drug effects and drug-drug interactions”, and OAs are more susceptible to these problems (p. 20). According to
McConnell, Linton, et al. (1997), the average number of drugs used with hospitalized OAs is four to five each day, and up to 75% of older patients have one or more drugs stopped and new drugs initiated during their hospital stay. Through their study of older patients in hospital, Gray, Sager, Lestico, and Jalaluddin (1998) found that 14.6% (23/157) of older patients experienced a probable adverse drug event, and those who did were prescribed significantly more new inpatient drugs. Through their earlier study of 197 elderly patients in acute care, Beers, Dang, Hasagawa, and Tamai (1989) found that 40% of all admission drugs were stopped by discharge and 45% of all discharge drugs were begun during hospitalization. There are also concerns about potentially/inappropriate prescribing for hospitalized OAs (Hale et al., 2008; Page et al., 2010), a practice that will probably become more prevalent with population aging (Hale et al.). Other concerns target prescribing when alternatives to drugs would have sufficed (Miller, 2012), along with inadequate assessment (Touhy et al., 2012), for example, treating symptoms rather than their causes (Eliopoulos, 2010; Kane et al., 2009), or attributing adverse effects to aging (Miller).

The signs and symptoms of adverse drug effects in older (versus younger) persons are more often mistakenly attributed to diseases or to age-related changes and circumstances (Miller). Further, DRI is commonly treated with more drugs instead of dealing directly and more appropriately with the adverse effect (Eliopoulos; Kane et al.; Miller). These practices do not remedy drug-related problems or underlying and potentially deadly illnesses (Eliopoulos); also, they contribute to polypharmacy (Kane et al.; Stoehr, 1995), more complications from the new drug (Eliopoulos; Miller), and the probability of an adverse drug interaction (Kane et al.).

RNs’ Key Role in Drug Therapy for OAs

Many authors signal RNs’ key and multifaceted role in drug therapy for OAs. Nurses can
play a significant role in drug therapy (Linton, 2007). They play a pivotal role in ensuring that drug use is appropriate, safe, and effective (Varner, 2006). Hospital nurses are excellently positioned to promote OAs’ function (Jacelon, 1999). Zwicker and Fulmer (2008) contend that nurses take the lead in providing preventive care to OAs on drug therapy. They review, confirm, and carry out drug orders, alert prescribers about drug-related concerns and challenges, proactively safeguard a culture of safety, and detect wrong drugs, dosages, etc., prior to administration. Also, they make suggestions about drugs to prescribers based on their holistic wisdom and assessment of the OA, and they are the primal sources for providing OAs with discharge education and counselling. Varner claims that nurses provide the essential education, and they are helpful in promoting compliance and effective management of drugs by OAs and their caregivers to avert “the potentially deadly problems associated with polypharmacy” (p. 27). Often it is nurses who instigate assessment of drug use and evaluate outcomes (Varner). At times, nurses have key responsibilities in titrating or altering OAs’ drug regimens (Linton). Nurses who question and reevaluate OAs’ drug regimens (e.g., at admission) may detect unnecessary, inappropriate, and/or duplicate drugs, even drugs that spurred the need for hospitalization (Miller, 2012). Tabloski (2010) declares that nurses are pivotally positioned to promote appropriate drug use, to prevent or spot adverse drug outcomes, and to prevent or reduce the need for drugs by using nursing interventions.

Nurses have key responsibilities in monitoring (Linton, 2007). Often they are responsible for detecting OAs’ responses to drugs. MacDonald (2004) asserts that acute-care nurses play a vital role in monitoring. They are expected to know and to detect the adverse effects of drugs, even when detection in frail OAs is more difficult because many respond atypically to illness and
to drug therapy. Zwicker and Fulmer (2008) claim that acute-care nurses are perfectly positioned to detect or avert adverse drug events in OAs in hospital and at discharge. Often nurses are the first to detect adverse drug effects because they usually spend more time with patients than primary care practitioners do, and they are more observant of daily changes in function (Miller, 2012). Jacelon (1999) states that hospital nurses are excellently positioned to monitor OAs’ care and to notice minute changes in status that “signal the early signs of iatrogenic cascade” (p. 32).

The foregoing evidence suggests that RNs play a crucial and broad role in drug therapy for OAs. In the literature, there are studies about RNs’ learning needs and other caregivers’ learning needs about gerontological nursing, including drug therapy for OAs, and even about specific topics, such as herbals and surgery, over-the-counter drugs, and cardiovascular drugs. Also, there are studies about the following: how RNs learn, their varied learning styles, the learning activities that RNs (and sometimes non-RNs) use to understand OAs’ care, including drug therapy, and the various learning activities that RNs use to enrich their knowledge about OAs and, at times, their knowledge about drug therapy. However, there is a paucity of information about how hospital RNs learn about drug therapy for OAs, about conditions that affect their learning, and about their associated knowledge and learning needs. Interestingly, one of Accreditation Canada’s (n.d.) system-wide standards is entitled, “Managing Medications” (Access to Standards, para. 4). The standards for managing medications underscore the use of a collaborative approach to prevent and lessen adverse drug events by attending to all facets of a medication-use process, from choosing and preparing to administering the drug and monitoring clients. Also within the standards is an emphasis on monitoring quality and obtaining good results. Given these standards, along with hospital RNs’ vital and strategic role in drug therapy
for OAs, it seems prudent to explore RNs’ knowledge and learning needs about that care, as well as how they learn about it and conditions that affect their learning.

**Significance of the Study**

The findings from this study may contribute to knowledge in many important ways. First, they may illuminate the knowledge that hospital RNs need to provide OAs with drug therapy and any learning needs that they have about this topic, information that does not seem to be available in the literature. Second, minimizing adverse drug effects in OAs while optimizing drug therapy so that it promotes and protects health and cures and/or manages disease requires, in Johnson’s (2000) words, “a unique knowledge of drug responses in older adults that is not always applied” (p. 425). Currently, nurses provide “the lion’s share” of hospital care (Fletcher, 2000, p. 760). They already have various responsibilities in drug therapy (McConnell, Linton, & Hanlon, 1997), including advocating on behalf of patients in relation to drug orders and decisions (College, 2003)³, and playing an important role in monitoring and altering OAs’ drug regimens (McConnell, Linton, et al.). Due to hospital RNs’ strategic position on the juncture for care, the findings may enlighten readers about the learning dilemmas that they face as they provide OAs with drug care, including the circumstances around those dilemmas and their reasons for wanting more knowledge. Also, the findings may inadvertently shed light on what is happening in terms of drug therapy for OAs in hospital.

The findings may provide a rich understanding about how RNs learn about drug therapy for OAs. In his forward to Cervero’s (1988) text, Schon states that the gap between professional education in universities and the realities of practice is widening (also see Baskett & Marsick, 1992). Baskett, Marsick, and Cervero (1992) note the increasing discrepancy between
developing paradigms about professional learning and real practice. Many professionals think that practice-derived knowledge has far greater utility than knowledge from formal educational sessions (Cervero, 1992), possibly because professionals are subjected to a greater panoply of pressure in today’s chaotic society (Baskett & Marsick). Due partly to the many possible constraints on their learning, hospital RNs who provide OAs with drug therapy may face situations that are muddy and complex (versus clear and straightforward) in terms of their predictability, meaning, and manageability. As a result, they may learn in ways that are immersed in drug-related practice, self-directed, highly reflective, dialectical, experiential, noncognitive, transformative, and critical, and their learning may be aimed at finding solutions that are contextually, including ethically, valid and, when necessary, quick. RNs may even learn from drug-related errors and/or inappropriate care, including the effects and consequences. The stories in this study will enlighten readers about these events and how RNs learn to deal with, and even prevent, them. Thus, and adapting Schon’s messages (in Cervero, 1988) for the purposes of this study, the findings may illuminate RNs’ learning as they set and solve problems associated with drug therapy for OAs. Also, the findings may edify RNs’ repertoires for practice, the blend between the scientific and the artistic nature of their learning and their work, and the ethical dilemmas that they face. Drawing from Baskett et al.’s work, the findings may thus elucidate how RNs mesh “abstract and practical knowledge and reasoning” to design “wiser professional actions” (p. 115).

The findings may illuminate the conditions that catalyze RNs’ learning, along with the conditions that constrain it, and how they deal with the barriers, if they do. All of this knowledge is important partly because Baskett et al. (1992) note that the cultures in organizations and
beyond “do not always support...contextual knowing and learning” (p. 115); instead, demands for balanced books, greater output, and efficiency have ousted the goals of effective learning and competence. Finally, the findings may inform educators about the resources that RNs need to learn about drug therapy for OAs, including when they need them and how they use them.

Outline of the Thesis

This thesis begins with a literature review that provides a context of knowledge about the problem. Next, is a description of the method that I used for the study. Following the method are seven chapters in which I outline respectively RNs’ knowledge and learning needs about drug therapy for OAs, conditions that affect their practice with singular OAs on drug therapy, their strategies for learning about drug therapy for OAs, constraints on their learning, facilitators of their learning, the discussion, the significance and the implications of the findings, and the conclusion. Subsequent to these chapters are the references, appendixes, and footnotes.

Summary

In this chapter, I introduced the problem – the gap in knowledge that provides the rationale for this study. Then, I described the purpose of the study and the context for it. The context provides information about age demographics, OAs’ consumption of drugs, OAs’ use of hospitals and their drug therapy there, and RNs’ crucial role in drug therapy for OAs. Next, I described the significance of the study and how this thesis is organized. In the following chapter, I describe the literature review for the study.
CHAPTER 2 LITERATURE REVIEW

The literature review is intended to inform readers about the rationale for conducting the study, to help them to experience the research within a context of knowledge about the problem, and to ignite unease in readers and their wish to know more. I did not find any literature that illuminates RNs’ views about the knowledge that they need for drug therapy with OAs; however, I provide literature about RNs’ learning needs on that topic. This is followed by a critique of literature about adult learning, including professional learning, an overview of the tensions in professional learning, and a view of adult learning. Next, is literature that illuminates how RNs learn generally, followed by literature that illustrates how they learn about OAs’ care and/or about drug therapy for OAs in particular. Finally, I provide literature about conditions that influence RNs’ learning about drug therapy for OAs, either by hindering it or easing it.

RNs’ Learning Needs About Drug Therapy for OAs

Learning needs are dynamic and diverse amongst individuals and specialities within the nursing profession (Gunderman, 1995). Timms (1992) flags the scarcity of needs assessment in gerontological nursing. I was unable to find any studies about RNs’ knowledge associated with drug therapy for OAs. In this section, I describe studies that explore RNs’ and non-RNs’ learning needs about gerontological care, including drug care. Also, I present a study about nurse practitioners’ learning needs about OAs, including drug therapy, a study about nurse anaesthetists’ learning needs about herbals, a study about community nurses’ learning needs about over-the-counter drugs, and an evaluation of a nurse-specialty program for RNs.

Researchers have explored the gerontological learning needs of RNs in long-term-care facilities (Allen, 1989), of RNs and licensed practical nurses in nursing homes (Bye, 1988) and
in nursing facilities (Glass & Todd-Atkinson, 1999), and of RNs, registered practical nurses (RPNs), and health care aides in long-term-care facilities (Ross, Carswell, & Dalziel, 2001). Other researchers have explored the learning needs of health professionals (nurses, physicians, dentists, pharmacists, and psychiatrists) generally (Robinson, 1981), of RNs generally (Farley & Fay, 1988), of RNs and nurse executives in visiting nurse associations (Hekelman, Niles, Snyder, & Stricklin, 1995), and of RNs in community health and in nursing homes (Volinn, 1982).


The results of these studies suggest a substantial need for more information about drug therapy for OAs. Respondents reported medications (Hekelman et al., 1995), or medication-related topics -- drug therapy (Bye, 1988; Glass & Todd-Atkinson, 1999), dosing (Robinson, 1981), interactions (Bye; Glass & Todd-Atkinson; Robinson), reactions, toxicities (Bye; Robinson), and medication use, abuse, and side effects (Timms, 1992, 1995) -- as their most important learning needs. Other respondents chose drug-related topics as their second (Allen, 1989; Farley & Fay, 1988) and fourth (Zorn & O’Keefe, 1989) most pressing needs. Volinn (1982) found that two topics -- “drug use and effects” and “gerontological changes” -- were tied in first place as topics of interest (p. 107). When asked about their personal needs, British RNs placed “medications: use/abuse/side effects” in eighth place; yet, when asked about the learning needs of gerontological RNs generally they placed that topic in second place (Timms & Ford,
1995, p. 303). Although respondents in Ross et al.’s (2001) study did not identify drugs as a specific learning need, that topic may have been subsumed under other major needs (e.g., difficult behaviour, pain) that were reported. Neither Bye nor Glass and Todd-Atkinson reported RNs’ views separately from those of other respondents; thus, their results are less useful. The respondents in Bye’s study reported diverse learning needs; thus, she suggested that educators continually assist learners to assess their needs. Also, she suggested that the needs of nurses outside nursing homes be explored and resources be designed and coordinated to meet them.

Scherer, Bruce, Montgomery, and Ball (2008) surveyed nurse practitioners to learn how knowledgeable they felt about caring for OAs. More than half of the nurse practitioners were only “somewhat comfortable” with their knowledge about some topics, including polypharmacy (p. 473). Respondents suggested many additional key content areas, including substance abuse.

Temple, Fagerlund, and Saewyc (2005) surveyed RN anaesthetists to understand their knowledge about common herbals that may cause perioperative problems, and their beliefs about interactions between herbals and anesthesia. The results indicate a significant lack of confidence and knowledge about herbal supplement implications. A vast majority of the respondents wanted more education about herbals.

Neafsey and Shellman (2002) flag concern about the flood of prescription drugs becoming over-the-counter drugs and the resulting potential for adverse interactions (various authors cited, p. 31). They surveyed community-health RNs to explore their knowledge and self-efficacy associated with selected over-the-counter prescription interactions. The results suggest that the nurses had “several misconceptions” about over-the-counter drugs and would benefit from ongoing continuing education programs (p. 38). The researchers highlight the growing
availability and use of over-the-counter drugs by OAs and the importance of strategies such as monitoring and patient education.

Ferris and Pierce (1982) evaluated a six-month Cardiovascular Nurse Specialty Program for RNs. Practicing RNs chose pharmacology (cardiovascular) as their highest priority content area and pharmacology (pulmonary) as their seventh priority.

Each of the aforementioned initiatives is noteworthy. Together, they extend insight about RNs’ learning needs about drug therapy for OAs. However, amongst the studies are those that use surveys, RNs from mixed settings, and participants with different pre-service education. None of the studies explores hospital RNs’ views about their knowledge and their learning needs about drug therapy for OAs.

Adult Learning

There is a general tendency in our society to conflate the notions of formal schooling and education (Reagan, 2005). To avoid this tendency and to invite the possibly holistic and multifarious nature of RNs’ learning activities, I briefly describe and critique the following views of adult learning: self-directed learning, transformative learning, experiential learning, reflective practice, noncognitive learning, and critical learning. Included are various authors’ insights about professional learning. Each of these views of learning, when compared to the traditional, structured, and passive ways of knowing, is more informal, fluid, and active.

Self-Directed Learning

Knowles (1975) states that self-directed learning is a process whereby people, with or without assistance from others, take the initiative to identify their learning needs and goals, to specify human and material resources for learning, to choose and execute appropriate learning
strategies, and to evaluate learning outcomes. Knowles’ (1980) experiential learning theory (also see Jarvis, 2006), known as andragogy, is based on six assumptions, as follows. As people mature they move from being dependent toward being self-directed, although they may be dependent in specific short-lived situations. They amass a growing store of experience that becomes an ever-more-rich resource for their own and other people’s learning. Their readiness to learn is activated when they need knowledge to deal more effectively with tasks or challenges in their lives (also see Knowles, 1978). Their learning is orientated to developing greater competence, to immediate application, and to performance. Their most powerful motivations are internal (versus external). Finally, they need to know the relevance of the learning activity to their life tasks or challenges (Knowles & Associates, 1984). Usually self-directed learning occurs in collaboration with helpful persons, like resource people, mentors, and peers (Knowles, 1975).

The notions of self-direction, internal motivation, and independent learning highlight the autonomous nature of RNs’ learning. RNs’ sometimes dependency may cover their learning in new territory, for example, mentored learning. The notion of amassing experience equates with Benner’s (1984) idea of novice to expert in clinical practice, and with Cervero’s (1990) idea of building a repertoire of knowledge and reasoning through practice. Yet, experience is not always good experience; instead, it may result in impoverished learning. The idea of learning to deal with real-life issues is relevant for practice. But it may be interpreted as instrumental learning, a reductionist view, thus ignoring any inherent complexity (Brookfield, 1986, cited in Merriam, Caffarella, & Baumgartner, 2006). Neither is this view open to learning for interest sake or for enjoyment (Merriam et al.). Also, the orientation and motivation (internal) for learning seem to overlook the notion that learners may be affected by the context (social, historical, and cultural)
(Merriam et al.); for example, health-care conditions may force learning and adjustment.

Merriam et al. (2006) claim that the three major goals of self-directed learning are to increase adult learners’ abilities to be self-directed, to promote transformational learning, and to stimulate emancipatory learning and social action. This view of self-directed learning is broader because it includes learning for social action and change. According to Garrison’s (1997) view of self-directed learning, learners want to take “personal responsibility and collaborative control of the cognitive (self-monitoring) and contextual (self-management) processes” in designing and validating learning outcomes that are both personally relevant and socially valuable (p. 18). The notion of collaboration stems from the idea that the person assumes responsibility for building meaning while including other individuals in validating worthwhile knowledge. Thus, meaning and knowledge are both individually and socially constructed. Motivation to learn includes both initiation and task motivation and is affected by external and internal conditions. This model “encourages students to approach learning in a deep and meaningful manner” (Garrison, p. 30).

Garrison’s (1997) view of learning highlights learners’ (in this case, RNs’) use of learning resources, along with the critical and collaborative nature of learning. It foregrounds internal and external conditions that affect motivation, and it recognizes that contextual contingencies (institutional, ideological, and socioeconomic) may constrain or facilitate RNs’ goals, motivation, and achievement. Yet, this notion does not touch critically on how external conditions may affect RNs’ autonomy, motivation, and self-management by supporting or impeding the idea of task control, as well as opportunities for sustained communication and validation. Instead, Garrison states that ongoing collaborative consideration of the myriad variables linked to three factors -- the talent of the learner and the facilitator, the institutional
resources (supports and assistance), and the mutual dependence of institutional or personal norms and standards as well as the learner’s integrity and autonomy -- will help to decide “the appropriate degree of learner self-management” (p.23). One concern is that the notion of ‘appropriate’ is normative and thus may be externally controlled.

Transformative Learning

Merriam et al. (2006) claim that three concepts are fundamental to an understanding of transformative learning: the importance of experience, the essence of critical reflection, and the link between transformative learning and adult development. In the following, I briefly outline Mezirow’s “psychocritical perspective” of transformative learning and Freire’s “social-emancipatory” view (p. 131).

Mezirow (2000) explains that transformative learning is triggered by a “disorienting dilemma” (p. 22). Learning is the process of transforming “our taken-for-granted frames of reference” to render them more inclusive, analytical, receptive, emotionally capable of variation, and reflective so that they may produce beliefs and opinions that are more valid or justified to direct action (p. 7). The focus is on learning to arbitrate and execute our own intentions, values, feelings, and interpretations (versus those that we have uncritically internalized) in order to gain greater authority over our lives as civically responsible and lucid decision makers. To test the authenticity of our new insights, we engage in constructive and critically reflective discourse with other persons whereby we search for collective understanding and assessment of the rationale for a meaning or belief. The learner then decides to act on their reflective insight. Action may be immediate or delayed, or it may involve thoughtful endorsement of an existing action. Mezirow states that learning is always embedded in existing and “complex institutional,
interpersonal, and historical settings” that surely and crucially affect the potential for transformative learning and mold its nature; thus, often learners must surmount constraints, and they may have to learn how to do that, making learning emancipatory (p. 24). Transformative learners who want to change societal or organizational conditions join other like-minded persons and become active agents (Mezirow).

Thus, according to Mezirow (2000), learning involves experience, such as that acquired in practice, it engages the cognitive and emotive aspects, and perhaps to some extent the moral aspect, of the person (in this case, the RN), it is critically reflective, insightful, and transforming, and it may result in greater agency. Also, learning is interactive, collaborative, and geared to action. The idea that learning generates more effective ways of being suggests enhanced thinking, and that learners’ actions may include culling beliefs, etc., that are outdated. There seems to be a potential for learning to enhance divergent thinking (as a basis for critical thinking) and emotional intelligence. Also, learning is contextually specific, meaning that political conditions may affect chances for learning as well as its form. Thus, learners may have to learn more in order to advance. Finally, learners may band together for the purpose of social action.

Yet, Merriam et al. (2006) maintain that this theory has been criticized for its lack of attention to context (e.g., how the dominant culture affects autonomy), for attending too much to personal transformation and less so to social change, and for its overreliance on reason in the learning process. Merriam (2004) asserts that transformations may occur in noncognitive ways, that is, without people’s being aware of them; thus, Mezirow should significantly expand his theory to encompass “more ‘connected’, affective, and intuitive dimensions” equally with cognitive ones (p. 66-67).
From a socially emancipatory view, Shaull, in his forward to Freire’s (1970) text, claims that every person when given the necessary tools is able to examine his or her world critically in conversation with other individuals. Then, the person may gradually understand his or her personal and social reality including the paradoxes in it, become aware of his or her own view of that reality, and handle it critically. The resulting intensified consciousness enables the person to view those conditions as an historical and thus transformable reality (Freire). Merriam et al. (2006) describe different levels of “conscientization” (p. 141): people who are fatalistic and do not question the status quo, people who realize that they may have some authority over their lives and begin to question, and people who develop a critical awareness and become active agents in building more just conditions. As they do this, they act and reflect simultaneously for the purpose of transforming the world (Freire).

Unlike Mezirow’s (2000) theory, Freire’s (1970) approach is rooted in a political context and a larger schema of profound social change (Merriam et al., 2006). For both authors, problem-posing and dialogue amongst learners spur critical reflection (Merriam et al.). Learning raises consciousness, just as transformation does (Merriam et al.).

For the purpose of this study, insights from Freire (including Shaull) (1970) and from Merriam et al. (2006) open the door to collaborative, critical, and transformative learning that is embedded in political (e.g, professional-practice) realities. Also, there is room for noncognitive, including intuitive, learning in practice.

*Experiential Learning*

Experiential learning can occur in myriad contexts (Merriam et al., 2006). According to Jarvis (2006), learning begins with experience, and because we are always exposed to learning
opportunities, learning is continuous. Usually a disjuncture, caused either by external changes or by internal changes (learning, beliefs and values, changed goals, etc.), stimulates learning. Disjuncture happens when our biographical storehouse is no longer ample to cope instinctively with our situation; as a result, our unthinking balance with our world is shaken and we feel unease. Learning is the blend of processes whereby the whole individual (their body and mind) experiences a social situation, transforms (cognitively, emotively and/or practically) “the perceived content” of it, and integrates it into their personal biography. The outcome is “a changed (or more experienced)” self (p. 13).

In this model, learning is an interactive (versus an internal) process (Merriam et al., 2006), and it is holistic, aesthetic, experiential, ongoing, and transformative. It builds on expertise, similar to the notion of a repertoire of knowledge, and it is triggered by the unease we experience when our tacit knowledge no longer works, as in novel situations. Although learning begins with experience, the model does not explain deeply enough the learning that is embedded in professional practice, including in problem setting and solving. Neither does it address learning aimed at social action and change.

Dewey (1938) explains that two principles – “interaction and continuity” -- are essential in the construction of experience (p. 51). According to the principle of continuity, every experience absorbs something from previous experiences and changes somehow the quality of future experiences. The principle of interaction highlights the transaction that occurs between the person (e.g., their needs, desires, goals, abilities to design the experience) and their local conditions. Dewey cautions that although all authentic education occurs through experience, not all experiences are truly or uniformly educative. Some are non- or mis-educative. Mis-educative
experiences stop, distort, or restrict growth from future experience (Dewey).

There are different modes and different theoretical views of experiential learning (Merriam et al., 2006). Fenwick (2003) identifies five views. Constructivist theory involves reflecting about concrete experience to create personal meaning. Situative theory involves engaging in a community of practice, becoming more familiar with the inherent constraints and supports, and participating in altering the processes of social activity in order to refine practices, design new ones, or cull and correct practices that are detrimental or dysfunctional. The community includes its history, beliefs, values, rules, relationships, and tools (e.g., objects, technology, languages, representations) (Lave & Wenger, 1991, cited in Fenwick). Such conditions may be power laden (Fenwick). Psychoanalytic theory involves challenging and understanding any unconscious wishes and fears (Fenwick) that may affect our learning (Merriam et al.). Learning according to critical cultural theories involves identifying oppressive conditions (e.g., practices, discourses, structures) and working collectively to create a more just society (Fenwick). Complexity theories involve examining relationships between cognition and the environment from a systems perspective; essentially, all parts of the system are always learning, and learning in one part spurs changes in the others (Fenwick).

Given RNs’ lack of pre-service education about drug therapy and OAs, experience may be a major source of their learning. Experiential learning may expand their repertoires of knowledge and refine and cull their previous ways of knowing. Noteworthy, however, is the caution about the need to disrupt faulty practices (Merriam et al., 2006). When unsupervised, learners may participate in ways that “reinforce negative practices that a community is trying to eliminate” (Fenwick, 2003, p. 93). This may also happen if learning is totally experiential (e.g.,
without the benefit of any abstract knowledge (see Cervero, 1990, 1992)), or vice versa. Experiential learning may be either informal or formal. It may involve solitary and/or collaborative activity, either hands-on or hands-off participation, and social change either locally (as in the situated view), or culturally (as in the critical view). Situated learning may be relevant when there is a need to change a hospital unit’s system for harmonizing drugs on admission. Use of the systems theory may enable understanding of how a change in a pharmacy’s system for labeling drugs triggers adjustments throughout the hospital.

Merriam et al. (2006) critiques the concentration on cognitive reflection in the literature about experiential learning because it does not consider the effects of desire and opposition on learning. While the constructivist view assumes that each learner is “a stable fixed identity, with transparent access to experience through rational reflection”, the psychoanalytic view notes the schism between “conscious and unconscious desires” (Fenwick, 2003, p. 77) that may influence learning and reflection (Merriam et al.). In some views of experiential learning (such as Kolb’s, 1984) the learner is disconnected from the context of the situation (Merriam et al.).

Kolb (1984) states that learning involves transforming experience to create knowledge. Learning is holistic (Kolb & Kolb, 2005), meaning that it involves the whole person (thinking, emotions, perceptions, behavior), and it is continuous (Kolb). According to Kolb and Kolb, learning occurs due to synergistic transactions between the person and the environment, and it involves relearning. Learners must solve conflicts between dialectically opposed ways of adapting. They have two modes for grasping experience (“concrete [sensory] experience” and “abstract conceptualization”), and two modes for altering it (“reflective observation” and “active experimentation”) (Kolb, p. 30; Kolb & Kolb, p. 194), and learning involves moving from
specific involvement to detached analysis, and from watching to doing (Kolb).

As was mentioned previously, in Kolb’s (1984) model, both experience and reflection seem to occur in a void because there is no consideration of the context, including power inequities (Merriam et al., 2006). Yet, the theory is still useful for this study. Learning is aesthetic, holistically engaging, transformative, and continuous. It supports the development of divergent and inductive thinking. Also, learners use new theories to guide decision making and problem solving. Finally, the notion of relearning supports the mercurial nature of knowledge and the need to maintain its currency by building, refining, and culling it as necessary.

Reflective Practice

Merriam et al. (2006) explain that through reflective practice, learners make decisions based on experience associated with mostly complex and obscure problems. Usually the data that they use includes their previous and current experiences. Their tacit knowledge – the wisdom that they employ daily and almost unconsciously -- is a key component of the data.

York-Barr, Sommers, Ghere, and Montie (2001) explain that reflective practice is an active undertaking that involves deliberately pausing “to assume an open perspective, to allow for higher-level thinking processes” (p. 6). Practitioners may examine beliefs, purposes, and practices in order to gain novel or richer understandings that contribute to actions that enhance learning. Their actions may involve altering their conduct, skills, attitudes, or views (York-Barr et al.). Schon (1987) explains that when professionals’ tacit, instinctive, and customary “knowing-in-action” (p. 26) no longer serves their purposes, they may pause to think, or retrospectively think, about what they have done (“reflect on action”), or they may reflect while still doing (“reflect-in-action”) and redesign what they are doing as they are doing it (p. 26,
Learners critically reflect about the reasoning that got them into a dilemma or an opportunity and, as they do this, reconstruct their strategies of action, their comprehension of phenomena, or their ways of constructing problems (also see Watson & Wilcox, 2000, p. 58). Reflection fuels “on-the-spot experiment” wherein professionals design and try out novel actions for exploring the newly observed events, for testing their unconfirmed understandings of them, or for affirming their creative strategies for improvement (Schon, p. 28).

Extending this theme somewhat, Cervero (1988) differentiates between the functionalist view and the critical view of professional performance. According to the first view, professionals solve well structured and unambiguous problems using a shared body of rational knowledge and a code of ethics geared to furnishing high-quality services and bettering society. Conversely, the critical view presumes that professionals are variable in their identities and have diverse, if not opposing, values about the goals of practice. Thus, they construct problems from the given situations. They do this because rather than being well-defined, the problems are “messy”, “indeterminate” and “ambiguous”, making problem formulation (versus problem solving) “the key to professional practice” (p. 31). Watson and Wilcox (2000) contend that when technical solutions will not suffice, problems must be reframed as unique and baffling situations that require professional reflection. Thus, professionals are perpetually in a dialectical relationship with problems that are unique, uncertain, or ripe with value conflict (Cervero). According to Schon (1987), these “indeterminate zones of practice...escape the canons of technical rationality” (p. 6). Reasons include these: dealing with uncertainty requires the ability to formulate a problem effectively, dealing with uniqueness requires the abilities to improvise or to invent and test strategies, and dealing with value conflicts (e.g., tensions between efficiency, fairness, and
quality of care) requires making decisions when there are no distinct and consistent outcomes to guide the technical choice of methods (Schon, 1987). Schon (1983) and Baskett (1991) state that in the process of making meaning, professionals constantly dialogue with themselves and their habitats and revisit their immediate challenges (cited in Baskett & Marsick, 1992). Also, they draw from various formal and informal resources (Baskett & Marsick).

Watson and Wilcox (2000) identify two methods of reflective reading to enhance practitioners’ comprehension of their practice. One method engages them in reading their practice-related stories and examining how they made sense of their challenging experiences through narratives. In the second method, they read their practice-related customs while examining how they ordered their experiences through specific interventions, approaches and routines. Each method enables practitioners to trap themselves in the action of practice, to ask challenging questions about it, and to acquire insight about universal and specific aspects of their work. Such constructed meaning complements and augments objective and technical knowledge (Watson & Wilcox).

Merriam et al. (2006) caution that the goal of reflective practice might not always be to solve practice issues. Wellington and Austin (1996) describe five interactive and interdependent orientations to reflective practice that may be either tacit or conscious: professionals who focus on imminent demands and survival work within the authorized structures, and thus their engagement in reflective practice is either insignificant or nil; professionals who are oriented to domestication and systems want to perfect methods to accentuate efficient and effective delivery of the defined goals and are at ease with the imposed conditions; professionals who are oriented to domestication and people focus on individual meaning, feel uneasy about the prescribed
conditions, and may negotiate with administrators for change; and professionals who are orientated to liberation and systems reject authority, continually question sociopolitical conditions, and advocate for just conditions. Finally, professionals who are orientated to liberation and people target universal personal emancipation. Although they resist the decreed constraints, they may tolerate working with them. “Inner directed”, they spotlight self-development and the relationship between internal and external (p. 311). The authors claim that educators need to acknowledge the legitimacy of all of these orientations as well as their own preferred modes.

These authors provide extensive insight into the world of professional learning. They highlight the diversity of professionals, the major contribution of experience to their practice-related knowledge, the transformative nature of reflective practice, and the many ways by which learners make sense of their experiences, including how they blend their tacit knowledge, their previous knowledge, and their new knowledge to address novel situations. Learners actively reflect about their actions either retrospectively or as they act, giving plasticity to their ongoing thinking and actions. These authors foreground the sometimes routine and predictable, the sometimes complex and messy, and the always ethical nature of learning. Watson and Wilcox (2000) note the range of responses needed to address professional challenges, from technical accuracy for instrumental challenges to flexible methods for intricate and unclear situations.

The above-mentioned authors link learning to problem setting (for complex issues), to problem solving (for more routine issues), and to the use of both formal and informal resources. The use of a dialectical approach might be helpful when RNs’ learning is geared to problem finding and/or to dealing with value conflicts, and when learning involves inventing and
experimenting and/or trying to fathom the implications of decisions. RNs’ ability to reflectively shift gears in their thinking may support them as they try to respond to patients’ needs and to external conditions that are dynamic and unpredictable. Many non-practice interests may spur RNs’ reflection. Reflective practice may promote higher level cognitive thinking, including enhanced divergent thinking and creativity. The ability to reframe problems is indicative of post-formal thinking. Reflection that transforms attitudes may fuel post-conventional thinking by RNs immersed in ethical issues.

Noncognitive Learning

Merriam et al. (2006) maintain that learning is holistic. Embodied, spiritual, and narrative learning all involve meaning-making that is personified, constructed, and deciphered. Thus, noncognitive learning may be transformative (Merriam, 2004).

Embodied learning involves learning “in an experience” from sensory information (Merriam et al., 2006, p. 187). Examples include physical, affective, or gut reactions to an event. Benner (1984) asserts that expert nurses may intuitively grasp situations and problems without spending time on extravagant analysis. Michelson (1998) contends that embodied learning is situated and thus subject to specific sociohistorical constraints.

According to Tisdell (2003), spirituality is about making meaning and honoring wholeness and the linked nature of all things, and it is ubiquitous in the learning environment. Spiritual development denotes progression towards a more genuine self. Similarly, Graves (1997) asserts that the notion of ‘grace’ has far-reaching implications for pedagogy. Grace has seven qualities. It transforms, touching feelings, beliefs, attitudes, values, views, and volition. It heals, teaching us to search “for the promise” even in odious circumstances (p. 18). It surprises
It surmounts the ego, enabling us to view ourselves as people who are linked to each other and the world. It severs socially constructed boundaries (e.g., age, culture, race), thereby working toward something noble in positive and unanticipated ways. It points toward what is just, while attending to the spirit (versus the literal meaning) of the law. Also, it enhances creativity so that the outcome is extraordinary (Graves). Strategies that foster spiritual development include mentoring (e.g., when built on respect and reciprocity), self-directed learning, and dialogue to help focus on key issues, dissolve barriers, and promote teamwork and alliances (English, 2000).

Merriam et al. (2006) contend that narratives help us to comprehend our experience. We story our lives holistically and in response to the critical incidents that trigger our development. Thus, “we can construct, analyze, reflect upon, and learn from” narratives that encompass us and articulate who we are (p. 215). When exposed to stories, such as case studies and examples from practice, learners may grasp concepts, rules, or theories relevant to practice, forge connections with ideas and other learners, and ultimately create “a learning community” (p. 210). Randall (1996) contends that our story world is always growing. We may restory suddenly (e.g., when compelled to do so by a critical event), or we may choose to restory (e.g., when our prevailing lifestory becomes illogical or no longer makes sense of our existence).

These notions of sense-making extend the conceptualization of learning beyond rationality and theory (Merriam et al., 2006) to involve the whole person. Examples of embodied learning may be RNs’ intuition about patients’ conditions or their reactions to critical situations. Spiritual learning supports human connections and relational learning, the pursuit of justice, and development of the ability to dialogue genuinely about practice. Also, it enriches thinking and
creativity. RNs may be compelled by situations to restory, they may choose to restory to achieve harmony, and they may share stories about patients with other HCPs as the basis for learning and problem solving, thus promoting relational learning and the creation of communities of practice. Through their stories, RNs may illuminate their paradigms, their struggles, and shifts in their paradigms.

**A Critical View of Learning**

Merriam et al. (2006) explain that viewing adult learning through a critical lens moves the focus from the learner to the context, including societal systems, cultural and institutional forces that shape learning, and sociohistorically constructed conditions that mould and define the learning event. Learners question and critique their assumptions about all of these contextual components; also, they challenge their beliefs about the attributes of knowledge, such as which knowledge is legitimate, its location (in the person or society), and how it is learned. Three critical views are critical theory, postmodernism, and feminist theory (Merriam, at al.).

Brookfield (2001) contends that critical theory “springs from the desire to extend democratic socialist values and processes, to create a world in which a commitment to the common good is the foundation of individual well-being and adult development” (p. 21). Brookfield (2005) proposes seven interrelated learning tasks: to recognize and contest ideology that tries to normalize the exploitation of the many by the few, to unearth and oppose hegemony (how people learn to assent to unjust conditions), to expose power and how it is used and misused, to crush alienation so we may use our inherent creativity, to pursue freedom, to restore reason (e.g., values) for application in all spheres of life, and to live democratically. This author foregrounds the politics of learning (e.g., contextual conditions that either constrain or facilitate
it) and illuminates the notion that people (e.g., RNs) who critically think about dominant ideologies and the ensuing socially constructed conditions, including their effects and consequences, may grasp how to deconstruct unfair conditions and create habitats that support justice, learning, and enhanced agency and creativity.

Postmodern perspectives are critical in nature. Although postmodern discourses endorse the possibility of many views and voices, there is no absolute truth to be discovered, “only a plurality of signs, styles, interpretations, and meaningless process” (Collins, 1994, p. 99-100) vying for legitimacy as the truth and the good (Gergen, 1991). Diversity is valued, as are the opportunities available in “uncertainty and undogmatic practices” (Merriam et al., 2006, p. 262). Concurrently, the structures and relationships of power which unite to impede the potential of a polyphonic condition are revealed, and people “struggle for the right to be heard” (Collins, p. 99). Each time we convey knowledge, we exercise power (Kilgore, 2004). Thus, people continuously construct and reconstruct in a negotiated world where one reality of self recedes to reflective questioning, irony, and the playful investigation of yet another reality, and “the center fails to hold” (Gergen, p. 7). Learning must be clearly situated, and students are encouraged to question, critique, and even reject conventional wisdom and the social locations of the stakeholders (Guile & Young, 2002; Kilgore). One solution in such a fragmented world is shared learning whereby experts connect with learners who are working cooperatively with real people on actual problems and replace predesigned solutions with “collaborative, vertical, horizontal, and cross-disciplinary learning” (Finger, 1995, p. 116).

The use of a postmodern lens might help to explain some features of RNs’ learning. Due to constraints, such as HCPs’ lack of pre-service education about drug therapy for OAs and the
dearth of research about that practice, HCPs may have disparate knowledge and views about many aspects of that care and try to assert their views. RNs may question, critique, and even reject the status quo, and they may share their reflective insights about constraints on their learning and strategies to erase them. This lens highlights the importance of learning that is contextually valid and accomplished through ongoing dialogue and negotiation, but always with astute understanding of the power plays at hand.

Tisdell (1996) flagged four recurring themes of feminist pedagogy: how knowledge is created, voice, power, and how to manage differences on many axes (e.g., gender, race). Like Maher (1987), Tisdell (1996) contends that while models that focus on social transformation and structural social change highlight the topic of difference and how to manage it, they focus excessively on social structures at the expense of people’s abilities to be agents outside the structures (also see Tisdell, 1998). Conversely, the gender models are concerned about the psychological emancipation (Tisdell, 1996; also see Tisdell, 1998) of women generically (Tisdell, 1998), and thus do not adequately attend to the differences among women, including disparities due to structured relations of power based on class, race, or sexual orientation (Tisdell, 1996, 1998). Tisdell (1996) asserts that a synthesis of these models considers at once the cognitive and emotive components of learning, the person’s aptness for agency, and the psychological and sociopolitical factors that affect learning. This synthesis highlights the significance of relationships and connection for learning, and it explains how power relations, ever present in the learning environment, influence not only how people construct knowledge but also its legitimacy and how it is spread. This synthesis makes the links between psychological factors and structural factors that affect learning the foremost unit of analysis; thus, it may
facilitate learning that is emancipatory in both psychologically and socially transformative ways (Tisdell, 1996). Tisdell (1998) states that if learners examine the influence of intersecting social systems of privilege and oppression on their own identities, including their beliefs and values, they may disrupt the discourse, thereby changing their identities and enhancing their abilities to be agents. Knowing about these poststructural feminist models may help me to grasp any socially constructed conditions and identities that relate to OAs, to RNs, and to other HCPs, and to illuminate how those conditions are created and perpetuated and how they affect RNs’ learning and knowledge. Those insights may be especially helpful because most RNs are women.

Tensions in Professional Learning

Having reviewed adult-learning theories, including information about professional learning, it is useful to explore the work of authors who distil contemporary tensions in professional learning. Baskett et al. (1992) illuminate six overlapping and interacting tensions. They are the degrees to which learning is individual versus collective and rational versus intuitive, the involvement of emotions in learning that has been viewed until now as primarily cognitive, the extent to which learning dilemmas are predictable and amenable with encoded expert knowledge versus nonroutine and unsolvable with it, the extent to which formally structured education and experience contribute to knowledge, and the extent to which knowledge is amassed through the revelation of principles that are formally coded and employed versus socioculturally constructed and context specific. Through these tensions, Baskett et al. provide useful insights about professional learning. At times, formal ways of knowing may be insufficient, even irrelevant, in terms of meeting RNs’ needs. For example, formal activities may be detached from RNs’ lived experiences and thus do little in terms of helping them to expand,
critique, refine, etc., the tacit knowledge (e.g., insights, feelings) (Guba, 1981; Harris, 1993; Polanyi, 1958, cited in Guba) that they have acquired through experience (Harris). Neither may formal activities help RNs who want to collaborate with others to enrich mutual understanding about drug care, or to grasp how contextual conditions affect their learning and strategies to address the conditions.

Other authors lean more toward social learning. Wenger (1998) asserts that all people belong to dynamic communities of practices and are members of several at once; essentially, we nurture learning in our relationships, communities, and organizations. Drawing in part from Wenger’s work, Stamps (1997) states that learning is a social activity that happens on the job; thus, we should keep learning and practice close together. Further, novel ideas about social learning may illuminate how people really learn at work (Stamps). As cited by Stamps, Wenger (1998) claims that “social practice” -- the notion of doing in a local sociohistorical context “that gives structure and meaning” to what is done -- is shared by a community and makes it a community (p. 38). Practice includes explicit knowledge and tacit or implicit knowledge. Learning occurs when participants, while working together, produce practice by negotiating meaning; thus, there is always the potential for embracing novel elements and/or for continuing, rediscovering, or recreating the previous in the new (Wenger).

Both Stamps’ (1997) and Wenger’s (1998) insights are useful for this study. Yet, they neither mention a role for abstract knowledge nor consider that RNs may learn (either formally or informally) outside of work. Also, while the notion of a community of learners who collaboratively negotiate meaning is attractive, conditions within them and beyond them may not support the collegiality necessary for collaboration. Finally, when the authors discuss the
outcomes of learning, they do not include culling outdated knowledge.

Researchers support the use of both practice knowledge and abstract knowledge. Cervero (1990) explains that professional practice is “characterized by complexities, uncertainties, and conflicting values” (p. 85). The aim of professional practice is wise action -- making the best decisions in a specific context and based on certain ethical beliefs --, and know-how from practice is vital to achieve this aim. Decisions relate to setting problems and solving them (Cervero, 1990), processes that are equally important to practice (Cervero, 1992). Learning occurs when professionals know that they need better ways to think about their practice (Cervero, 1990). Although professionals value knowledge gleaned from practice over knowledge acquired from formal learning activities, where legitimate knowledge is deemed to be acontextual, generalizable, and remote enough to cover a variety of situations (Cervero, 1990), researchers support the notion that the advancement of wisdom requires both abstract knowledge and practical knowledge (Cervero, 1990, 1992; also see Baskett et al., 1992). Cervero (1990) explains that professionals may have diverse, even contrary, views about wise action; thus, their actions are always value laden and must be examined against an ethical framework. Also, although professionals use knowledge from practice or from reflection on practice, years of experience may produce inept and dysfunctional behaviours; thus, abstract knowledge also has a key role in facilitating enlightened action because it may transform practical knowledge and spawn new practices, such as antibiotics (Cervero, 1990). Similarly, Benner (1984) claims that knowledge advancement involves expanding practice knowledge “through theory-based scientific investigations and through the charting of the existent ‘know-how’ developed through clinical experience” (p. 3).
Two important insights from this literature that are relevant for this study are the ethical nature of professional practice, and the notion that both practical knowledge and abstract knowledge are necessary to advance wisdom. The researchers reinforce Dewey’s (1938) message that experiential learning is not always effective. Also, they identify professionals’ motivation for learning – to augment their thinking for practice. However, there is no mention of the interest-driven nature of professional reflection (see Wellington & Austin, 1996).

A View of Adult Learning

Drawing from the insights offered by the previous authors, I have distilled a view of adult learning that I will employ to help me to grasp how RNs learn about drug therapy. RNs are diverse. Their learning may be holistic, engaging their whole persons. RNs may learn through formal and/or informal activities. Their learning may be self-directed, other-directed, and transformative, for example, through self-directed learning, through noncognitive learning, and through a critical lens. The transformations may be personal and/or social in nature. RNs may learn through experience, for example, through self-directed learning, transformative learning, embodied learning, and narrative learning. Narrative learning may occur when they dialogue with other stakeholders about critical incidents. A good portion of RNs’ learning may be from experience alone or experience tied to other strategies. Experiential learning may involve reflecting to create personal meaning, engaging in a community of practice, understanding unconscious desires and fears that constrain learning, identifying and targeting undemocratic conditions, and adapting to learning that has occurred in the larger system. Not all experiences may be educative, and mis-educative experiences may hinder growth from future experience. Further, at times, experiential learning may be risky. RNs may learn in communities of practice.
where they and the other members produce practice by negotiating meaning. Sometimes RNs may struggle to learn in postmodern conditions where there are diverse views about whose knowledge and learning modes are valid. Then, their learning may involve questioning, critiquing, and even rejecting the status quo, as well as continuous dialogue and negotiation, but always with an astute grasp of the powerful forces at play.

RNs may learn through reflection that is either tacit or conscious. They may do this when they experience transformations. They may reflect either on action (retrospectively) or in action, for example, in a nimble fashion as they practice. RNs’ reflection is shaped by their interests; thus, it may be geared to practice, to systems, or to people, and it may be either domesticating or liberating in its intent.

RNs’ learning may target problem setting and problem solving, processes that are equally important to practice. Their learning may be continuous and it may involve relearning, conditions that reflect the dynamic nature of knowledge about drug therapy for OAs. RNs’ knowledge may include explicit knowledge, tacit (or implicit) knowledge, abstract knowledge, and a repertoire of context-specific knowledge and reasoning methods procured mostly through experience. The advancement of wisdom requires both practical knowledge and abstract knowledge.

RNs’ motivation to learn may be ignited by internal states (e.g., hearing about a critical incident) and/or by external conditions (e.g., the development of a new drug and associated practices). Thus, RNs may pursue knowledge when they need enhanced cognitive abilities for practice. RNs may learn independently or in a temporarily dependent fashion, for example, in novel situations. Their learning may be personal, and it may occur collectively through
collaboration and partnerships or through relationships and connections with others and the
world. Collaboration may include getting help from resource persons, dialoguing with other
individuals, being involved in collective action, and participating in communities of practice. As
a result of their learning, RNs may add, affirm, refine, or discard knowledge, become more
authentic persons, and amass experience and expertise. Also, they may acquire greater abilities to
address real-life tasks and problems and to fulfill their interests and needs for enjoyment.
Through their resistance, they may be emancipated personally and socially.

Conditions within the hospital and beyond it may affect RNs’ learning; also, they may
determine the legitimacy of knowledge and how knowledge is made and circulated. The
conditions may be ideological, institutional, and psychological and emotive in nature.

RNs’ learning dilemmas may be predictable and routine and thus solvable with a defined
body of knowledge and ethical code. Conversely, they may be complex and messy, making
problem setting the challenge. RNs may constantly be in a dialectical relationship with problems
that are novel, uncertain, and loaded with value conflicts. That may happen when their learning
involves problem finding, experimenting, or considering the implications of their decisions.
RNs’ learning may reflect or support the development of higher order abilities, such as inductive
thinking, divergent thinking, problem finding, intuition, experimentation, creativity, emotional
development, and moral/ethical thinking. Finally, RNs may use many materials and resources to
support their learning.

The preceding literature and view of learning inform my understanding of how adults,
including professionals, learn. To enrich that understanding even more, I now examine literature
about how RNs learn.
How RNs Learn

Benner (1984) asserts that there is a great deal to learn as nurses discover meaning while they participate in the vitally human events that embody the art and science of nursing. RNs may search endlessly for knowledge as they try to contend not only with the diverse nature and knowledge of health care stakeholders involved in drug therapy for OAs, but also with the ongoing shifts in knowledge about OAs, about gerontological care, about drugs, and about health care. In this section, I describe RNs’ learning activities generally and strategies that they use to understand OAs’ care, including drug therapy. Also, I outline teaching programs to increase expertise about drug therapy for OAs and/or about OAs’ care generally, the sources of drug-related information that nurses employ, and technological learning activities and resources, including some that target drug therapy.

**RNs’ Learning Activities Generally**

The results from studies by Cervero and Dimmock (1987), Gunderman (1995), and Krawczak (1995) escalate awareness of RNs’ use of informal ways of learning and their variable learning styles. Cervero and Dimmock surveyed hospital RNs. Their learning activities fell into four different types: self-instruction and performance (both self-planned) and group instruction and inquiry (both other-planned). While group-instruction activities and self-instruction activities were intentionally educative, performance activities and inquiry activities were mainly geared to non-learning outcomes and so were indirectly educative. RNs chose performance activities (e.g., consult a specialist) when they needed information to execute patient care, and self-instruction activities (e.g., consult a medical dictionary) when they knew the information that they needed and suitable resources. Inquiry activities included working with committee members who
determined the curriculum on their own. Group-instruction involved traditional activities, such as a leader-led class. Thus, hospital RNs engage in learning activities that are non-traditional and part of their practice. The researchers suggest that educators consider all four categories if they want to adapt continuing education to their members’ ongoing learning efforts. Organizations and professional associations that recognize the diverse categories may motivate professionals to engage more actively in such learning activities (Cervero & Dimmock).

Gunderman (1995) highlights the lack of understanding about how professionals learn even while various changes in health care fuel their ongoing need to expand their knowledge and their skills. Gunderman surveyed RNs in acute care, long-term care, or other settings to fathom their patterns of continued learning. The results suggest a lavish level of use for 10 activities, presented in rank order: discussing patient care with colleagues, conversing purposefully with patients/families, interpreting reports of patient tests, reviewing written material (e.g., care plans), reading patients’ charts, practicing clinical skills, consulting reference texts (nursing or other), reading non-nursing books or articles, evaluating own charting, and seeking experts to answer questions or understand charts. The six common patterns that emerged, along with examples of the associated learning activities, are as follows. Performance activities (the ten activities mentioned above) were self-planned and tied to nursing practice. Inquiry activities were planned by others. Learning was an after-effect of an activity (e.g., committee work) that was geared to another goal. Group-instruction activities (e.g., conferences, workshops) were planned by others. Self-instruction activities (e.g., experimentation) were self-planned and not a part of routine care. Self-instruction (media-related) activities (e.g., reading journals or books) were self-planned. Group-instruction activities (e.g., taking a course) were planned by others.
Gunderman (1995) explains that the findings support the use of more self-determined, unstructured learning practices at work and recognize the predominance of performance activities; thus, people hold “the seeds for their own growth” (p. 157). The goal is to heighten the learning potential of the practice environment by using activities such as reflective problem solving with more seasoned practitioners and dialogue with other stakeholders. The challenge is to integrate practice knowledge and formal knowledge in a manner that leads to wiser actions. The goal and the challenge mirror Stamps’ (1997) and Cervero’s (1990, 1992) messages.

Gunderman (1995) concludes that RNs need to keep learning from practice. This notion, along with circumstances such as the briskly changing conditions for practice and the diversity of RNs, requires a new focus on continuing education. She suggests that while formal sessions should continue, there should be greater provision of informal offerings that support ongoing learning, RNs’ preference for personalized learning modes, and the import of practical knowledge. Reasons are that professionals make decisions independently; however, they are also connected to other stakeholders in their practice settings. Gunderman recommends that local examination of nurses’ work settings, their diversity, and their learning activities may provide a basis for planning ongoing educational activities. The findings resonate with Stamps’ (1997) notion that novel ideas about social learning may illuminate how people learn at work.

Krawczak (1995) maintains that the current health care system is “increasingly complex and ever changing” (p. 1); thus, HCPs must participate in continuing education to remain competent. Also, the notion that diverse individuals learn best in diverse ways is “the heart of the concept of learning style” (p. 5). While engagement in structured learning activities might gratify some RNs’ learning needs, each day RNs have access to a rich array of on-the-job informal
learning experiences. Krawczak notes that the learning activities identified by Bevis (1975) are predominantly informal. Given the current changes in health care, in the drug landscape, and in knowledge about drug therapy for OAs, Krawczak’s messages are poignant.

When Krawczak (1995) surveyed RNs (most in hospitals) to explore the relationship between preferred learning style and engagement in continued learning activities, she found no important links. As reported, one limitation of the study was that the instrument used does not measure pursuits during leisure time; yet, RNs may pursue learning then due to cost constraints that limit, for example, the availability of staff and time to attend activities at work. Also, the learning activities reported might more so reflect availability than preferred learning style. However, and like Cervero and Dimmock (1987), Krawczak found that the RNs’ preferred learning styles were more varied than the previous research suggests; essentially, while ongoing learning is often equated to participation in formal sessions, nurses also engage in other modes of learning. Krawczak suggests that the idea of continuing education be enlarged to legitimate all activities, and that future studies explore the learning styles of nurses everywhere.

Hospital RNs’ learning activities may also include those found in the instruments used in the aforementioned studies. More learning activities may be asking questions, case studies, demonstrations, simulations, lectures, and participation in discussions, panels, forums, mentorship, and computer instruction (Galbraith, 1990).

*Strategies That RNs Employ to Understand OAs’ Care, Including Drug Therapy*

Next, I explore the strategies that RNs employ to amass information about OAs’ care, including drug therapy. The results of many of the studies detailed above, and in which the participants were either RNs alone or with non-RNs, illuminate various learning activities,
including listening to authoritative experts, readings authoritative texts, collaborating with others, and independent study. RNs in Allen’s (1989) study attended seminars, workshops, courses, and conferences, read scholarly papers (mostly from general nursing journals), and discussed articles with peers. Seventy percent of the RNs chose participating in a course, a workshop, a seminar or a conference, while 18% chose reading and discussion with peers. (Twelve percent equally endorsed either one or both). Half of the RNs had taken a nursing course that dealt at least partly with the care of OAs, and one-sixth of the RNs had taken a gerontology course. The main mode for ongoing learning reported in Hekelman et al.’s (1995) study was external programs delivered by accredited providers.

The respondents in Ross et al.’s (2001) study did not identify drugs as a specific learning need; however, the learning resources used by the RNs were residents, supervisors, families, case conferences, physicians, formal educators, and professional journals. Most of the respondents (RNs and non-RNs) had positive opinions about interactive workshops. They favoured demonstrations, guest speakers, and structured courses. Least favoured were self-directed learning (it infringed on personal time) and computer-assisted instruction. Bye (1988) found that helpful strategies were reading professional journals, consulting colleagues, attending staff meetings and continuing education programs, and independent study. Seventy percent of the respondents to Scherer et al.’s. (2008) survey would participate in an online geriatric course. Finally, respondents in Temple et al.’s (2005) survey reported learning about herbal supplements from continuing education, coworkers, media, friends or family, family physicians, the internet, pharmacies, and homeopaths. Many of the nurse anaesthetists read journals.
Teaching Programs About Drug Therapy for OAs and/or About OAs’ Care Generally

Next, I present teaching programs aimed at increasing expertise about drug therapy for OAs and/or expertise about OAs’ care generally.

Various authors describe programs to enhance expertise about drug therapy for OAs. Santmyer, Serafini, and Larson (1992) studied how a teaching program about psychiatric and behavior problems and the use of psychotropic medications affected learning and documentation. Participants were RNs (11%) and non-RNs (89%) in long-term care. Learning methods included videotaped case studies, discussion, definitions, information about the classes of psychotropic drugs, role-playing, explanation of the teaching program, and instruction about, and use of, standardized care plans. The results suggest improved documentation and knowledge among the staff about psychiatric symptoms and challenging behavior.

MacDonald and Hilton (2001) evaluated a multi-tiered program for nurses and orthopaedic surgeons, geared to pain management for patients aged 75 years and older. The program included an education component (e.g., written material, didactic presentations, content about frail OAs and pain), a systems-support component (e.g., an analgesic form, a flow sheet for documentation), and a clinical-supports component (e.g., pain-resource nurses, weekly rounds lead by the geriatrician, the pharmacist, and the nurse educator). The researchers report that pain-management prescriptions and pain-management practices improved dramatically and contributed to enhanced patient outcomes; however, there is still a need for ongoing improvement in prescribing, in assessing, in managing pain, and in documenting.

Wallace, Grenier, Grossman, Lange, & Lippman (2006) report that a program based on the geriatric nursing science that has developed during the past four decades was presented to
RNs from hospitals, nursing homes, and community agencies. One of the content areas was “pathopharmacological considerations of aging” (p. 215). Results of the pretest and posttest measures show improved attitudes about OAs, and greater knowledge about many aspects of OAs’ care, although drug therapy was not specifically mentioned. As described by Ferris and Pierce (1982), when hospital nurses were asked about their preferences regarding the content, type, length, and location of a cardiovascular program, they chose pharmacology (cardiovascular) as their highest priority content area, and short role-enhancement programs over long specialist-type programs.

Kahl et al. (1992) describe university-based geriatric-education centres that offer geriatric training and technical assistance to health professions educators and practitioners. The foci of their paper are the activities aimed at enhancing HCPs’ (e.g., pharmacists, nurses, doctors) knowledge and skills associated with drug therapy for OAs.

Palmer et al. (2008) studied the use of clinical simulations in improving RNs’, licensed practical nurses’, and nurse educators’ competency in caring for OAs who suffered an acute medical event or a sudden worsening of a chronic condition. Workplace information for the RNs was not given. Prior to the simulations, the participants received scientific information about 10 topics, including polypharmacy, as well as relevant information about evidence-based practice. The results of the pre- and post-test scores suggest that “nurses readily learn” from clinical simulations (p. 165).

Researchers describe train-the-trainer models that include information about drug therapy. Barba and Fay (2009) explain two models to prepare practicing RNs as geriatric resource nurses. Both models include information about evidence-based gerontological nursing
practice and use collaborative and interactive teaching strategies (e.g., workshops, distance learning, clinical projects). One of the models includes content about polypharmacy. A resulting change in practice was the development of a geriatric taskforce to review all postoperative orders for drugs that are included on the Beers list of potentially inappropriate drugs for OAs, and to try to have those drugs changed. The researchers claim that the use of collaborative, interactive, and mentoring strategies excited the nurses and ignited changes in their attitudes, beliefs, and levels of confidence. They suggest the use of more active approaches to learning, as well as learning experiences that are multifarious and appealing.

McConnell, Lekan, et al. (2009) describe the Geriatric Nursing Innovations Through Education Institute. Drug therapy does not seem to be among the many important topics; however, it may be subsumed under other topics (e.g., acute pain, delirium). The “learner-centered” (p. 32) teaching strategies include independent learning (e.g., online modules), experiential learning, session debriefing, reflection, role playing, and clinical case studies that are guided by evidence-based protocols and followed by group discussion and feedback. Other activities are small-group collaboration for problem solving, direct instruction, and mentorship while using new knowledge to address clinical challenges in the workplace. The researchers conclude that the institute is a viable model for cultivating RNs’ abilities to employ evidence-based approaches as they care for OAs with geriatric syndromes.

Two groups of authors describe programs to enhance expertise about OAs’ care generally. In their efforts to develop a new module for RNs who provide care to OAs in the community, Matthews-Smith, Oberski, Gray, Carter, and Smith (2001) analyzed the educational needs of RNs in hospital, nursing homes, and clients’ homes and designed a real-life scenario
based on the findings. The module reflected attention to the disparate needs of the proposed students, the needs of adult learners, critical thinking abilities, and a wish to foster in-depth learning. The researchers claim that while the use of problem-based learning helps learners to merge theory and practice and to develop cognitive abilities, the use of practice portfolios emboldens them to focus on specific features of their practice and to improve their knowledge and skills within their workplaces. After reviewing the literature to understand the best educational practices for enhancing the geriatric competency of RNs in nursing homes, Bourbonniere and Strumpf (2008) recommended the use of a standardized curriculum that is relevant to staff and facilitates certification. They also favored individualizing the mode for delivery, the goals, and the specificity of content to each nursing home, unit, and group of staff, interactive sessions that last up to one hour and are easily accessible, and the development of a core of advanced-practice gerontological nurses to act as educators and consultants. The authors claim that it is possible to enhance and sustain the geriatric competencies of RNs in nursing-homes, depending on the type of learning activities, the design of the educational sessions, and the teacher’s qualifications and consultation practices.

Sources of Drug-Related Information That Nurses Employ

The findings from two studies illuminate the sources of drug-related information that nurses use. Ndosi and Newell (2010) surveyed hospital nurses. Most of the nurses got the greatest portion of their drug-related information at work through autonomous learning and practical experience (only a few got it from formal training). The nurses gleaned information from the British National Formulary, the pharmacist, nursing colleagues, doctors, handouts of patient information, the internet, journals, the hospital formulary, textbooks, and the Monthly
Index of Medical Specialties. Next to the formulary, the nurses depended heavily on human sources, a condition that may reflect their complex practice environments and need for “quick and concise answers” (p. 2660). The authors state that the notion of searching for information from many sources while administering drugs lacks efficiency; instead, workplaces, as the principal learning environment, need to provide nurses with text-based resources (print or electronic) that are accurate, current, reliable, succinct, comprehensive, and readily accessible, and that respond to their needs for information. Although the authors mentioned population aging, it is unclear whether their focus was on sources used to care for all persons or OAs only.

Gettig (2008) surveyed pharmacists, nurses, and doctors to ascertain any differences in their access to, and in their preferences for, drug information. Pharmacists had the greatest access to resources. The most preferred resource by nurses was the Nursing Drug Handbook. The nurses preferred text/hard-copy resources. Resource reliability and accuracy were of primary importance, while succinctness and efficiency were of moderate importance. Gettig contends that HCPs who appropriately use an array of accurate resources can craft evidence-based drug recommendations and optimize patient outcomes. This study did not focus on drug information for OAs only.

Technological Learning Activities and Resources

I found five descriptions of technological learning activities and resources geared to enhancing RNs’ gerontological nursing competency, including some that target drug therapy. D’Amico, Wexler, and Palmer (2010) outline web-based learning activities and resources about OAs’ care. Examples include videos, articles, assessment tools, best practices, case studies, competencies, statistical data, and online courses. In their hypothetical case scenario that includes drug therapy, the authors demonstrate how website materials may be combined with
other activities, such as role playing, collaborating, and care planning. They claim that the use of web-based resources promotes the development of expertise in care and of knowledge about helpful resources.

Felver and Van Son (2007) describe a collection of learning activities and competency evaluations aimed at promoting the development of OA competencies. The authors built the materials into an online baccalaureate program for RNs. Also, they developed a separate CD-ROM to help nursing students and RNs to enhance their geriatric capacity and educators who want to integrate gerontological content or to deliver it as a separate course. Source materials include baccalaureate competencies for geriatric nursing, including polypharmacy. The designers incorporated principles of adult learning. For instance, they provided resources to support independent learning and different activities for different clinical settings. Also, they created many activities (e.g., texts, pictures, a video, opportunities for dialogue) for each competency, and competency evaluations with utility beyond evaluation. Examples are an education brochure for OAs and an in-service about OAs for nursing staff.

In another initiative, “How to Try This” (2011), evidenced-based assessment tools were translated into free, web-based resources in video and in print. Included are a video entitled, “The Beers Criteria for Potentially Inappropriate Medication Use in Older Adults”, and an article entitled, “Monitoring Medication Use in Older Adults”. Resources about other topics, such as falls, delirium, depression, and pain, may also be relevant to drug therapy.

According to Stierle et al. (2006), in 2002, the Nurse Competence in Aging Initiative for RNs was created to help national specialty nursing associations to welcome the concept of, and individual nurses to choose, “‘dual professionalism’ in geriatrics and another specialty” (p. 93;
also see Scholder et al., 2004). Included is a comprehensive website resource center, GeroNurseOnline www.geronurseonline.org. Resources include pharmacology seminars, “Medications and Medication Safety”, and information about post-market drug safety.

Nurses Improving Care for Healthsystem Elders is a national program aimed at achieving “systematic nursing change that will benefit hospitalized older patients” (Mission & Vision, n.d.). Examples of interesting developments are the Resources Tool Kit that includes the Geriatric Resource Nurse model, the Acute Care for Elders model, and clinical protocols. Also included is the Geriatric Institutional Assessment Profile (Abraham et al., 1999), a tool for assisting hospitals to analyze OAs’ needs and to illuminate gaps in their care; thus, I discuss it later, in the section, “Conditions That Influence RNs’ Learning”.

A Critique of these Studies and Initiatives

Each of the aforementioned studies and initiatives is interesting and noteworthy and extends insight about how RNs learn, including about some aspects of drug therapy for OAs. However, amongst the studies and initiatives are those that used predetermined programs and/or components (e.g., best practices, standards, competencies), surveys, RNs from mixed settings, and participants with different pre-service education. None of the studies explored hospital RNs’ views about how they learn about drug therapy for OAs, especially how RNs learn when they face indeterminate and context-bound issues that arise due to changes in health care, in drugs and drug practices, and in gerontological information. Other changes may be the growing diversity of OAs and complexity of their needs. Thus, there seems to be space for this study to explore hospital RNs’ views about their learning, their knowledge, and their learning needs associated with drug therapy for OAs.
Conditions that Influence RNs’ Learning About Drug Therapy for OAs

In the this section, I review literature about conditions that may affect RNs’ abilities to learn about drug therapy for OAs either by impeding their learning or by enhancing it.

Constraints on Learning

Constraints on RNs’ learning about drug therapy for OAs may include barriers from society, from organizations, and from HCPs.

Societal barriers.

Societal barriers to learning may include ageism, the pharmaceutical industry, the dearth of awareness in society about available knowledge, and the use of teaching strategies that do not adhere to current legislation.

Ageism may be a constraint. HCPs’ attitudes and policymakers’ attitudes are frequently embedded in erroneous assumptions or simplistic beliefs about OAs and their health care (Gee, 2000; Matteson, Bearon, & McConnell, 1997). Stereotypes about OAs employed by geriatric experts reinforce current bias against older persons in health care (Thompson, 2011). Authors note the lack of distinction given to OAs’ care (Barnes, 1997), and that OAs sometimes receive “differential treatment” or are boycotted from opportunities (Matteson, Bearon, et al., p. 605-606) (also see Anti-Ageism Taskforce, 2006).

Another constraint on RNs’ learning may be the influence of the pharmaceutical industry (Clarke, 2000; McConnell, Linton, et al., 1997). Years ago, Kahl et al. (1992) noted grave problems in the prescribing of drugs for OAs and with OAs’ use of prescription and non-prescription drugs. The predominant causes were a paucity of information and inadequacies in provider behaviour. More causes were how quickly new drugs were being introduced and the
difficulty disseminating research findings in ways that were clinically useful. They suggested that in order to combat these prescribing problems, patients, families, and HCPs needed more wisdom about geropharmacology. Due to the number of new drugs and the dearth of research about drugs and OAs, RNs may find it challenging to maintain the currency of their knowledge. Ebersole and Hess (2001) highlight the “explosion of new drugs in the past 15 years” (p. 292) and OAs’ use of them even though there is insufficient research with members of that population (also see Anti-Ageism Taskforce, 2006; Miller, 2012; Tabloski, 2010). Hale et al. (2008) agree that OAs are frequently underrepresented in early trials. Edlund (2007) notes the paucity of studies to determine the safety and efficacy of drugs for older people. Many drugs studied before 1989 were not studied in OAs (Tabloski). Thus, there is insufficient research about drug effects, adverse effects, drug-drug interactions (Miller), and analgesics (MacDonald & Hilton, 2001) in OAs. There is a dearth of specific guidelines for withdrawing drugs (McConnell, Linton, et al.). Also, there are reports of problematic prescribing (Clarke; Hale et al.; Miller; Tabloski), due partly to that underrepresentation and to the overwhelming number of drugs available and their potential interactions (Hutchison, 1999).

Other constraints are a lack of awareness in society about available information, and the use of teaching strategies that are not in tune with legislation. Temple et al. (2005) found that constraints on RN anaesthetists’ knowledge about herbal supplements and anaesthesia included their lack of awareness of the American Society of Anesthesiologists’ position about herbal supplements, and the fact that understanding about the effects of herbals on surgical outcomes when combined with drugs, was fairly new in the Western cultures. Also, they call for more research about herbal supplement interactions to enhance provider knowledge (Temple et al.).
From their study of a teaching program about behavior and symptom management, Santmyer et al. (1992) found that the RNs responsible for developing the resident care plans did not fully employ the standardized plans provided due to their concern that the government regulatory agencies would not condone their use.

*Organizational barriers.*

Organizational barriers to learning may include local and logistical obstacles to engagement, stakeholders’ disparate views and attitudes, as well as issues associated with models for care, with governance, with systems and resources (e.g., for learning), and with systems directly associated with drug therapy.

Local and logistical obstacles may include tuition costs, work (and family) responsibilities, a lack of program information (Bye, 1988; Glass & Todd-Atkinson, 1999), peer opinions and attitudes, a lack of employer cooperation (Glass & Todd-Atkinson), and a dearth of preferred journals in the workplace (Allen, 1989). Ross et al. (2001) found that reasons for not attending continuing education sessions included a lack of availability, insufficient support from the facilities, a lack of relevance, and problematic timing.

Cervero (1988) states that for an organization to function effectively, all of its parts must work together toward the same outcomes. However, Abraham et al. (1999) highlight institutional obstacles to best practice in geriatrics. Drawing from their work and that of other authors, constraints on RNs’ learning about drug therapy for OAs may include a lack of commitment from the staff and the institution to aging, OAs, and their care (Abraham et al.), administrative opinion that OAs need physical care that involves little professional ability (McConnell, 1997), and institutional values that do not support staff (e.g., little effort to encourage them to grow or to
empower them to provide quality care) (Abraham et al.).

Another constraint may be that nursing care is undervalued (McConnell, 1997), evidenced by the differences in RNs’ and physicians’ authority, responsibilities, prestige, and conditions of work (Clarke, 2000), together with nurses’ subordinate position within a division of labor that is dominated by medicine (Freidson, 1970; Chappell, Gee, McDonald, & Stones, 2003; Clarke; McBride, 2000). These conditions, especially when reinforced by the predominant use of the medical model, may create practice-related challenges that hinder RNs’ abilities to learn about drug therapy for individual OAs and then, when appropriate, to use that learning to enrich their learning about drug therapy for OAs generally. The medical model controls the delivery of health care (Clarke; McBride). The resulting narrow spotlight on acute medical problems may not support the broad focus that RNs’ require (McConnell) to learn about the needs and the function (see McBride) of OAs on medication. (See Clegg, Young, Illiffe, Rikkert, & Rockwood (2013) about health care’s focus on single-system versus multi-organ challenges.) For example, broad assessment may be necessary to illuminate any underlying chronic needs and to learn how they may benefit from, affect, or be affected by drug therapy. Also, broad assessment may be necessary to discover the cause/s of OAs’ sometimes atypical signs and symptoms (McKercher & Crilly, 2000), including drug-related causes, and to learn about the importance of knowing about OAs’ holistic needs and function as a basis for monitoring drug effects, protecting their status, and teaching them about drug therapy. Because the medical model trivializes the contributions of nonphysicians to care (McBride), it may not invite RNs’ attempts to learn collaboratively with doctors about complexities in drug therapy for OAs. Also, the disconnected and medically directed (McConnell) nature of drug care under the model may
impede RNs’ access to the comprehensive information that they require to learn about the drug-related needs of OAs.

More constraints on RNs’ learning may arise from an organization’s entrenchment of managerial views. Varcoe and Rodney (2002) describe the ideology of scarcity and its techniques. Pressures for efficiency in acute care (Kane et al., 2009) may result in the use of strategies such as reducing the number of RNs and replacing RNs with less qualified staff (Tourangeau, Giovannetti, Tu, & Wood, 2002; also see Jacelon, 1999). Then, RNs will have fewer RN colleagues to learn collaboratively with, and less time to learn. Managerialism may impede RNs’ abilities to access learning activities and resources. Also, although RNs may want to dialogue with administrators about barriers to learning, they may not because they fear the consequences in a managerial climate.4

System-and-resource constraints may be HCPs’ lack of knowledge about OAs’ care (Foreman et al., 1994, and please see the authors mentioned previously), a shortage of knowledge about OAs’ care, and different opinions amongst the disciplines about usual geriatric challenges (Abraham et al., 1999). Another barrier may be the sources of drug information available to RNs at work. Ndosi and Newell (2010) found that most hospital nurses depended heavily on human sources of information. Yet, such sources may not always be available or trustworthy. Pharmacists may only be available during normal working hours. Although consultation with other nurses or with doctors may furnish answers for specific situations, the information they give may not be critically appraised or evidence based (Ndosi & Newell).

The failure of hospital systems directly associated with drug therapy may constrain learning about drug therapy for OAs. Through their analysis in two hospitals, Leape et al. (1995)
identified drug-related errors that caused preventable or potential adverse drug events, as well as proximal causes of the errors and underlying systems failures. Some of the systems failures, for example, shortcomings in (a) the dissemination of drug knowledge (e.g., physician prescribing errors due to insufficient knowledge), (b) access to patient information (e.g., about laboratory results, current drugs), (c) interservice communication (e.g., nurses had difficulty contacting pharmacists), (d) the provision of standards for doses and for frequencies (e.g., no hospital standards for dosing schedules), (e) staffing and assignment (e.g., assignments were not adjusted to changes in the patient census and acuity), and (f) the provision of feedback (nurses and doctors received paltry information about drug errors), may also impede RNs’ learning about drug therapy for OAs. These systems failures may do this, for example, by reducing RNs’ time for learning, as well as their access to learning opportunities, such as reading current information about drugs, including standards for them, reading patients’ information to learn about links between drugs and laboratory results and about interactions, collaborating with pharmacists, and learning from feedback.

Characteristics of HCPs.

HCPs’ attitudes and lack of knowledge may impede RNs’ learning about drug therapy for OAs. In most clinical settings OAs are ubiquitous (Felver & Van Son, 2007). However, and as was mentioned above, HCPs’ and policymakers’ attitudes are often tainted by erroneous understanding about OAs (Gee, 2000; Matteson, Bearon, & McConnell, 1997). Also, authors highlight the lack of HCPs who are prepared to care for OAs (Abraham et al., 1999; Institute of Medicine, 2008; Kovner, Mezey, & Harrington, 2002) (also, please see the authors identified in chapter 1). Mezey, Capezuti, & Fulmer (2004) claim that “with a few notable exceptions, limited
attention has been paid to how care is delivered to older adults” or to provider competency (p. xiv). HCPs lack knowledge about aging, about problems in older age (McConnell, 1997), and about OAs’ unique needs and care (Abraham et al.; Barnes, 1997; Mariano, 1995). For example, adverse events in OAs often result in the use of risky interventions, such as psychotropic medications, restraints, and urinary catheters (Foreman et al., 1994).

Authors specifically note the lack of RNs who are prepared to care for OAs (Berman et al., 2005; Pringle, 2009; Rosenfeld, Bottrell, Fulmer, & Mezey, 1999; Scholder et al., 2004; Stierle et al., 2006; Wallace, Grenier, et al., 2006). Stierle et al. highlight the “critical shortage of nurses in geriatrics” (p. 94). That is the case even though the American Nurses Association granted specialty status to geriatric nursing in 1966, there is a robust body of knowledge about geriatric nursing that could greatly improve care (Wallace, Grenier, et al.), and gerontological nursing is one of the profession’s most challenging areas of practice (American Nurses Association, 2001). Only a limited number of RNs are informed about the unique facets of OAs’ care (Barnes, 1997; Felver & Van Son, 2007; McConnell, 1997; Miller, 2012; Rosenfeld et al.), and that condition might not end soon. Authors target the delay in gerontologically preparing future RNs (Baumbusch & Andrusyszyn, 2002; Institute of Medicine, 2008; Kovner et al., 2002; Scholder et al.; Stierle et al.). Due to HCPs’ impoverished knowledge, RNs may lack colleagues for collaborative learning. Then, RNs may have difficulty building repertoires of knowledge about individual OAs that protect not only them but also OAs generally. Also, RNs and other HCPs may inadvertently provide drug therapy for individual OAs that is based on inaccurate diagnoses and/or involves inappropriate interventions, conditions that may promote negative consequences for them and flawed learning about drug therapy for all OAs.
RNs’ lack of awareness of their knowledge gaps may cloud their abilities to know when they need more knowledge, what knowledge they need, and/or how to access it. When Horbury, Henderson, and Bromley (2005) studied hospital RNs’ beliefs and motives associated with administering analgesics, they found knowledge deficits. They suggest that the RNs’ poor attendance at in-services about pain may have been because neither they nor their nurse leaders knew about the knowledge deficit and they encouraged attendance based on a need to know. McCaffery, Ferrell, O’Neil-Page, and Lester (1990) discovered that the attendees (mostly RNs) at pain workshops lacked knowledge about the classes of opioids and were shocked to hear of it. Reasons for the nurses’ confusion about opioids may have been the media’s tendency to refer to all abused substances as narcotics, the inexact use of the term in hospitals, drug marketing, and the attendees’ lack of knowledge about the prevalence of drug addiction in patients with pain. Legal and administrative barriers to giving opioids may convey the messages that avoidance is preferable and that opioids are likely to be misused, thus adding to the attendees’ fears about addiction (McCaffery et al.). The researchers suggest that sparse or negligible advances may have been made in correcting nurses’ erroneous views about psychological dependence on opioids. More recently, MacDonald and Hilton (2001) highlight HCPs’ lack of knowledge and their fears about analgesic side effects.

Facilitators of Learning

Conditions in society and in organizations may facilitate RNs’ learning about drug therapy for OAs.

Societal facilitators.

Societal facilitators include the drug industry and legislation. Facilitators from the drug
industry are more research (and guidelines) about drug therapy for OAs. Temple et al. (2005) suggest that standardization and regulation of herbals may facilitate the research necessary to fully grasp their impact. From a legislative view, Santmyer et al. (1992) report that the adoption of the Omnibus Budget Reconciliation Act of 1987 enhanced staff’s awareness of the practices necessary to deliver adept mental health care. The RNs in Volinn’s (1982) study tied self-improvement to education that was linked to updated licensing and institutional laws and regulations.

*Organizational facilitators.*

Organizational facilitators of RNs’ learning include commitment to OAs and to learning. Commitment includes the provision of ongoing education for RNs (and other HCPs) about drugs, about OAs, and about drug therapy for OAs, together with encouragement for RNs (and other HCPs) to learn more about these topics. There is support for these facilitators. One concept from the Acute Care for Elders model is “geriatric training” for nurses and other care providers (Nurses Improving Care, n.d.). Other authors target support and encouragement from peers, directors, and administrators to participate in education sessions and in staff discussions (Allen, 1989), encouragement of personal growth (Abraham et al., 1999), and encouragement from supervisors (Bye, 1988), as well as readily available sessions, peer opinions, time off with pay, and reimbursement of tuition and travel costs (Bye; also see Glass & Todd-Atkinson, 1999). Facilities must support RNs who pursue new knowledge, and all attempts to alter practice or to augment skills must be supported by plans to sustain them (Bourbonniere & Strumpf, 2008). Gunderman (1995) states that continuing educators must maximize the learning capacity of the practice setting. A strategy may be to equip the people who converse with professionals (e.g.,
their colleagues, supervisors) with the tools that they need to fathom the act of learning, and to help each other to learn from experience and how to acquire knowledge from practice (Gunderman). Tools may include sufficient at-work learning resources. RNs who worked in facilities without journals wanted access to any gerontological journal (Allen).

Organizational conditions enable teaching programs. The success of a pain-management program depends on the institution’s commitment to champion interdisciplinary accountability, to establish “standards of practice, education, and ongoing quality improvement initiatives”, and to supply the needed resources (MacDonald & Hilton, 2001, p. 64). Other facilitators are nurse administrators’ support of the program, staff’s high level of acceptance of it, and collaboration amongst nurses with different clinical and educational expertise (Santmyer et al., 1992).

Added organizational facilitators may be the provision of safe spaces for genuine, collaborative, and respectful dialogue about care and practice-related issues, acceptance of diverse views (see Abraham et al., 1999), and a culture wherein all HCPs’ contributions are recognized and valued. More facilitators may be the design of effective systems for following up on adverse drug events and their causes (Leape et al., 1995). The notions of teamwork, collegiality, and valuing contributions have support in the literature. Abraham et al. note the need for HCPs and administrators to work together to solve OAs’ challenges. A concept in the Acute Care for Elders model is the use of interprofessional teams (Nurses Improving, n.d.). RNs in Vollin’s (1982) study tied self-improvement to education that was wedded either to greater cooperation between nurses and doctors, particularly those with expertise in geriatric medicine, or to more support from doctors. English (2000) speaks about concepts (e.g., self-discipline, reciprocal engagement, reduction of ego) that convey the message that even though one person
may know more about a topic, every person has experiences to share.

Another facilitator of learning may be more time. Gunderman (1995) states that nurses need time to dialogue with other nurses, other HCPs, patients, and families (see Abraham et al., 1999). More facilitators may be responsive systems for sharing data about new drugs and drug practices, along with in-hospital standards (e.g., for doses and frequencies) that are tied to current research about drugs and OAs (see Leape et al., 1995).

Drawing from the work of authors who identify facilitators of gerontological care, other facilitators of learning may be the use of a “geriatric approach”, meaning “extra time, effort, expertise, and teamwork” (Gorbien et al., 1992, p. 1040), and the use of gerontologically prepared teams of HCPs who want to provide patient-focused, goal-oriented, cost-effective, and coordinated care (McConnell, 1997). The RNs in Volinn’s (1982) study tied self-improvement to education that is linked to coordinated community resources. So, a key enabler may be unity of geriatric systems and services to boost coordination of, and dialogue about, drug care.

A facilitator may be the use of a model for care that goes beyond the curative interest of the medical model to include foci on health promotion and protection (see Pender, Murdaugh, & Parsons, 2002), socially constructed inequalities (see Clarke, 2000), and chronic illness. Then, RNs may learn how to promote and/or maintain the holistic wellness and function of OAs and, as well, about links between chronic illness, acute illness, normal aging changes, and drug therapy. Also, RNs may discover socially constructed constraints (e.g., attitudes about age) on learning and critical approaches to learning that help them to contest such constraints.

More facilitators of learning may be staffing systems that meet OAs’ needs (see Abraham et al., 1999), that may be adapted easily in response to fluctuations in the number of OAs and the
complexity of their needs, and that support mentorship about drug therapy (Leape et al., 1995). RNs tied self-improvement to education that was combined with more staff, with assignment to diverse shifts, and with clearer explanations of skilful care (Volinn, 1982). Another facilitator may be the use of drug-related practices. Temple et al. (2005) found higher knowledge scores for RNs who used herbals, suggesting that greater exposure enhances knowledge.

Conceptual Framework

Drawing from the work of many researchers mentioned in this study, I have designed a conceptual framework that illustrates the areas that the research questions probe (see Figure 1). Essentially, the framework “broadly explains phenomena of interest, expresses assumptions, and reflects a philosophical stance” (Burns & Grove, 1999, p. 131).

Drug therapy for OAs is a complex activity, made so by intricacies within OAs themselves and intricacies in the socio-political conditions that exist both within and beyond the hospital. Thus, RNs’ knowledge and their learning needs for that practice may be diverse, dynamic, and extensive. RNs lack pre-service education about drug therapy for OAs, yet they may play a pivotal role in that therapy. Their learning may be ongoing as they build, enrich, transform, validate, and tweak their repertoires of knowledge and their thinking to stay current with the quickly changing landscapes of gerontological wisdom, of drugs and drug practices, of hospital care, and of socio-political conditions.

RNs’ motivations to learn may be diverse and triggered either internally or externally. RNs may use diverse learning strategies (please see “A View of Adult Learning” in this chapter) to acquire both abstract knowledge and practical knowledge. Their strategies may be mostly informal and embedded in practice, and they may be holistic both in their multifarious nature and
because RNs’ learning may sometimes be aesthetic, engaging all aspects of their unique selves with the experience at hand. Formal ways of knowing may often be insufficient, even irrelevant, in terms of meeting RNs’ needs. That is because RNs may encounter daily learning dilemmas that are uncertain, messy, and fraught with value conflict. They may even see potentially/harmful drug-related practices and outcomes that cause internal turmoil and spur more learning. Thus, they may use dialectical approaches to problem setting and problem solving, or what Cervero
(1990) refers to as “wise action” (“making the best judgment in a specific context”) (p. 86).

RNs’ learning is grounded in the socially constructed conditions within and beyond their hospital. That context may be replete with multiple stakeholders with diverse and often conflicting knowledge, views, and interests, together with powerful ideologies about ‘who’ (e.g., which stakeholders) and ‘what’ (e.g., what knowledge and practices) are important. Those conditions, together with the powerful forces that create and perpetuate them, may influence RNs’ learning, either by constraining it or by catalyzing it. They may shape the contemporaneousness, form, and quantity of RNs’ learning activities and their knowledge associated with drug care for OAs. Thus, the ultimate quality of drug therapy for OAs in hospital -- its potentialities, relevance, effectiveness, outcomes, and implications – may be decided in part by the extent to which RNs can successfully acquire the knowledge that they need to meet their own needs and those of OAs. Not surprisingly, at times RNs’ learning may be critical and emancipatory and even touched by spiritual grace (see Graves, 1997, previously).

Summary

In this chapter, I did the following: offered literature that illuminates RNs’ learning needs relative to drug therapy for OAs, critiqued literature about how adults, including professionals, learn, described tensions in professional learning, and distilled a lens that may capture how RNs in this study learn about drug therapy for OAs. Other literature explains how RNs learn generally and about OAs’ care and/or drug therapy for OAs in particular, along with conditions that affect RNs’ learning. Many of these concepts are mirrored in the conceptual framework. It provides a contextual backdrop for this study to fathom how hospital RNs learn about drug therapy for OAs, their associated knowledge and learning needs, and conditions that influence their learning.
CHAPTER 3 METHOD

In this chapter, I examine literature about questionnaires and surveys. Then, I explain the foundation for the constructivist paradigm, the nature of qualitative research, and my rationale for using a qualitative approach. I overview the design, including participant selection and recruitment, the participants’ characteristics, and the processes used to collect, manage, and analyze the data and to achieve rigor. Also, I outline my assumptions, how I protected the ethical and human rights of the participants, and the limitations and the strengths of the study.

Literature About Questionnaires and Surveys

By examining literature I discovered that surveys are limited in terms of distinguishing between wants, needs, interests, and demands, and illuminating actual but unrecognized needs and latent interests (Cameron, 1988). Questionnaires and surveys are economical in terms of the time for administration and analysis, they allow quantification of the comparative importance of individual needs, and they can be used with large samples; however, responses may be restricted and thus superficial, response rates may be variable and result in bias, and there is little chance to explore the meaning of answers (Matthews-Smith et al., 2001). Close-ended questionnaires constrain participants’ ability to engender other topics of interest (Kristjanson & Scanlan, 1989), and survey results tend to emphasize breadth versus depth (LoBiondo-Wood & Haber, 1998) and specificity (Cameron). Also, the finding that some RNs think that their own learning needs are not as great as those of RNs in other settings raises questions, for example, about RNs’ awareness of their needs or their priority, and about whether RNs are speaking about their own experiences or their observations of other nurses (Timms, 1992, 1995), that may be explored and answered through dialogue.
Constructivism and the Qualitative Method

Questions about method are associated with questions about paradigm, defined as the fundamental beliefs or worldview that guides the researcher both in the choice of method and “in ontologically and epistemologically fundamental ways” (Guba & Lincoln, 1994). From an ontological view, constructivist researchers assume that there are multiple, socially constructed, contextually situated, and dynamic realities (Cohen, 2002; Guba, 1981; Guba & Lincoln, 1981, 1994, 2005). From an epistemological view, truth is subjective and thus multiple, dynamic, and literally created through interaction between the participants and the researcher (Cohen; Guba & Lincoln, 1994, 2005). Inquiry diverges as more information comes to light, all of the elements of reality are mutually related, and truth is a “best fit” for a specific context, making generalizations impossible (Guba, 1981, p. 77). Methods are hermeneutical/dialectical, and transformative or reconstructive (Cohen; Guba & Lincoln, 1994, 2005). The aim is to describe, understand, transform, and reconstruct. At times, it results in consensus that is more enlightened and sophisticated than any previous constructions (Cohen; Guba & Lincoln, 1994, 2005).

Denzin and Lincoln (2003) explain that qualitative research situates the researcher in the world. The researcher employs many “interconnected interpretive practices” (p. 5), such as notes, recordings, interviews, and conversations, to transform the world for the purposes of illuminating and discerning the phenomenon. Using “an interpretive, naturalistic approach” (p. 5), researchers try to interpret the meanings that people bring to the phenomenon. Multiple paradigms, including constructivism, employ qualitative research methods and strategies (Denzin & Lincoln).

According to Merriam (2009), the more common form of qualitative research is a “basic qualitative study” [italics included] (p. 22). The use of qualitative methods (please see Data
Collection, below) enabled the RNs to share in an unrestrained and unfiltered way, their expert, subjective, contextual, and thus disparate views about the following: their knowledge, their motives for learning (including how their interests shaped their learning), the many ways by which they learned and relearned, the outcomes of their learning, the forces that shaped their learning and thus their knowledge, their learning dilemmas (including the factors that fuelled them), the continuous nature of their learning and the resulting extensive and dynamic nature of their knowledge and learning needs, how the results of their learning influenced their future learning abilities, knowledge, learning needs, and learning practices and, finally, their feelings and thoughts associated with their learning supports, their learning practices, and the outcomes of their learning. Essentially, the use of these methods supported the construction of an in-depth mutual understanding (see Burns & Grove, 1999) about their views.

Participant Selection, Recruitment, and Characteristics

Small samples tend to be the norm in qualitative research, owing to the intensive contact (through interviews) with participants and to the significant amount of verbal data that require analysis (Sandelowski, 1986). I used a nonprobability (purposive) sample of five RNs who met the selection criteria (please see the next paragraph) and wanted to participate. The small sample gave the RNs time to reflect about how they learned, about conditions that affected their learning, and about the knowledge-related questions and prompts, and to respond. Also, the size of the sample allowed for in-depth exploration of the RNs’ sometimes diverse perspectives.

Variables like education (Bye, 1988; Zorn & O’Keefe, 1989), age, the shift worked, and position (Bye) may contribute to diverse perceptions about learning needs. Thus, the specific selection criteria and the rationale were as follows. RNs had not been exposed to gerontological-
nursing courses, including content about drug therapy for OAs, during their pre-service education. This criterion excluded graduates of programs that expose students to gerontological-nursing courses. RNs had worked either on a full- or a regular-part-time basis (days and evenings) in acute medicine and/or surgery for at least two years, and mostly with OAs. Experienced RNs who work on the busiest units and during the busiest hours with OAs may be ready and able to speak about their drug-therapy knowledge, about their learning, and about conditions that affect it. RNs spoke English as their first language (to enhance our dialogue together and my ability to understand them), and they lived in [name of the city] to enhance my access to them. Use of all of these criteria enabled me to attract RNs with whom I was able to explore the research questions in an interactive and transformative manner. Essentially, they could “illuminate the phenomenon being studied” (Sandelowski, 1986, p. 31).

To find RNs who wanted to participate and could elucidate the phenomenon (Haber, 1998), I met with the nurse managers on the surgical units and the medical units of an acute-care hospital to explain the study and to provide them with copies of the recruitment letter (see Appendix B) which they kindly disseminated to the RNs on their units. Six RNs contacted me by phone. We negotiated times and places for the first interviews. One RN withdrew from the study before the first interview. During each initial interview, I explained the study’s purpose and the consent (see Appendix C) to each RN and answered any questions. Each RN signed two copies of the consent and kept a copy. Five RNs participated in the study. All RNs were white women in their forties. More characteristics are in Table 1.

Data Collection

I used face-to-face individual interviews to explore RNs’ knowledge and learning needs about
Table 1

*Characteristics of the Five Participants*

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<tr>
<td>POP with OAs</td>
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<td>50-60%</td>
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<td>65-75%</td>
<td><strong>70%</strong></td>
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Education: BScN = bachelor of science in nursing; D = diploma in nursing
PS course: pre-service course about gerontological nursing
Category: RPT = regular part time; FT = full time
Type of nursing: MS = medical/surgical; CM = cardiology/medicine; S = surgery
POP with OAs: per cent of practice time spent with OAs (*later, said 60% and “increasing”; ** later, said, “60%...easy”).

drug therapy for OAs, their related learning practices, and conditions that affected their learning.

Three RNs chose to be interviewed in my home. Two chose their homes. I conducted two, two-hour interviews with each of three RNs, and one, two-hour interview with each of two RNs. The three RNs who were interviewed twice had “more than a passing interest in the study” (Van Manen, 1990, p. 98). They provided more examples and specific information. One RN was concerned about the care that her father was receiving. The other two were close to retirement and concerned about the care that OAs were receiving. They had been critically appraising the issues for awhile and wanted their insights to be heard, understood, and acted upon.

The interview process must be regulated by the question that prompted the need for it (Van Manen, 1990). I used semi-structured and taped interviews. My use of questioning techniques (e.g., “Can you tell me more?”, “Can you give me an example?”), “How did you
acquire that knowledge?”, and “What if any conditions affect/ed your ability to access that knowledge?” enabled each RN and me to develop a conversational or dialogic relationship with each other and the phenomenon (Van Manen). At the beginning of the interview, I asked close-ended questions to collect demographic data from the RN. Next, I asked about their most pressing learning needs (if any) relative to drug care for OAs. When they identified needs, I used questioning techniques (e.g., “Can you tell me more about that?”, “What made you realize that you have that learning need?”; “How would that knowledge help you?”) to gain an in-depth understanding of them and rationale for them.

None of the RNs had had any pre-service education about gerontological nursing. Thus, prior to the individual interviews, I reviewed the literature to understand various authors’ views about the knowledge that hospital RNs need to provide OAs with drug therapy and about conditions that affect their learning. That review illuminated many broad questions (Appendix D) and handy prompts that I used to stimulate discussion. I had no assumptions about suggestions that would resonate with the RNs. I asked each RN to identify suggested topics that were relevant to them, including knowledge that they already had, knowledge that they lacked, and topics that they needed to know even more about than the other experts suggest. Also, I asked them to identify any topics beyond those suggested that they thought were important, including knowledge that they already had and knowledge that they lacked. When the RNs responded to a question, I used questioning techniques to understand their views and rationale more fully. Examples included these: “Is there anything else you need to know about this topic, or not?”, “Are there any topics beyond those that we have discussed that you need to know about, or not?”, “If so, what is that knowledge?”, “How would it help you?”, and “Can you give
me an example?” When the RNs identified relevant knowledge, I asked them how they had acquired it (if they had) and about any conditions that had affected their learning.

My use of this dialogic approach served many purposes. It was polyphonic and collaborative, due to including the RNs’ voices, other experts’ suggestions, and my voice. It supported the RNs’ autonomy as experts in their own practice, and it stimulated their consideration of suggested knowledge (and associated learning needs) and of constraints and facilitators of learning that they had not been aware of. It took account of opposing values and attended to local political, social, and economic realities (Harris, 1993). As I learned from the RNs, I was able to make succeeding stages of inquiry more explicit and refined (Guba & Lincoln, 1981). As a result, the RNs refuted, validated, and/or enriched the knowledge that other experts suggest in the literature. Also, the RNs elucidated their own expert views about how they learned, about conditions that affected their learning, and about their holistic practice repertoires, comprised of their drug-therapy knowledge and learning needs.

Interactivity (Guba & Lincoln, 1981), or intersubjectivity (Van Manen, 1990), is a characteristic of all phenomena. Sandelowski (1986) cautions that the closeness of the researcher-participant relationship is a “major threat to the truth value of a qualitative study” (p. 30). During each interview, the RN and I were interrelated and influenced each other (Guba, 1981). Reasons included our mutual interest in the topic, our experience with this care, and the fact that we shared a common culture of nursing. As well, we learned from each other, including from our reactions. Thus, I heeded Sandelowski’s (1986) and Beck’s (1993) suggestions that credibility is heightened when researchers describe and explain the relationships between their own behaviour and experiences and the participants’ behaviour and experiences. My subjectivity
(values, attitudes, beliefs, interests, needs) operated in dispositional and in deterministic ways, consciously or unconsciously (Glesne & Peshkin, 1992). I tried to free myself from the assumptions ingrained in my own conventional knowledge and practice (Schon, in his forward to Cevero, 1988) and to avoid selective perception (Guba & Lincoln). Yet, I knew that while my use of certain “safeguards” may minimize the interactivity, a great deal of it still remained (Guba & Lincoln, p. 58). I had been an RN for 33 years. I had previously practiced in gerontological nursing, and for the past 16 years I had been teaching nursing students about that field. Often OAs, their family members, nursing students, and colleagues call me to discuss care-related issues. I frequently am troubled by the quality of the drug (and other) care that OAs receive, and I have advocated for OAs individually and from a systems perspective, including in publications.

I tried to be insightful and genuine about my standpoint on the topics at hand. I believe that we need to critically examine and contest unjust conditions that affect our lives or those of other people. Unjust conditions are evident in the findings from this study, and I, an RN, had experienced many of them. Thus, during the interviews, I often found myself reflecting about these conditions at the same time that I tried to listen to the RNs. For example, I tried to think about different resources (e.g., regulatory bodies, Accreditation Canada) that may alert health care stakeholders (e.g., HCPs, nurse and other administrators) to their responsibilities to speak out about issues that matter. When I heard stories about administrators’ managerial, top-down, and disappointingly simplistic leadership, I bemoaned how it hindered RNs’ learning and how OAs suffered due to RNs’ and other HCPs’ reduced resourcefulness. Although I knew that I had not heard all sides of the stories, initially my biases affected my take on the RNs’ messages, and on occasion I only became aware of this when I reread the transcripts.
I got sidetracked when I heard about questionable drug-related practices. That happened when an RN spoke about using serum creatinine (a laboratory test) to assess OAs’ renal function, even though it is not a valid indicator of kidney function in OAs (see Kane et al., 2009). So I sent a hospital pharmacist a paper about normal aging changes and pharmacokinetics in OAs, along with the message, “I wondered if you might find this paper interesting.” The pharmacist sent their thanks. When an RN explained the notion of the revolving door, whereby OAs were discharged on the wrong medication and ended up being readmitted, I thought how the use of formalized systems for medication reconciliation or coordination may disrupt these cycles and their costs to OAs and the health care system. When I heard that HCPs were giving OAs Demerol, I thought about its potential unsuitability for OAs (see the Beers criteria (2003), http://archinte.ama-assn.org/cgi/content/full/163/22/2716; Tabloski, 2010), and I mentioned the Beers criteria. When the RN asked how she may access the criteria, I told her. I bemoaned the ongoing lack of use of age-adjusted laboratory norms for OAs when they have been available for some time (see Edwards & Baird, 2005). Also, I felt uneasy whenever the RNs described learning through risky practices. Although it is not HCPs’ fault, I think that the uninformed care that many OAs receive is unacceptable.

I was not always satisfied with my interviewing techniques. At times I was affected by fatigue (Guba & Lincoln, 1981) and time pressures. When RNs used the term ‘doctors’ I, due to fatigue, did not always ask if they were speaking about doctors generally or specifically (e.g., gerontologists, general practitioners (GPs), specialists). Neither did I always clarify when RNs used terms such as ‘we’ or ‘us’; thus, I did not know to whom they were referring (e.g., to all staff, or just to themselves and other RNs). At times, I should have delved more into what an RN
was saying in order to prevent premature closure on the topic, or I did not ask an important question, for example, one that brought the focus back to OAs specifically (versus patients generally) or one that invited clarification. Sometimes my questions were vague. Rarely, I spoke for an RN rather than letting her speak for herself. When the tape recorder failed for a few minutes and the RN and I had to redo that section of the interview, I felt pressured due to my concern about the RN’s time.

More often, the interview went well because the RN and I were embedded in a common culture of nursing concepts, tools, practice, and language. To stay true to the aim of my inquiry (Van Manen, 1990) and to optimize my learning from the RNs, I tried to determine my perceptions and their effect on the information as it developed (Guba & Lincoln, 1981). I tried to monitor what was working internally to affect (e.g., “shape, skew, distort, construe and misconstrue”) my sense-making as I collected, analyzed, and wrote up the data (Glesne & Peshkin, 1992, p. 106). I tried to do the following: to listen to each RN without prematurely moulding their words into my own framework (Wright, 1975), to avoid becoming arbitrary, undisciplined, or led astray by my unreflected views or becoming “misled, sidetracked, or enchanted by extraneous elements”, to be as perceptive as possible in order to disclose the full breadth and depth of the phenomenon (Van Manen, p. 20), and to use neutral (non-leading) phrases, such as, “Can you tell me whether or not…?” and “How, if at all…?”. Also, I made notes about my insights and reported them here (Glesne & Peshkin).

Data Analysis

The interviews generated 591 pages of transcribed data (a mix of single and double spacing). Once the tapes had been transcribed, I wrote the participants’ individual numbers,
along with the interview numbers, on the transcripts (Burns & Grove, 1999). To get a sense of the whole (Giorgi, 1975), I listened to the tapes while reading the transcripts. When I discovered (and had to correct) many errors on the transcript of the first interview, I hired another person to do the rest of the transcribing.

Data analysis involved sorting through the information to distil or interpret the shape and the content of the RNs’ insights and their relationships to the research questions. Using Giorgi’s (1975) method, I reread each transcript while identifying its natural meaning units and the theme dominating each unit. In the margins of the transcripts, I noted my initial observations about the data and the themes (e.g., how they helped to answer the research questions), and about my thoughts, feelings, and experiences and how they may affect the study (Burns & Grove, 1999). The themes and units contained RNs’ views about their knowledge, their learning needs, their learning practices, and conditions that influenced their learning, along with the rationale and the examples that the RNs gave to support and illustrate their views. Next, I interrogated each theme and its raw data by asking, “What does this tell me about the knowledge that this RN needs to provide drug therapy to OAs?” When a theme highlighted an RN’s views about learning activities or about conditions that affected her learning, I asked, “What does this tell me about how this RN learns about drug therapy for OAs?” or “What does this tell me about any constraints on, or facilitators of, learning?”. I used two resources -- a copy of the 47 educative items that were used by Cervero and Dimmock (1987) and drawn from Bevis’ (1971, 1972) work, and a copy of the Continued Learning Activities Survey -- to alert me to examples of learning activities. (Gunderman (1995) explains that the Continued Learning Activities Survey contains 43 items and is a re-casted version of the 47 educative items that were originally created.
by Bevis (1971) and further tested by Cervero and Dimmock (1987)). During analysis, I
discovered that some sections of the data were pieces of larger themes, and I found relationships
(e.g., learning practices that were collaborative). After reorganizing all of the data categorically
by theme, I summarized the themes to transform and illuminate the RNs’ views about how they
learned, about conditions that affected their learning, and about their knowledge and learning
needs. All of these activities reflect the inductive nature of the qualitative approach.

Credibility, Fittingness, Auditability, and Confirmability

The issues of internal and external validity and of reliability are dealt with somewhat
differently in a qualitative (versus a quantitative) study. Credibility (versus internal validity in
the quantitative sense) is the criterion against which the truth value of qualitative research is
evaluated (Guba & Lincoln, 1981). A study is credible when the person having an experience
immediately recognizes it from the descriptions or interpretations as theirs (Beck, 1993;
Sandelowski, 1986), and when other people, on encountering the experience, recognize it even
though they have only read about it (Psathas, 1973, cited in Sandelowski). Prior to interpreting
the RNs’ responses, I asked them for clarification or validation (Marcus & Liehr, 1998; also see
Beck; Sandelowski). Once the tapes had been transcribed, I asked each RN if she would like to
review her transcript. One RN did and wrote some minor corrections on it. When I had finished
analysis, I sent a letter to each RN asking if they wanted to see the thematic analysis; however,
none of them did. More processes related to credibility were described above, in Data Collection.

Fittingness (versus external validity (or generalization) in the quantitative sense) is the
criterion against which the relevance of qualitative research should be evaluated (Guba &
Lincoln, 1981). Fittingness means that the findings are applicable in a context other than the one
studied (e.g., readers find them meaningful and applicable for their own experiences), and the findings correspond to the data (Sandelowski, 1986). Guided by Beck’s (1993) suggestions, I checked “the representativeness of the data as a whole” (also see Sandelowski) and that the results matched the data (p. 265). Also, I checked the representativeness of the codes and examples used to condense and display the data (Sandelowski). I think that the findings are rooted in the data, the data is comprehensively represented, the codes and examples employed portray the meaning of the data, and the data and findings answer the research questions.

Auditability (versus reliability in the quantitative sense) is the criterion against which the consistency of qualitative findings should be evaluated (Guba & Lincoln, 1981). Guided by Sadelowski’s (1986) and Beck’s (1993) suggestions for assessment, I described my interest in OAs’ care, the purpose of this study, how I viewed RNs’ learning, the processes used (e.g., for participant selection and recruitment and for data collection and analysis), and the dynamic of intersubjectivity. Also, I recorded the interviews, described the RNs’ characteristics, and included the RNs’ voices to substantiate the thematic categories.

It is impossible for evaluators to rid themselves of subjectivity; thus, confirmability, rather than objectivity in the quantitative sense, is the criterion of neutrality in qualitative research (Guba & Lincoln, 1981). “Confirmability is achieved when auditability, truth value, and applicability are established” (Sandelowski, 1986, p. 33). Given my attention to the concepts of auditability, credibility, and fittingness, I trust that confirmability has been established.

Assumptions, Ethical Considerations, Limitations, and Strengths

I made several assumptions when conducting the study. I assumed that the increasing age of patients in hospital affected RNs’ views about the knowledge that they needed for drug
therapy, that RNs pursued learning activities relating to drug therapy for OAs, and that conditions within the hospital and/or beyond it affected their ability to learn. RNs who chose to participate in the study were willing and able to discuss genuinely their knowledge, their learning needs, how they learned, and conditions that affected their learning. They would focus on their own needs versus those of their peers, and the language that they used and the links that they made would reveal their worlds. Also, I used assumptions about constructivism, described above.

I followed the ethics-review processes from the Ontario Institute for Studies in Education of the University of Toronto and from the acute-care hospital used for this study. At the beginning of the first interview, each RN signed a consent (see Appendix C) that included their agreement to participate in the individual interviews and in a focus group, along with their agreement that the interviews may be audio-taped. When, due to the extensive data that emerged from the interviews, my supervisor and I decided that a focus group was not necessary, I sent each RN a letter to explain that condition.

From the consent, the RNs knew that they may refuse to answer any questions, and that they may withdraw from the study at any time without any consequences and all their data would be destroyed. The consent included strategies to protect the RNs’ confidentiality, including using pseudonyms for each of the RNs and the hospital and locking up all of the data (tapes, discs, and transcripts) and the contact information. Prior to giving the tapes to the persons who transcribed them, I listened to them and deleted any identifying information. Each of the two persons who transcribed the tapes had a contract with me that outlined their responsibilities in terms of confidentiality. The RNs knew who had access to the data, that they would have an opportunity to review their transcripts and to edit them, about the potential costs and benefits of being in the
study, and that they would not be compensated for their time. The RNs were interviewed in locations of their choosing. They had contact numbers (for me, my supervisor, and the ethics person at the hospital) that they could use for any questions or concerns. Both prior to and during an interview, I asked the RN about any questions or concerns.

This study was a qualitative (exploratory and descriptive) study with a small sample. Thus, the findings are not generalizable; instead, the assessment of credibility and of fittingness rests with the reader. The RNs self-selected and participated voluntarily. Each RN had much more experience than the one year indicated in the selection criteria; thus, RNs with less experience were underrepresented. RNs’ descriptions of what they knew and did may not accurately reflect their actual knowledge and actions. Finally, assessing the validity of the RNs’ knowledge about drug therapy for OAs was not a purpose of this study. In terms of strengths, this study may be ground-breaking in its intent to answer the stated research questions.

Summary

In this chapter, I examined literature about questionnaires and surveys. I explained the bases for the constructivist paradigm, the nature of qualitative research, and my reasons for using a qualitative approach. I described the design, including participant selection and recruitment, the participants’ characteristics, and the processes used to collect, to manage, and to analyze the data and to achieve rigor. Also, I outlined my assumptions, the ethical considerations, and the study’s limitations and strengths. Next, I outline RNs’ drug-therapy knowledge.
CHAPTER 4 DRUG-THERAPY KNOWLEDGE REQUIREMENTS FOR RNs

One theme is the knowledge that RNs reported having to learn about drug therapy for OAs, along with their learning needs. RNs used the steps of the nursing process -- assessing, diagnosing, planning, implementing, and evaluating -- to guide their decision making about drug therapy for OAs. Thus, in this chapter, I structure their knowledge within those steps (see Appendix E). To assess and diagnose OAs on drug therapy, RNs needed to know how to age-adjust their approaches to assessment, about drug use with OAs, about alternatives to drugs, and how to conduct and evaluate a drug history. To set goals for, and to plan, implement, and evaluate drug therapy for OAs, RNs needed to know about suggested goals, about collaborative and individualized care planning, how to modify their interventions for working with OAs and for collaborating with other HCPs, about professional and regulatory expectations, and about foci and strategies for evaluation. RNs used some knowledge (e.g., drug use, communicating with OAs) in many steps of the nursing process. To avoid duplication, I detail that knowledge in only one step (e.g., drug use, in assessment; communicating, in the interventions).

Assessing and Diagnosing OAs on Drug Therapy

To assess and diagnose OAs on drug therapy, RNs had learned how to age-ready their approaches, about drug use with OAs, about alternatives to drugs, and how to conduct and evaluate drug histories.

Modifying Assessment

One RN illuminated her learning needs about assessment on admission.

Just [to] have a few ideas of what works well with older people, as far as interviewing them, assessing them, just some trigger points...[as] some place to start with an older adult, your approach, and the questions that...are more pertinent for an older person.
RNs knew other HCPs’ diagnoses, partly so that they may advocate for OAs. (RNs read OAs’ health records to get their diagnoses and more information about their drugs and any issues.)

Most RNs knew that chronological age was not a valid predictor of OAs’ health and functional abilities; thus, they assessed OAs as unique persons, and they wanted more information about OAs’ heterogeneity. RNs were concerned about some HCPs’ erroneous assumptions about OAs, together with their stereotypical assessment and their use of drug practices (e.g., prescribing) that were based on numerical age alone. One RN cautioned about using stereotypes: “Making sure of the accuracy. In other words, if they are 92 years old,…don’t have…too much of a preconceived idea…Just…do your own assessment and work what you feel.” RNs modified their holistic assessment to accommodate any OA characteristics that affected it. They spoke face-to-face to OAs and slowly to ensure that they did not feel rushed. RNs used a systematic approach, asked OAs more questions (e.g., whether they understood everything or had any questions), considered each OA’s level of education, and responded to cultural differences. An RN said that Native Canadians tend to be a little more stoic and a little less forthcoming [They’ll give] a lot of one-word answers [e.g., “Yes” or “No”]…. So I have to gear my questions to that. I might…talk to their family as opposed to them, and watch for cues from them…., ‘cause they…definitely have ideas of what should and should not be discussed.

RNs needed more time to assess older (versus younger) adults, due to the growing acuity and complexity of OAs’ needs and care, and RNs’ need to be more attentive to risks, including constraints on their learning, that led to drug-related harm in OAs. Also, at times RNs had difficulty grasping what was happening with OAs and had to consult other sources. An RN said, If…I need to delve more, I will. And if I’m satisfied with the information I’ve gotten from them…then I’m okay. But there’s still some things I get confused about, especially when there’s drug interactions, and how much should I give…Then I look for things.
At times, diagnosing DRI in OAs took more time due to doctors’ inability to spot the problem. An RN explained:

There have been…times when doctors…can’t figure out what the problem is. And they end up taking them [OA] off all of the medication. And you find out, lots of times, [that the problem was]…the medication…And then…they [doctors] didn’t know what to do. So they just go back to square one and start all over.

All RNs knew about normal aging changes in OAs, including physical changes, norms, and age-adjusted laboratory changes, and most RNs wanted more information. One RN said,

I wouldn’t mind having more information,…We realize that everything slows. But I…sometimes don’t know how much. So I wouldn’t…mind being more knowledgeable about that…[And it] would be great if we knew how to measure it…We do blood work routinely…creatinine and urea and the complete blood work…So…we see the difference in the geriatric population,…that the creatinine might go up…when they’re on a drug that…[affects] their renal function…Even [to learn about] the altered laboratory norms…for an OA, that would be good.

More information would enhance her ability to assess age-related changes in pharmacokinetics (how the body affects a drug), as well as the extent and the import of the effects. Most RNs wanted to know more about how aging affects pharmacokinetics, pharmacodynamics (how a drug affects the body), and homeostatic mechanisms (the body’s equilibrium). One RN said, “We are seeing more and more and more…70-, 80-, 90-year-old people,…and we’re giving them the same medication that we’re giving someone that’s 50. So I’d like to know that they’re going to process that properly.” RNs linked OAs’ laboratory results, histories, holistic functional (including clinical) status, and drugs.

RNs wanted more information about how aging affects OAs’ signs and symptoms of disease and their psychological reactions to illness and treatments (e.g., drugs, anaesthetics). When diagnosed with something new (e.g., diabetes), many OAs became very anxious about going home and managing the condition but did not tell their RNs. RNs wanted more
information about factors (e.g., OAs’ tendency to underreport signs and symptoms, their often atypical signs and symptoms of disease and of ADRs) that complicated assessment of normal aging changes, common diseases, and drug reactions in OAs. For example, RNs wanted to know more about the dynamic whereby HCPs ignored ADRs or dismissed them as normal aging changes, and about OAs’ sometimes atypical presentation (e.g., when an ADR might be subtle or look like another illness). An RN asked, “What do you see in OAs, particularly with a bad reaction…And how long would that go on? I mean, it can go on for awhile before it gets picked up.” One RN said, “Not necessarily as much [knowledge] as I would like. It’s just sort of an individual basis in what you see and…report, and whether it seems like not normal to you”.

When I asked, “It’s a gut kind of thing?”, she said, “Sometimes, yeah.” She added,

   There’s probably a lot that we don’t always pick up on, something that’s gone really wrong. You…tend to…use the same old standbys and…the same drug reactions…You know,…what has worked for younger people and a problem, yup, the older people will have it too…You’ll see…similarities….But it can be a challenge, for sure.

Another RN stated, “If they’re starting a new drug and they become tremorous…. [or] they…come in with tremors [and I’m] thinking, ‘Oh, they’re a drinker’, but it actually could be…an adverse drug reaction. But I wouldn’t know that.”

RNs learned about OAs’ normal holistic functional status, as well as their status on admission and currently. To learn about each OA’s normal baseline, RNs communicated with OAs and their families, collaborated with other HCPs, and read authoritative texts (e.g., OAs’ health records). Information about function was useful because at times families of OAs with Alzheimer disease asked RNs when Aricept would be restarted and alerted RNs about the need to restart drugs for Parkinson disease due to a “real change” in their older relatives’ function.
They’ve got a bit of a handle on where this older person is ‘at’....If the...[OA] has Parkinson disease and...[is] off their meds, they’ll [family] often say,...“When are they going...back on their meds? They really need them, I am finding...[them] very stiff or...really shaky”...So they will often...cue you as to...when they [OA] can start them again..., because they see...a real change.

Also, RNs used knowledge about OAs’ function to guide assessment and as they monitored OAs to detect any need for drug therapy and the effects of their drugs. Families helped RNs to detect signs and symptoms that may be drug-related. At times, one RN asked families, “Is this...a normal picture of them [OA]? I find them this way. Could it be [due to] the medication?” RNs used information about function to fathom OA characteristics (e.g., sensory function) that may support or undermine drug therapy, and to inform the goals and plans for drug therapy, including discharge planning, along with the interventions used in hospital. Interventions included communicating, teaching, supporting adherence, coordinating care, and mentoring other HCPs. Finally, knowledge about function facilitated evaluation of drug therapy.

RNs assessed OAs proactively, frequently, and continuously to discover drug-related issues, including those requiring advocacy. An RN said that because she was getting older and more knowledgeable, she knew about older (versus younger) adults’ greater vulnerability (e.g., to a gastrointestinal bleed); thus, she gave OAs more specific directions and reminders to enable her detection of DRI (e.g., she told OAs on heparin and enteric-coated aspirin not to flush the toilet so that she may check the color of their stool). As well, RNs wanted more information about pain assessment, including when OAs were confused. An RN said, “Their pain is as much as ours. Who says it isn’t. Even if they are confused they still experience pain and they hurt.”

_Drug Use With OAs and Related Issues_

RNs wanted more information about drug use with OAs and related issues in part because
there were so many drugs available on the market. An RN said, “Sometimes we get so busy, and…you’re not up to date on all these meds”. RNs’ knowledge for decision-making about prescribing for OAs encompassed three sub-topics: factors that make it difficult to develop specific guidelines for prescribing, general guidelines for prescribing, and important pharmacological considerations when prescribing.

The first sub-topic included normal aging changes, factors that influence aging, and variations in the rate of aging amongst people, as well as OAs’ clinical status (e.g., nutrition, hydration, cardiac, renal, liver), and the novice status of research in geriatric pharmacology. General guidelines for prescribing included these: Evaluate OAs thoroughly, prescribe cautiously and essential drugs only, avoid over- and under-diagnosis, consider allergies and previous reactions, consult specialists as necessary, consider normal aging changes and disease burden (both may require a change in the usual dose), when in doubt about a dose, check with a pharmacist, use doses and routes that OAs and their caregivers can handle, and advocate to stop unnecessary drugs. An RN wanted more knowledge about these guidelines due to the climbing age of her patients: “Before, you would see people in their 50s and 60s. Now, it’s…not uncommon to have cardiac patients in their 80s.”

The third sub-topic, important pharmacological considerations in prescribing, was huge. It included knowing each drug (e.g., name, class, purpose, action, pharmacology, risks and benefits), and about drugs with the same purpose, drugs with a stigma (OAs may not disclose them), the costs and risks of drugs advertised on American television, and current drug practices. Practices included how to benefit from drugs (RNs wanted more information to benefit teaching), and safe and effective administration (e.g., how and when to take drugs and why,
administration times that may/not be adjusted, the safe use of drug forms, and interventions for drug management, like labels, caps, schedules, color coding, different forms, liquid measures, lists, blister packs).

Still on the third sub-topic, RNs wanted to know more about when not to give a drug, and about special considerations and cautions about specific categories of drugs (e.g., safety issues and interactions with Coumadin). Specific categories had been stressed more during the past two years and included drugs that were (and were not) appropriate for OAs, drugs that did not metabolize well in OAs, and drugs that should not be given to OAs with certain conditions. (More information may be found in Beers (1997) in the reference list.) Added learning needs were the categories of drugs most commonly prescribed for OAs (e.g., for diabetes, for hypertension), and common drug regimens for OAs in emergency situations (e.g., a racing heart rate, hypotension, hypertension) and in pain, including managing the tension between pain and confusion postoperatively, and the use of adjunctive therapies. One RN wanted more information about common drugs and safe administration to pass on to OAs and other stakeholders. An RN said it would be super if she could offer doctors a way to deal with pain and delirium. According to the results of “patient satisfaction surveys”, “a lot of…medical patients aren’t being dealt that well with their pain control…I’m hoping that…[the pain-management] team will enlighten us, ‘cause there are…adjunctive therapies…for pain control.” RNs craved more information about behavior management, including psychotropic drugs and considerations to prevent misuse. One RN had a pressing need for information about the management of agitation.

RNs knew about valid sources of information about drug therapy. RNs wanted to know more about the names of drugs, about lab tests that informed decisions about doses for OAs,
about drug titration (e.g., drugs that should/not be titrated), and how different drugs affected OAs (e.g., their potential effects and related cautions, including avoidance and essential monitoring).

The potential effects of drugs included adverse effects, the more common side effects, interactions, and drug toxicity. RNs wanted more information about OAs’ greater susceptibility to ADRs, the prevalence of ADRs in OAs, the kinds (e.g., signs and symptoms) of ADRs that OAs may experience, drugs that most commonly cause ADRs in OAs, drugs associated with certain ADRs (e.g., vision challenges, incontinence, cognitive problems), drugs with additive adverse effects, high-risk drugs in OAs (e.g., potentially toxic drugs that were commonly prescribed), and the potential for some drugs to build up in OAs after discharge, necessitating readmission. One RN did not witness ADRs often because she worked on surgery.

Unless they’ve come in from emergency with an ADR and…[are] admitted with that, I don’t see that a lot…We don’t get a lot of older…medical patients,…because we’re surgical…The medical nurses may see that a lot more. However, later, she said, “There’s certainly lots to learn, especially if we’re looking at adverse drug side effects…I’m not up to date on that”. “It’s made me realize, just from this short interview, that I really need to be more up to date on [visible] side…effects of drug therapy in geriatric patients”.

RNs knew about side effects. One RN wanted more information so that she may enhance OAs’ adherence. For teaching purposes, RNs wanted more information about side effects and how to avoid them. An RN said, “Better understanding of some of the side effects and…ways to take the medication so that you don’t have the side effects,…I have some [knowledge], but I would probably like to have more”. An example was OAs who used puffers but did not know to rinse afterwards and, thus, ended up with horrendous throats.
RNs wanted more information about the causes and effects of interactions. (One RN said that sometimes she and other staff did not understand the interactions and how they affected OAs.) RNs knew about causes of interactions, including fragmented prescribing, OAs’ characteristics (e.g., lack of knowledge, unsafe drug practices, clinical status), and the fact that there were so many new drugs. An RN who said, “Our meds don’t mesh well”, worried that a new drug may interact with an OA’s current drugs. Also, OAs with many illnesses and drug treatments had a greater risk for drug-drug or drug-disease interactions, a risk that was increased by fragmented prescribing. RNs wished to be kept up to date about interactions among off-the-counter drugs (e.g., cold remedies), products from health food stores, home remedies, prescribed drugs, and diet, and about interactions among new drugs and those currently being taken.

All RNs wanted more information about DRI in OAs to teach OAs and their families, to teach staff about prevention, and to enhance their own abilities to evaluate drug outcomes and plan ongoing care. RNs had seen many kinds of DRI, including bleeding unspecified, gastrointestinal bleeding, bleeding and bruising, falls and bruising, cuts and bleeding, dizziness, dehydration, hypotension, hypertension, rashes, confusion, behavioural problems, constipation, ileus, bowel obstructions, lethargy, malnutrition, urinary retention, thrush, low sodium, low oxygen, cardiac arrhythmias, bradycardia, fainting, weakness, and nausea. One RN wanted “updates” about drug-related domino effects, including how (why) they started. For example,

Why does it [thrush] go on for so long, through so many people giving the meds,…without being questioned. Or nobody’s picked up that this man doesn’t want to eat because of the horrendous condition of his mouth and tongue.

Other domino effects were hypotension, low sodium, bowel obstructions from codeine overuse, and bleeding. An RN added, “Or aspirin, the commonest drug that we know. And rectal bleeding
is a big problem, where you get repeat hospitalization.”

RNs considered the many causes and consequences of OAs’ drug-related problems, and they wanted more information about the causes of DRI. That would enhance one RN’s ability to trust the gerontologist’s interventions (“The things that he’s done”). Although the specific causes of interest were too numerous to mention here, the categorical causes of interest to the RNs included the drug industry (e.g., the staggering number of drugs available), OAs’ characteristics (e.g., OAs’ and family members’ lack of knowledge due to receiving little if any teaching from HCPs in the community and/or prior to discharge from hospital), organizational constraints (e.g., a lack of time to teach OAs prior to discharge), the drugs prescribed (e.g., how they interacted with normal aging changes and OAs’ clinical status), and some HCPs’ modes of practice. Modes of practice included prescribers who lacked knowledge about drug therapy for OAs and/or about each OA’s specific drug therapy, fragmented prescribing, under-diagnosis and/or inappropriate prescribing, inadequate management and monitoring of OAs’ drug-related conditions, and a lack of attention to current drug practices. RNs wanted more information or “reaffirmation” of their knowledge about the serious effects and consequences of suboptimal diagnosis, including when it led to drug therapy to treat signs and symptoms versus the causes of them. Examples of the outcomes (as suggested by other experts in the literature) included polypharmacy, increased deterioration, needless permanent damage, continuation of drug-related problems and life-threatening conditions, and added complications from new drugs, including a greater risk for ADRs. Most RNs wanted to know more about the consequences of DRI in OAs. Examples were serious injury, decreased function, premature hospitalization, re-hospitalization, prolonged hospitalization, premature institutionalization, increased costs of care, and potential death.
Still on the topic of the potential effects of drugs, RNs avoided practices that aggravated drug effects, and they knew how to prevent side effects and how to reduce or to prevent adverse effects and readmission. RNs wanted more information about the preventable nature of DRI in hospital, including prevention and reduction strategies. One RN said that more information about increasing the effectiveness of drugs and reducing adverse effects “would be [pertinent] for anybody in the medical profession. That would be very good.” Another RN said, “A [codeine-related] bowel obstruction…is not fun…with anyone, but especially with older people. And it is preventable.” RNs knew how to prevent toxicity (e.g., by monitoring OAs’ blood, coordinating their drug care, collaborating with other HCPs), how to minimize it, and how to treat it. All RNs wanted more information about strategies to minimize the negative consequences of DRI in OAs (e.g., how to address ADRs to optimize OAs’ function and independence). One RN wanted more information in part to affirm her current knowledge. (“We do it for a fair…number of them [ADRs]….I’ve been around a lot….So I’ve seen what’s…worked. So, but it’s always nice to have it [more information] there”). RNs knew how to control negative effects. RNs wanted more information about some topics (e.g., ADRs, preventing or reducing adverse effects and readmission, and controlling negative effects) to support their teaching of OAs and their families.

Because the causes of DRI in OAs included inadequate monitoring by HCPs, RNs monitored to prevent and to detect DRI. They monitored the effects of drugs, including safety issues (e.g. fall prevention, because most OAs did not have blood-pressure machines). RNs were suspicious of ADRs, aware of potential ADRs, and able to detect them. When one RN spoke about detecting ADRs, she said, “There are probably a few little things that might be more beneficial for us to learn”. General strategies for monitoring included monitoring frequently,
closely, and strategically (e.g., when OAs began taking new drugs and when they got ongoing doses); assessing blood concentrations (e.g., the international normalized ratio for Coumadin), other laboratory results, and telemetry (heart monitoring); knowing OAs’ allergies; keeping a close eye on OAs, including their responses to drugs (e.g., their vital signs and function); involving the dietician in watching for drug-induced malnutrition; consulting RN colleagues and OAs’ families about OAs’ ongoing functional status, and reviewing drugs regularly and asking questions about them. All RNs wanted more information about these monitoring strategies. An RN who had missed ADRs previously said that she was improving. Some RNs wanted to know more about how to investigate OAs’ complaints for possible drug-related causes.

RNs were always learning about new drugs, including their sizes, standards for them, and drugs for specific conditions (e.g., Risperdal for Alzheimer disease). One RN said,

There’s a lot more I would like to learn…a lot more I should be more knowledgeable on…These new Alzheimer medications just boggle me sometimes….Keeping up to date with all the new medications, for sure,…Alzheimer medications, dementia medications, Parkinson medication, I’m not up to date on.

One RN wanted to learn about anything associated with drugs, OAs, and surgical care. She said, “Everything for surgical nursing. They [topics] could be surgical and the geriatric patient, new drugs, new frontier drugs, anything.” Another RN said, “All these new drugs coming out, it’s important [to know about associated ADRs]…You have to know.” She wanted to know how overdoses of, and ADRs to, new drugs presented in OAs. Finally, RNs wanted more information about new or changing drug practices (“the differences” in OAs’ drug therapy today), such as the trend to prescribe fewer drugs and lower doses for OAs, as well as drug recalls (e.g., Vioxx). An RN said, “A lot of these drugs that we give now, we would never give to older people [before],” and “Doses now are a lot smaller than what we normally used to give.” (For example, the dose of
digoxin had decreased over the years.) Her knowledge about OAs and drugs was “ongoing….because it does change”.

Alternatives to Drugs

RNs knew about alternatives to drugs (e.g., lifestyle, complementary, traditional, and non-pharmacologic therapies), and they knew that using non-drug therapies (e.g., comfort measures for pain when blood pressure was low, nutritional sources of potassium) may reduce the risk for DRI. Most RNs wanted to know more about the uses, limitations, and potential adverse effects of alternatives, along with any precautions. An RN who spoke about the inappropriate prescribing of Ativan said that education for HCPs about OAs’ experiences and the use of non-drug strategies to protect their health “would be of great benefit”. One RN knew about interactive effects between alternatives and prescribed drugs: “Your herbal and your supplements…from the health food store, how does that all affect what medication you are on right now. There…[are] big problems with potentiating…or reducing the effect.” She wanted to be kept up to date about that topic to be proactive: “I’d like to…anticipate a problem before it starts and prevent a hospitalization that really should never have happened.” RNs specifically mentioned Echinacea, Ginkgo, and St. John’s wort, and associated cautions.

Some RNs’ values about information regarding alternatives changed as the interviews progressed. Initially, a surgical RN did not think that information would be as useful to her as it would be to RNs on medicine; however, later, she stated,

Vitamins and things from the health food store,… Renfew and raspberry oil…A lot of them can affect their medications…I would like more knowledge on…all these herbal things…A lot of…older patients come in on St. John’s wort, and a lot of drugs are contraindicated with that, and they don’t know that.

An RN who at first said, “If they want to take what their mom made many years ago, and it’s just
a bunch of herbs thrown together, fine”, later began to appreciate her knowledge: “There’s quite a few things they could probably stop taking before surgery ‘cause it will cause problems”.

**Conducting and Evaluating Drug Histories on Admission**

RNs knew their patients and their drugs. (“You have to know nowadays”). Thus, they wanted to know more about the goals, components, guidelines, and challenges associated with conducting and evaluating OAs’ drug histories on admission.

RNs conducted drug histories to discover OAs’ drugs, and as the basis for coordinating, and ensuring the continuity of, their drug therapy and detecting any risks and problems. RNs knew about OAs’ tendencies to have many drugs (at home or with them at admission), and to keep stopped drugs with current drugs and to self-prescribe them based on previous experience.

RNs used age-adjusted strategies to collect drug histories. They asked OAs when they took their drugs, whether they still had previous drugs at home and were self-prescribing, about drug abuse and allergies, and about the option of using blister packs. RNs held OAs’ hands, avoided using medical terminology, slowed the pace of their speech, asked OAs appropriate questions, gave them time to answer, and took time to listen so that they may grasp OAs’ views about their drugs regimens and detect any DRI or any cognitive challenges. RNs reviewed OAs’ health records, reviewed OAs’ drugs over and over with them, and tried to offset OAs’ stress. For example, RNs used a relaxing, non-threatening style of questioning, invited OAs’ questions, urged them to take a break (afterwards, some OAs volunteered information that they had not thought about previously), collected information over more than one visit, and asked OAs and younger adults the same questions to avoid belittling OAs and to reassure them.

RNs asked OAs about one system (e.g., cardiac, neurological, gastrointestinal,
genitourinary) at a time and then linked each system to their drugs. An RN said,

They’ll talk about things that…don’t seem related, like being dizzy or light-headed when they get up in the morning and palpitations,…just off the top of their heads, that really don’t seem connected. And then…they’ll tell you about their medications…and what doctors they saw. It’s all investigative. It’s really up to the nurse to pick up on those cues and…carry it…forward.

RNs offset language barriers by contacting community doctors and pharmacists or by asking family members to bring OAs’ pills to hospital.

RNs used investigative strategies to understand OAs’ drug use and any related needs. (One RN said, “We do a lot of investigative nursing…to find out the actual source of what medications they’re on or how they’re being affected by the medication”). RNs used many styles of questioning to augment OAs’ disclosure of their histories, drug use, and needs. For example, they asked specific questions with examples (e.g., “Have you ever had trouble with your heart, like heart pains?”) to avoid gaps in OAs’ histories, and they asked open-ended or broad questions about OAs’ at-home health challenges (e.g., heartburn, constipation) to discover how they dealt with them (e.g., by borrowing drugs, or by using home remedies or over-the-counter drugs). To offset fragmented drug care in the community, one RN asked OAs broad questions about recent illnesses and how they had handled them, and about visits to clinics and hospitals; as a result, she helped OAs to reveal all of their drugs and enhanced her knowledge about their related needs. Also, RNs asked round-about questions to discover information useful for planning discharge. For example, by asking OAs if they were married, one RN learned about their sources of social support, their functional abilities, and how they managed at home.

RNs knew about constraints on their ability to learn about OAs’ drugs (please see chapter 5); thus, at times they consulted other sources. One RN stated, “I use every type of resource out
there to find out what the patient is on, and what I can do…to help better their medication situation.” RNs consulted families, community pharmacists and physicians, OAs’ drug bottles, their previous health records, and drug lists provided by nursing homes. One RN explained:

I often go right…to their pharmacist…to get their drug information,…with their [OA’s] permission of course,…because they often miss something or…miss a dose. Or they’ll have a change in their medication that they have forgotten to mention…I try to gather information as much as possible.

An RN said, “There’s also their old charts and histories and previous admissions we will look at”. Another RN asked to see any drugs that older women had in their purses. When OAs had been sedated or hit on the head, when they were confused due to drug reactions, or when the information that they gave did not make sense due to language barriers, RNs consulted their families or their community pharmacists. One RN commented,

If a patient seems a little bit off or…confused, or they’ve been sedated from emerg, I will call the significant other or a daughter, son, and ask them their opinion on the drugs, too. Or I call the pharmacist….I just want to make sure their drugs are right.

She had learned that “probably from lots of experience and boo-boos”. RNs had learned that due to difficulty seeing their family doctors, many OAs went to walk-in clinics, resulting in a risk for fragmented drug care; thus, one RN alerted OAs’ family doctors about OAs’ different prescriptions, and she consulted the hospitalist (a doctor who worked in the hospital only), OAs’ community pharmacists, or OAs’ previous medical records. When one OA lived at home and no one knew the drugs that she was taking, an RN said to the OA’s daughter,

“She [OA] brought in her six medications in her little pouch…Go home and bring me all of her pills…, everything from the medicine cabinet and…from the kitchen counter or…the window will.” And they bring in bags of pills, bags of pills.

RNs evaluated the information from OAs’ drug histories to identify key links, including the causes and the effects of any problems that had driven OAs to hospital. RNs wanted to ensure
that OAs’ drugs fit their current status. (An RN said, “I just want to make sure their drugs are right”). Also, RNs found and examined links between OAs’ drugs and their clinical status, such as their normal aging changes, hydration and nutrition, diseases, signs and symptoms (e.g., dizziness, light-headedness, palpitations, chest pain), and laboratory results. An RN explained:

With a lot of bruising,…you think Coumadin. If…someone…is short of breath,…you…think [about] respiratory problems or those sorts of meds. Are they on puffers…[or] Lasix? And if they are on Lasix, what about the potassium and…their cardiac status and all that.

At times, an RN discovered OAs whose status did not fit their drugs (e.g., “This cannot be a normal cardiac assessment if your blood pressure is 180/80”). RNs evaluated the effects of OAs’ drugs, the extent to which negative effects and consequences were avoided or controlled, OAs’ knowledge about their drugs, and their adherence (e.g., their drug-taking behavior and management, the currency of their practices, whether they still had previous drugs at home). One RN wanted more information about evaluating OAs’ drug-taking behavior.

By evaluating, RNs found drug-related problems, such as prescribing issues, fragmented drug care in the community that had fuelled harm and hospitalization, insufficient review of drugs in the community, OAs’ lack of knowledge, OAs’ use of unsafe drug practices (e.g., improper use, self-prescribing, borrowing, abusing, non-adherence to drugs or related tests), and negative drug effects, including those due to drugs that had been recalled. Most RNs wanted to know more about evaluation, including goals, foci, guidelines, and strategies.

**Setting Goals and Planning and Implementing Drug Therapy for OAs**

Moving to the next steps in the nursing process, RNs wanted more information, or reaffirmation of their knowledge, about suggested goals for OAs on drug therapy. Goals included promoting and protecting OAs’ health, function, and safety, reversing drug-related functional
decline, preventing readmission, protecting OAs’ rights, increasing OAs’ adherence, and promoting continuity of care. RNs particularly wanted to know more about how to increase the effectiveness of drugs, and how to reduce the risks of DRI and to minimize its negative consequences. One RN described her pain-management goals for 90-year-old persons.

You always...need to do the best for the patient that you can....You want that patient to be comfortable,...to feel safe,...to be pain free or as little pain as possible, and...[to] ambulate her as quickly as possible to prevent...post-op complications....That’s all part-and-parcel.

RNs used information about OAs’ holistic baseline function for many purposes, for example, to clarify the goals for drug care both in hospital and at discharge, to identify OAs at risk for drug-related harm and decline, and to understand strategies for preventing harmful drug effects and consequences and for reversing them and returning OAs’ function to preadmission levels. Older (versus younger) adults took longer to do things and recuperated more slowly; thus, some RNs changed the goals and prolonged the timelines for achievement.

RNs planned OAs’ drug therapy carefully and collaboratively with HCPs from other disciplines. The plans reflected OAs’ limitations and needs, and the goals for their care. Having learned about OAs’ right to make decisions, one RN included them in the planning.

RNs age-modified their interventions for working with OAs on drug therapy and their interventions for collaborating with other HCPs about that practice. Also, they had technical knowledge about professional and regulatory expectations associated with that care.

**Working with OAs**

RNs supported OAs’ function. As well, they adjusted the pace of their care, and their strategies for communicating with OAs and families, for teaching them, and for promoting OAs’ adherence and families’ involvement.
Supporting Function and Preventing and Managing Harm

RNs used information about OAs’ holistic function to inform strategies for preventing and for reversing harmful drug effects and the consequences. Also, they knew about OAs’ greater vulnerability due to age and used that knowledge to shape their interventions. For example, RNs attended to OAs’ greater stress and reduced coping ability. One RN explained:

We’ll tell them, …“Your blood pressure might be high because you’re not taking medication for pain…Take your medication. It should help…Then we will watch… and see how it’s going”…Explanation and vigilance, ‘cause…they want to know that you’re there and vigilant about all of that.

RNs knew that effective management of postoperative pain supported ambulation, thus reducing OAs’ vulnerability to risks, such as loss of function and pneumonia. One RN said, “My priority is getting those people…out of bed and…moving before they develop pneumonia. It’s critical”. “You can’t expect them to get…moving…when they have just had a couple of extra-strength Tylenol”. RNs used their knowledge about drugs to protect OAs from DRI and to minimize its effects. One RN prevented harm and the need for drugs. When she was to give a bolus of intravenous fluid to an OA, she asked for more time (or a smaller volume) and was more vigilant to prevent heart failure and the need for Lasix.

More Time

RNs knew about factors that made drug administration for older (versus younger) adults more time consuming. One RN said,

It is often a slower process….And, “Here’s your meds. Now take your meds”, and get on to something else (she laughed)…It’s just not that easy. It takes them time to get their meds down. And they…want the knowledge as well. And it’s just…slower going.

Another RN, who was frustrated by OAs’ preferences because they slowed her down and she lacked patience, explained: “They are a frustrating group of people….I have to work on
that…because they take time…They’re slower”. “They tend to be more demanding than a younger person.” For example, OAs who worried that their home drugs and their hospital drugs looked different, needed to be told that the hospital pharmacy and their community pharmacy used different suppliers. Some OAs needed more help with their drugs, asked questions, wanted their pills crushed to ease swallowing or handed to them one at a time, or had Alzheimer disease and were confused. Also, OAs asked, “Why do I have to take that?…Why are you poking me for another intravenous antibiotic?” “They’re always questioning,…lots, which they have the right to do (she laughed). Actually, it is going into them”. RNs’ knowledge about factors that added to the time involved for many drug-related interventions is noted below in each of the sections.

Communicating with OAs and Families

Knowledge about communicating with OAs was useful when assessing OAs (e.g., collecting drug histories) and when intervening (e.g., teaching). The causes of DRI included communication issues between OAs and HCPs; thus, RNs used age-modified preventive strategies. Communicating with older (versus younger) adults and their families took more time. One reason was some OAs’ characteristics (see More Time, above in this section; see greater stress, in Modifying Assessment; see Collecting Drug Histories, above; and see poor disclosure in chapter 5). More reasons were family members’ greater involvement in OAs’ drug care, and the need to respond to families’ pre-discharge needs and concerns. One RN said, “You can learn a lot from older people if you ask appropriate questions. Or you can find out a lot if you take the time”. To support OAs’ processing abilities, one RN tended to give them direction, information, before I am going to do something,…so they have…more time to process what I am saying. And [I] validate…with them…I want to make sure that their processes are starting to work in the right direction”. 
RNs built rapport and trust with OAs and their significant others. Strategies included introducing self, being diplomatic to avoid embarrassment, treating OAs with dignity and respect, and respecting families’ beliefs and advocacy associated with drug therapy. Use of these strategies enabled one RN to avoid stereotypical assessment of OAs, to glean assessment data from them, to teach OAs about drug therapy, and to dialogue with families for these purposes: to understand each OAs’ baseline normal status, to detect drug-induced effects, and to determine when it was time to restart drugs (e.g., for Parkinson disease). Another RN had learned that trust was more important to older (versus younger) adults, and how to establish it. “A lot of elderly people, if they don’t [trust]…won’t…take stuff as easily as younger people will.” “You just have to communicate…and go into depth a little bit more…[about] what they [drugs] are…for” (e.g., “They are Tylenol 3s…for your pain”). A big part of her role was respecting her elders, including fathoming their views. Thus, she offered assistance (“Would you like me to crush them for you, break them in half?”), and she explored their needs and concerns (“Do you have any reason why you don’t want to take them?”) and responded to them (e.g., if their drugs upset their stomachs, she said, “I’ll give them to you with milk.”)

RNs tried to include family members in the conversation (e.g., about drug histories). They protected OAs’ privacy, and they respected OAs’ diverse wishes, needs, abilities (e.g., pain threshold, coping capacity), and views (e.g., about drug therapy).

RNs used strategies to offset communication challenges. Most RNs considered OAs’ sensory abilities. When assessing OAs’ pain, one RN was “really careful of their neurological faculties, you know, hearing aids, glasses. How well do they hear you? How well do they see?”

Also, she avoided stereotypes about age. “I treat each person on an individual basis…I
wouldn’t…talk to them really loudly, because they will probably say,…‘I’m not deaf’”. RNs employed aids/devices, did not use written information if OAs lacked vision supports, changed the tone of their voices for OAs with reduced hearing, and were patient and used repetition with OAs who had Alzheimer Disease.

To address language barriers, RN communicated with family members and drew on the skills of staff members who spoke different languages. An RN said,

We get a lot of people who cannot communicate with us…But…we are pretty lucky…[to] have a very…diverse multicultural staff, and…lots of people who can translate for us to the best of their knowledge. But…it is very hard. And…[some OAs] are definitely set in their ways [including about their drug care]…So we…try to explain to them…why we are doing this and what’s happening to them, to the best of our ability.

*Educating OAs*

RN had a pivotal role in teaching OAs and their families about drug therapy. An RN who had practiced with OAs for 20 years explained how her teaching responsibilities had increased: “In the last ten [years] it has gotten more specific, like…teaching…about the medication and reviewing it, pulling up the data, and writing it out on papers for them, about the different drugs.” Another RN said, “We are always educating, always.” “People have to understand what they are taking.”

RN identified relevant drug-related teaching objectives, strategies, aids, and topics. Objectives included promoting and protecting OAs’ health and function and helping OAs to control any negative effects. For example, at discharge, one RN taught OAs about their conditions and their drugs, including effective monitoring, to prevent not only fragmented care, illness, and readmission, but also DRI that resulted in readmission. Another RN wanted to stay current about OAs and drugs, including safe administration, so that she may pass that
information on and prevent nasty problems and readmission. Other objectives were to respond to OAs’ learning needs about drugs and thus support their right to information. According to one RN, it was crucial that OAs got the information that they required. “Oh, it’s very important. It’s their…medical life.” More objectives were to build trust with OAs, to reduce the number of drugs taken, to reduce OAs’ fears and those of their families, to increase OAs’ coping abilities (e.g., when their drug regimens needed to be changed), to influence some OAs’ beliefs (e.g., about self-prescribing and pain medication), to ease detection of untoward drug effects, to promote safe management, and to support OAs’ adherence and thus continuity of care. It was important to teach OAs at discharge how to avert fragmentation between the hospital and the community. One RN said,

I explain everything to them, what they are on and what they are going home on. It’s just…a cycle,…to make sure that their medication regimen isn’t interrupted to the point that it’s something brand new for them when they go home.

RNs said that more information would increase their ability to teach for the purposes of enhancing adherence and the effectiveness of drugs, and reducing the risk of DRI.

RNs had learned how to age-adjust their teaching strategies and why they should do that. For example, as well as assessing OAs’ knowledge and their learning needs, they looked for characteristics that may affect OAs’ learning. Characteristics included OAs’ views about drugs, their hesitancy to question, and their cognitive function. When necessary (e.g., when teaching about drug management), RNs urged OAs to use sensory supports (e.g., visual aids, brail, blister packs, communication boards). RNs took more time (than with younger adults) because OAs needed more in-depth education; also, OAs took longer to discharge due to their greater complexity and more people being involved in their care. RNs considered how OAs learned
(e.g., by reading, by hearing, by demonstration). (An RN asked, “How best do OAs learn, visual repetition, [and/or] validating?”) RNs multitasked (e.g., taught while removing OAs’ stitches), they were prepared (one RN looked up a new drug if she did not know it), and they built rapport with OAs. For example, when teaching OAs about drugs with a stigma, one RN was patient and subtle to discern the meaning that they gave to the drugs and to correct any misperceptions. “You have to be careful with things like Valium, which…has the stigma…Valium is often given for muscle spasms as well as other things”. “An alcohol-withdrawal problem, Valium is given on a regular basis for that. You have to…approach very diplomatically and quietly,…and not…embarrass…that person.” The patient “might say, ‘Well, I’m not crazy’…[They might] get the wrong information, or it’s not put in a subtle way…It’s the stigma attached and…the language that you use”.

Most RNs knew about the import of explanation. One RN said, “A lot of people…don’t know why they are taking these medications…or…having these tests done…We try to explain to them…in depth and to their ability to understand”. Another RN explained how she taught OAs about untoward drug effects.

If it’s [their pulse] too low, that could be…a sign…that it’s [their level] too high…And…[being] nauseated, not eating,…is another thing with dig[oxin]…I always tell them to take their pulse…Same with the thyroid, that it can slow your heart rate…And…if it’s out of whack,…you can feel really sickly…Metoprolol, too, that you should take your pulse, and…if you’re feeling weak and dizzy,…even with the nitro patch, always sit on the side of the bed first thing. All those cardiac drugs are very hard on elderly people.

Reasons for explaining included these: so that OAs may grasp the importance of their drugs, to gain OAs’ trust, to show OAs (and respect) their rights to information, to debunk any erroneous beliefs that OAs had about drugs and why doctors prescribed them, to decrease their fears (e.g.,
when they were diagnosed with new conditions that required drug therapy, and to increase the continuity of their therapy. RNs accepted OAs’ views (e.g., when they refused to update their drug practices to reflect current practices), but they still explained to build trust.

RNs involved OAs’ significant others in teaching for backup, to reinforce the learning, to support continuity of care (e.g., at discharge), and to mitigate family members’ stress and anxiety (e.g., when an OA was taking a drug and seemed more drowsy). Also, when family members found (on the internet) information about their older relatives’ drugs that concerned them, one RN showed them data from the Compendium of Pharmaceutical Specialties (henceforth called the Compendium) to calm their fears. An RN said that “family members” have “a lot of anxiety” when they bring “an older person that’s had surgery or medical problems, like pneumonia,…home on puffers or something…Are they using them properly?….There is a lot [to know]”. When teaching families, one RN used information gleaned from unspecified experience, from reading authoritative texts (e.g., the Compendium), and from collaborating with doctors.

RNs had discovered that some older (versus younger) adults had less general education and access to health-promotion media and that “a lot” of OAs were less than literate. Thus, RNs tried to offset those conditions. For example, they focused OAs’ learning about untoward drug effects by giving reminders, cues, and more specific directions about what to look for, and they tried to use language that matched each OA’s level of understanding and to give information in their own language, often calling family members or members of the hospital’s multicultural staff to translate. When OAs had poor literacy, one RN used a lot of back-and-forth banter (versus documents) for teaching purposes, and she gave them their doctors’ phone numbers so that they may make follow-up appointments independently and support continuity of care.
RNs reinforced OAs’ learning. Strategies included giving OAs written information, and reviewing the drugs daily with OAs and their families and over and over with OAs, depending on the scenario and why they were in hospital. RNs needed to know that OAs would use their drugs properly; thus, they assessed OAs’ comprehension and use of the new information and the meaning that they gave to their new drugs.

On discharge, RNs ensured (by giving a document to the OA) that their family doctor knew about their changed status (e.g., their new diagnosis and drugs) and would get all of their laboratory results. Also, RNs urged OAs to bring all of their drugs to their first and subsequent visits with their family doctors because the hospital doctors may have changed quite a few of them. (One RN explained that due to the hospitalist program, most family doctors did not come to the hospital, and thus may not know that their older patients had been hospitalized and about their new diagnoses and drugs. Also, OAs who lacked knowledge were unable to tell their family doctors what had happened to them in hospital.) In addition, the RN gave OAs printed information about outpatient clinics, as well as requisitions for drug tests (e.g., international normalized ratio), to support continuity of care.

RNs identified helpful teaching aids. One RN said that OAs needed on-hand teaching resources that were bright, succinct, and OA friendly.

To give them a bunch of material to read on their drugs, some of them would…read it faithfully. But a lot of them wouldn’t…bother. They need…short explanations and something that is easy to read. I mean, we’re thinking of visual troubles,…hearing troubles, and all of that stuff, too.

User friendly resources included those that were “visual and bright” and “prompt[ed] them to recall” (versus “bombard[ing them] with…a lot of information”). RNs wanted advisories (e.g., about OAs’ greater susceptibility to ADRs) that they may give to people so “they will know it’s
true”, and a poster (or handout) about interactions between home remedies, herbs, and prescription drugs that they may give to OAs (e.g., at discharge).

RNs knew about OAs’ characteristics that constrained their drug-therapy knowledge (see in chapter 5); thus, most RNs taught OAs about their rights to information and to ask questions. When OAs refused their drugs, knowledge about the Health Care Consent Act was relevant.

To teach OAs and their families about drug therapy, RNs drew on their knowledge about drugs and alternatives. As well, they learned about OAs’ drug regimens, including drugs for discharge, about the therapeutic effects of their drugs (e.g., to promote adherence), and about any required changes in their drug therapy. RNs discouraged self-prescribing (e.g., narcotic patches, Lasix) because it may lead to DRI and readmission. Also, they taught OAs about their drugs and related tests, and about drug management. For example, when a patient with acute bronchial pneumonia was using four or more puffers and unable to keep them straight, an RN listed the puffers, identifying their colors and the times for their use, and taped the list on the patient’s bedside table. Some OAs kept their current drugs and their discontinued drugs together in a bag; thus, on admission and at discharge, RNs taught them how to eliminate discontinued drugs. For example, when OAs’ drug regimens changed between admission and discharge, RNs helped them to eliminate unnecessary drugs. An RN explained that “some OAs come in with 30 drugs” and during hospitalization that number may be reduced to 20.

Then, we give them a list of the medication that they’re going home on so that they can eliminate...[their previous] drugs at home. Some people have a hard time doing that. So we’ll ask them to bring the medications in and we’ll discard the [unnecessary] ones.

Another RN told each OA to take their discharge prescriptions and their previous drugs to their community pharmacists who would cull any unnecessary ones.
Promoting OAs’ Adherence and Families’ Involvement

RNs promoted OAs’ adherence to, and families’ involvement in, drug therapy. To promote adherence, RNs drew partly on their knowledge about drugs. RNs evaluated OAs’ adherence to their home medications, and they explored OAs’ reasons for non-adherence while respecting their views. Most RNs knew that non-adherence contributed to DRI. An RN explained that when OAs were admitted due to problems with adherence, she did not know if they had just…decided that they…don’t want to take their pills any more [or that] they…don’t want to…live any more, or whatever. But,…you have to look at the whole picture. Why does this person not take their pills?...Why were they taking too many pills?...You have to assess the whole situation.

One RN wanted more information about non-adherence, including non-drug factors that interfered with OAs’ drug therapy. Strategies for promoting adherence included reassuring OAs, teaching them about their drug regimens, including their associated rights, and, when necessary, trying to decrease (or eliminate) their drugs on admission and at discharge. If OAs’ at-home drug schedules were safe, one RN tried to maintain them during hospitalization to prevent any confusion post-discharge. When their post-discharge drugs were expensive, some OAs stayed in hospital where the costs were covered. RNs affirmed OAs. One RN said,

I believe in being a cheerleader….So…whatever they’re doing, if it’s working,…we should be telling them it’s working…If you’re able to monitor your own insulin,…[say,] “Look how great your blood sugars are”….I think that’s…really important to them.

Most RNs engaged other HCPs (e.g., hospital pharmacists) and OAs’ significant others in promoting OAs’ adherence. To offset any physical, sensory, and cognitive challenges that OAs had, all RNs taught OAs and their families about strategies for managing medication. For example, at discharge, RNs either gave each OA a list of their drugs or told them to keep a current list. One RN urged OAs to ask their community pharmacists for blister packs “so
everything is…labeled properly”. RNs wanted more information about strategies for drug management and about how to use the fewest number of drugs and optimal doses to increase adherence, in part by helping OAs to avert DRI.

OAs’ families were involved in their drug therapy. (One RN said, “Their family is very involved, a lot more now than they used to be”.) To promote families’ involvement, RNs involved them in teaching OAs, in boosting adherence, and in offsetting language barriers. RNs taught families to decrease their fears, and they respected their beliefs about OAs’ drugs and their advocacy for their older relatives. RNs advocated for families who helped OAs with their drug therapy at home, and they empathized for families who saw their highly functioning older relatives become “disorientated” and “confused” postoperatively due to receiving morphine.

**Collaborating with other HCPs**

RNs used a team approach. They collaborated with other HCPs for these purposes: coordinating drug therapy, advocating, mentoring other HCPs about drug therapy, consulting HCPs for information, monitoring to prevent or to detect DRI, strategizing to minimize the effects of DRI, and addressing constraints on practice (see chapter 5).

**Using a Team-and-Coordinated Approach**

RNs’ favored team approach included OAs, their significant others, and HCPs. HCPs included RNs, dieticians, hospital pharmacists and doctors, OAs’ community pharmacists and doctors, nurse managers, social workers, discharge planners, and staff from involved community agencies (e.g., home care, long-term care). Hospital pharmacists were involved daily.

RNs coordinated drug therapy for OAs. They used information about OAs’ normal function, their current function, and any potential or actual risks. RNs coordinated to retain
HCPs’ focus on the goals for care, to prevent fragmented drug therapy, along with its effects and consequences, and to promote comprehensive and continuous therapy. RNs coordinated drug therapy with pharmacists, doctors, and staff in community agencies, and between the following: specialists and GPs, surgeons and nephrologists, in-hospital doctors and community doctors, in-hospital doctors who did not talk to each other, in-hospital laboratory staff and internists, in-hospital pharmacists and doctors, OAs and doctors, and doctors and OAs’ families. RNs’ will to coordinate was obvious in the many strategies that they used on admission, during hospitalization, and at discharge.

On admission, RNs tried to discover all of the drugs that OAs were taking, why some OAs were taking some drugs (e.g., for blood-pressure when their pressure was low), and why some OAs were still taking drugs after such a long time. Also, RNs addressed fragmented prescribing in the community that led to harm and admission, they interrupted cycles of recidivism (due to OAs having received fragmented care on discharge from hospital), they adjusted hospital drug-administration times so they fit OAs’ at-home schedules, and they dealt with fragmented care that had happened elsewhere in the hospital.

RNs knew about conditions that fragmented drug therapy for OAs (please see chapter 5), about the effects and consequences of those conditions, and about preventive strategies. One RN said that fragmentation happened “a lot” and resulted in hidden work for her, inefficiencies in the organization, and some aspects of OAs’ care being missed. Recently when she admitted a woman from emergency, her need to check and transcribe the pages of orders (“We review everything…You go through it all”) delayed her learning about the OA’s comprehensive needs. She explained that the woman
end[ed] up with five pages of orders. And trying to figure out what the actual orders are….I was lucky…that [my] student nurse…assumed the care of the other four patients for me….It took me…over an hour to go through her chart…so we could follow all the drug orders and make sure they were done right.

Another RN coordinated by giving locums (doctors “brought in for a week…from some facility” and who worked in-hospital only and thus did not know the patients) a report about each patient (e.g. their age and normal function and her assessment findings) to inform their decision-making about initial and ongoing drug therapy, along with the goals for discharge.

Coordination in-hospital included reporting abnormal laboratory blood work, and relaying hospital pharmacists’ suggestions (e.g., about doses, potential interactions, monitoring for toxicity) to doctors. One RN said,

The pharmacists are good…They’ll write a blurb and say, “Make sure you let the doctor know that he should be monitoring the blood [for toxicity]…every so many days”…But lots of times,…you get that lab [result] back…and it’s up to you to…tell [the doctor].

(In these situations, the internists intended to monitor, but it fell on her to do it because they had so many patients.) Also, coordination involved alerting surgeons when their prescribing practices demonstrated that they were not well informed about OAs’ comprehensive clinical conditions, trying (but unsuccessfully) to get physicians to review the drugs of OAs who had been in hospital for a long time, and collaborating with other HCPs (e.g., to influence drug therapy).

RNs knew about many conditions that fragmented OAs’ drug care at discharge (see chapter 5), about the goals of coordination at discharge (e.g., promote continuity of care, protect OAs’ health, prevent readmissions), and about various coordination strategies. Strategies included removing drug-related equipment (e.g., normal saline locks) from patients, learning when OAs should see their doctors post-discharge, and asking hospital physicians how often they wanted drug-related tests done post-discharge. When discharging OAs to other agencies, RNs
telephoned reports and forwarded documentation about their drugs so that the staff there may tweak their lists accordingly. When OAs could not afford their drugs, a community agency supported their needs to some degree; thus, one RN ensured that both the OAs and the agency’s coordinator had the necessary information. When OAs had been looked after in hospital by locum doctors who did not know their needs like their family doctors did, one RN needed “to be more ‘for’ the patient” and to prompt the locums (e.g., to order blister packs).

An RN cautioned doctors when OAs who were already taking aspirin and warfarin saw American advertisements for Plavix and asked for that drug. She explained her rationale:

Do they realize that this patient is on three different [drugs]? I know that they affect different parts of the blood,…like platelets and all,…[and] the more…you’re on, that you decrease the chances of a heart attack and stroke. But this patient, going home, how compliant are they going to be going for…[international normalized ratios] and…watching for bruising and bleeding, because the more you add… the greater the risk?

As a result, often the doctors spoke to the OAs and left them on their original drugs for six months, while assessing their adherence.

RNs asked strategic questions and made suggestions when internists and family doctors did not collaborate prior to ordering drugs for discharge. One RN explained that both the cardiologist and the GP ordered drugs, but the OA might not see the cardiologist again for months and, in the interim, the GP might not know to follow up with any drugs (e.g., metoprolol, calcium channel blockers, digoxin, Lasix) that the cardiologist had ordered. The RN found this situation “very shocking” and “terrible” and wanted to prevent drug-related harm and readmission; therefore, she asked the cardiologist when they wanted to see the OA again and she noted the appointment on the discharge form. Also, she asked the cardiologist what they wanted the GP to do in the interim, she suggested doing laboratory work (e.g., digoxin levels,
electrolytes) the day before the OA’s visit with the GP, and she completed a discharge form for the GP. Most of the time the cardiologist agreed with her suggestions.

RNs detected and fixed prescribing errors at discharge to prevent the revolving door (when OAs, due to being prescribed the wrong drugs, were readmitted). One RN communicated with the OA or their family and then told the prescribing doctor about any discrepancies.

Then, you’ve got to back up and go to the doctor [and say,] “Do you realize that this patient now is on an increase in a nitro patch, or they’ve added metoprolol,…or it’s an increase in metoprolol?” And…[they answer], “No”.

(If the OA’s GP was no longer practicing, she discovered the OA’s pharmacy and gave the telephone number to the discharging doctor who phoned to correct the prescriptions.) Without her coordination, the results included missed drugs (e.g., drugs that had been changed or added in hospital were overlooked), unnecessary drugs (e.g., preadmission drugs that were no longer appropriate and had been discontinued in hospital were inadvertently reordered), and readmission. Also, she taught younger RNs how to deal with these issues, because doctors who prescribed incorrectly were “mad at themselves” for missing the changes that had been made to the drugs during hospitalization.

RNs coordinated to address insufficient review of OAs’ drugs both in the community and at discharge from hospital. One RN explained that some OAs came to hospital with drugs that they had been taking for years and years and years without any review, and unless she asked questions (e.g., “Do they really need all this stuff?”), most surgeons reordered the home drugs at discharge. Another RN relayed information between OAs and hospital doctors to prevent the recidivism that occurred when OAs with chest pain were given drugs (enoxaparin) and other interventions (e.g., tests that were negative) and then discharged with insufficient information
about what was wrong with them. Also, an RN asked doctors to order blister packs for families who worried about giving OAs their drugs at home.

Most RNs spent more time coordinating drug therapy for older (versus younger) adults on admission and in hospital. That was also the case at discharge, due to OAs’ greater complexity, the involvement of more people (e.g., other HCPs, families), and the need to make follow-up appointments and to engage community services. Sometimes there were family meetings (e.g., with the discharge planner), whereas only rarely did younger patients need them. An RN who discharged on average two people a day said that at times it took her 20 to 30 minutes to coordinate each patient’s care, including the drugs prescribed by different doctors.

More practices to coordinate, and to support the continuity of, drug care are described in these knowledge sections: Assessing and Diagnosing, Communicating with OAs, Educating OAs, Promoting OAs’ Adherence, and Mentoring Other HCPs.

Advocating for OAs

RN advocates continuously for OAs on drug therapy. One RN said, “I think it’s an ongoing thing”. Although one RN sometimes got tired of advocating, she continued doing it so that OAs may regain their health.

I have no problems [advocating] if it’s for the benefit of the patient…..Someone has to speak up for them. And you’re there. You’re there. My goal is…for them to get better…So if I need that [medication]…then I’m going to ask for it.

Other comments were these: , “The most important part is being the advocate and then…advising”, “I’m an advocate, yeah, I have to be. Who else is…there to do that?[OAs] don’t understand that”, and “We’re [RNs] the advocates now. We’re in the trenches. We’re the ones…making a lot of decisions and passing on the information”. RNs illuminated their
knowledge about advocating for OAs, and they wanted more information, or affirmation of their knowledge, about that topic. In order to advocate, RNs had to know about each OA, how to work through OAs’ challenges, about goals and strategies for advocacy, and about power inequities.

*Knowing each OA.*

In order to advocate for individual OAs on drug therapy, RNs needed to know them. One RN explained that under the current total-patient-care model, she was responsible for five patients and their advocate; thus, she had to learn everything about them.

> When you have those five patients,… the doctor talks to you. [So] you have to know [all about them.] especially if a locum comes and they don’t. You have to be like the advocate for that patient.

Due to having to see so many patients, often locum doctors did not know the patients’ histories as well as the patients’ GPs did. (One RN said, “[They] can’t spend the time like a GP would”.) Similarly, an RN said that the hospitalists [are] busy and…don’t always see the whole picture. They’re only…[on the unit] for 45 minutes, maybe half an hour, to assess their [patients’] needs. They might…pop in just to deal with whatever I need, and then they’re out of there.

According to one RN, knowing patients completely meant knowing their diagnoses (e.g., what they meant and involved), their drugs, and their normal function, as well as communicating with them (e.g., about symptoms), examining them (e.g., listening to their chests), observing their holistic function (e.g., to detect aberrant signs), and reading their health records. By reflecting about the data that she amassed daily, she identified when OAs needed drug therapy and the effects of it. She learned about OAs as a basis for managing their illnesses with drugs and for promoting and protecting their health (e.g., by advocating, teaching, coordinating their drug care, and collaborating with other HCPs).
Working through OAs’ challenges.

Working through OAs’ challenges involved knowing the different terms, approaches, and information that triggered doctors to act. One RN explained: “[If] you can clue in on stuff like medication, then it just brings it together for them, ‘cause they deal with a lot of people, too”. She tried to meld information about OAs’ clinical status and their drugs for doctors so that she and they may dialogue effectively about any issues. Another RN wanted more information about how to address constraints on practice.

More knowledge would…certainly be helpful…It would be good to know how to deal with constraints…How to be diplomatic but [assertive to] get your point across and make your communication…more effective….That is something that…nurses…need to do.

Goals and strategies.

RNs’ goals for advocacy were closely aligned with their overall goals for drug therapy (e.g., their will to protect OAs’ health and their rights). Some of RNs’ goals for advocacy were peppered throughout their advocacy strategies. Strategies included these. Sometimes on admission, RNs consulted many other individuals to discover all the drugs that OAs were taking and to check their accuracy. During hospitalization, RNs reported DRI, they clarified or refined the goals for drug therapy, and they consulted other HCPs to understand its effects. RNs advocated for effective pain management by mentoring other staff members and by pushing for better management when some doctors, due to their erroneous assumption that OAs would not do well, tended to brush off such needs. Also, RNs advocated for comprehensive and coordinated (including continuous) drug therapy for OAs.

RNs influenced OAs’ drug therapy at admission, in hospital, and at discharge. To do this, they needed to know how to talk with other HCPs. An RN shared her insights about RNs’ key
role in influencing OAs’ drug therapy. “We’re the first line. We’re the only people that see them [OAs] usually. We do the assessments…Then…we hope the doctor’s gonna follow through”.

Also, “Nurses often are the ones that are the catalysts,…the ones that suggest or spark interest into moving in one direction or another”. She explained why that is.

We’re the ones who do the day-to-day nursing. And if you know something that may work and you suggest it, often it’s something the doctor hasn’t thought of,…, or…he's grasping at straws too, trying to deal with this. And if you bring something into the mix, then they…often will go that way and try it.

RNs influenced drug therapy by reviewing and withholding OAs’ drugs, trying to prevent (or to address) polypharmacy, making suggestions, asking questions, and sharing information and ideas. RNs shared their knowledge and rationale associated with each of those strategies.

RNs reviewed OAs’ medications at admission, in hospital, and at discharge. Reasons were to ensure that OAs’ drugs and doses were correct, to check the fit between each drug and the OA’s status, to understand any parameters for using a drug, to prevent polypharmacy or minimize the number of drugs, and to prevent or reduce the risk for DRI. One RN explained an in-hospital strategy: “If it’s…a really lengthy chart,…we’ll do a med review to consolidate all those medications so that the doctor will see what they’re on and…eliminate or tweak medication doses”. RNs withheld OAs’ drugs when they were concerned about their vital signs, did not understand the rationale for the drugs, were unsure which drugs OAs should take prior to surgery, and needed parameters for not/giving medications. When a physician did not heed one RN’s concerns and suggestions about a drug, she withheld it until she understood the reason for continuing it, and she informed the physician about her action. She explained: “That’s part of our advocacy.” She had to be comfortable with the fit before she gave the drug. She said, “Especially if there’s a presenting adverse reaction, then I want…to make sure, before I continue giving that,
that I’m not compounding the problem.”

RNs knew about causes of polypharmacy (e.g., prescribing issues, fragmented care, OAs’ drug practices) and the consequences (e.g., DRI). Thus, RNs used strategies to prevent (and to address) polypharmacy. For example, RNs tried to deal with fragmentation and other prescribing issues, suggested to doctors how to coordinate drugs or to reduce the number (e.g., discontinue unnecessary drugs), asked doctors if OAs still needed some drugs, urged OAs on admission and at discharge to discard any discontinued drugs and, when appropriate, used non-drug interventions for challenges associated with behavior, comfort, anxiety, and/or chronic illness (e.g., asked OAs to avoid sleeping pills to promote their mental status, asked OAs on Lasix to eat bananas for potassium.) RNs wanted more information about how to prevent polypharmacy, for example, by discontinuing unnecessary drugs, using non-drug interventions (e.g., lifestyle changes), and alternating drugs.

RN suggested drugs that may help to alleviate OAs’ symptoms, drugs that may be more effective than those prescribed, and changing pain medication when it was ineffective. (One RN said that “generally” Indocid by suppository was more effective than intravenous morphine for older women who had had hysterectomies.) When morphine caused an OA to become confused, an RN asked questions and suggested changing the drug or the dose. RNs made suggestions about potential drug interactions. Also, they reported OAs’ signs and symptoms and suggested drugs that had worked well previously. An RN who said, “I’m more of a trigger person than…a prescriber”, explained, “I’m a reactive person. I present symptoms…and…things that I know have worked the past…I’ll bring it to the doctor’s attention. And they’ll deal with it…most likely that way”. Another RN said that “most doctors are receptive” to her suggestions.
RNs had learned how to ask questions to influence OAs’ drug therapy, about rationale for asking questions, and about associated strategies (e.g., what to question, what to ask for, and when to question). Some RNs wanted more information about questioning. An RN who always asked questions, illuminated her motives. “It has to fit right with me before I can…do the therapy with drugs”. “It’s my conscience…It’s my nursing knowledge…It’s my personal knowledge from [growing up with]…elderly people”. RNs had a catalytic role in asking other HCPs questions about drug-related issues and collaborating with them about effective approaches to the issues. RNs asked whether OAs still needed medication, for parameters for withholding medications (e.g., if an OA’s heart rate was too low), for second opinions (e.g., from doctors and nurses) about assessment findings and any drug issues (a strategy that one RN had learned about through years of experience), for blister packs, and for the use of age-adjusted interventions to prevent harm. As mentioned previously, before giving an OA a bolus of intravenous fluid, one RN asked for a reduced volume to prevent heart failure and the need for Lasix. RNs asked for drugs (e.g., for sleep, pain, high blood pressure, prevention of constipation). One RN asked for drugs because she lacked postoperative standards.

I have to say,…“I need Colace. I need a stool softener. I need a laxative PRN [as needed]…Their bowels haven’t worked for a few days”…I’m always asking [because although]…there used to be postoperative standards,…they’re not allowed any more. So you always have to be on top of it.

As well, RNs asked questions in these situations: when the outcome of drug therapy was not what they had expected, when they were uncertain about combining drugs (e.g., new drugs may interact with OAs’ current drugs), when surgeons did not review OAs’ drugs prior to prescribing for discharge, when prescribed drugs did not seem to fit their assessment findings, and when prescribers reduced doses. At times on admission, one RN questioned OAs’ need for
drugs (e.g., Serax, narcotics), along with the frequency and the duration of use. She explained:

If you’re not on the ball enough to say, “Well, they’re taking these narcotics three times a day”, and anything else that they might be on,…if your pharmacology, in other words, is not strong or you haven’t had the experience, there could be some real serious repercussions…post-op.

Also, the OAs may be self-prescribing. Thus, often she consulted the family doctor about the drugs, or she urged incoming staff to ask why the OA needed all of them and if they were still necessary. RNs asked about reducing the number of OAs’ drugs, about relationships between patients’ drugs and their laboratory results (e.g., liver function tests), and about appropriate tests to monitor the effects of drugs post-discharge. To prevent under-diagnosis and more prescribing, RNs asked whether new signs and symptoms may be drug-related.

RNs asked doctors about interactions (to counteract fragmented prescribing), and they asked about the following: over-prescribing in terms of the frequency (e.g., Ativan three times a day) and duplication (six different antipsychotic medications when the OA did not need them), the use of multiple drugs that affected blood thinning, the need to change a dose (too high or low) or to add a drug (e.g., due to abnormal vital signs or blood sugars), and drugs that OAs should take prior to surgery. (The last issue arose when OAs’ blood pressure was high on admission, but they had not taken their medication because they did not know which pill was for blood pressure. At times, one RN asked the OAs to take their medication; however, when she was uncertain, she consulted other HCPs.)

RNs influenced OAs’ drug therapy by sharing information (e.g., about signs and symptoms that may need drug therapy) and ideas. For example, one RN told administrators about the use of post-discharge hospital clinics to support collaborative learning and prevent further illness and readmissions (see Facilitators of Practice, in chapter 5).
As advocates, RNs supported OAs’ rights (e.g., to dignity, autonomy, informed choice, privacy, confidentiality). Strategies included teaching OAs about their rights and giving them in-depth explanations about their drugs, including any changes. (An RN said, “You have to explain to them, ‘We’re bumping you up to 100 mg instead of 50’. And you have to tell them why….They want to know why, and they have a right to know’.”) An RN said that information for decision-making was “very important”. “It’s their medical life,…their well-being, what they have to deal with.” When OAs deferred to HCPs, RNs told them about their right to ask questions and encouraged them to do so. When a patient wanted to discuss something with their doctor, one RN offered to write it down for them. One RN wanted to know more about the Health Care Consent Act. RNs respected OAs’ right not to change their practices but ensured they had the information they needed to make informed choices. An RN said this about OAs who used puffers but had never heard about aerochambers and refused to use one:

So when they come into…hospital, and you give it [aerochamber] to them, you have to…try to explain to them, “This is a new way,…and you get more of the medication this way”….[But] a lot of them say, “I don’t need this. I do it my old fashioned way”. And I just say, “Whatever works”. I don’t fight and argue with them.

When patients refused to take their drugs, another RN told them that was their right, but she asked their doctors to talk to them. She explained: “It could be metoprolol…It helps their heart rhythm, the rate and the functioning of the heart…Their blood pressure could go up…You can’t just keep missing doses”. When a patient refused to change the time for a drug because their doctor had told them to take it then, the RN said, “Okay…But…this is a cholesterol pill and you are supposed to take it with supper”.

Power inequities.

RNs knew how power inequities affected their feelings about advocacy, how the
inequities may affect RNs’ advocacy in the future, and about the toll of advocacy. One RN said, “When you are passionate about what you do, many days you go home and you…feel very frustrated….No one is listening. Nobody is listening….It’s not a positive way to be.” Also,

It can be really frustrating. It’s like you’re just the worker on the floor. And people need to pay attention to what you have to offer. Some people are really intimidated to…say [to a doctor], “You know what? We need to call a meeting. This isn’t working. I think we can do better”. They are very defensive with that…They’ll just probably not bother to show up… We’ve had that before.

Another RN said, “Sometimes you get tired of doing it…You’re thinking, ‘Come on. Smarten up, doctor. You should know.’”

RNs knew not only about their need to keep advocating for OAs on drug therapy even when they were abused for doing so, but also about the causes and kinds of abuse that fuelled that need. One RN thought that due to the hierarchy imposed by the medical model, she was viewed as being inferior to the doctors who wrote the drug orders; thus, she had to advocate diligently when the drugs did not work. When another RN suggested creating a hyperlipidemia clinic (“People go to these clinics [to] get the cholesterol down…before they come in with an event”) she was laughed at, although she did not say by whom.

RNs sensed that advocacy for OAs may decline in the future because a few doctors laughed at new nursing graduates who made suggestions about drugs, and some newer RNs questioned why OAs were treated and why aggressively. Also, younger (versus older) RNs had different views about care. For example, due to their frustration with the workload, younger RNs either transferred to other units or left the hospital. Some younger RNs were more into managerialism. (An RN said, “We want…[them] to treat us the way that…we taught them to look after people…[But] I’m not sure that it is always there, because they are so much more into
the economics and the…speed"). Also, a lot of the newer RNs were afraid to share their concerns with the nurse manager due to her strong personality and because there was talk about job layoffs; thus, they relied on older RNs to take any drug-related (and other) issues to the nurse manager, and the older RNs did that because they had job security and would soon retire.

**Mentoring Other HCPs**

RNs mentored younger RNs, RNs from long-term care who had come to work in the hospital, other staff (unspecified), nursing students, RPNs, and doctors. Most RNs knew about the professional expectations of RNs and of RPNs, and about each staff member’s competence.

One RN shared her goals for mentoring and wanted more information to support mentoring. Due to the mass exodus of nurses from her floor, there were many new RNs, some from long-term care who needed mentoring about skills. Because she wanted to help them (she did not like them being thrown into practice on their own), she craved more knowledge. “I would love to have some more knowledge, just…to…tap into, [to say,]…‘This isn’t very good. Let’s try something else’. Or, ‘We better be watching carefully’”. She explained her rationale:

> When you are older staff on the floor with a lot of younger people, you are the one doing the teaching whether you want to or not (she laughed). And if you have that knowledge, at least you can pass it on…and feel like…a part of me saved somebody from…getting in a big difficulty.

RNs used mentoring strategies associated with drug therapy for OAs. One RN said that other RNs sought her advice due to her teaching experience, her personal experience, and her experience with renal patients. When she mentored other RNs about potential hypotension in OAs, she used insights about her own normal blood pressure. She helped younger RNs to decide whether they should give OAs their blood-pressure medication prior to surgery when their pressure was really high. She explained: “If it’s a renal patient, and you expect them to have high
blood pressure anyway (she laughed), they’ll come…to me and…say, ‘Their blood pressure is like 180 over whatever.’ That’s often renal…related.” At times, she told the younger RN, “Continue with their medications…And…let’s monitor them and see what happens.” However, when she was unsure what to do, she suggested calling the doctor. Also, RNs mentored other RNs about the use of blister packs, younger RNs about what to do when family doctors ordered the wrong drugs for OAs at discharge, and some younger RNs in order to change their ageist treatment of OAs who became confused, perhaps due to medication.

Another RN had learned that when OAs came off morphine (after hip or knee replacements), staff switched them to Extra Strength Tylenol. They were afraid to try Percocet or Tylenol 3 because they thought those drugs would cause confusion or that OAs would “not…be able to handle” them. As a result, the OAs’ pain control became an issue. When she mentored staff about better pain management (use the Percocet or the Tylenol 3s for a few days until the OA is up and moving and then revert to Extra Strength Tylenol), she drew from her observations of her 80-year-old aunt who had rheumatoid arthritis and had fallen and fractured her arm, but now, due to taking Percocet, was up and living her life. Other RNs taught nursing students how to build rapport with OAs to enhance their disclosure of crucial information (e.g., abuse of drugs and alcohol), and about the importance of ongoing assessment in detecting a need for drug therapy. As a result, one student found an OA with fluid in her lungs who needed Lasix.

RNs mentored RPNs in their expanded role that included drug therapy. Reasons were that administrators expected RNs to mentor RPNs, RNs wanted to help RPNs to become better practitioners, and the more successful the RPNs were, the easier it would be on the RNs. One RN shared her goals and strategies for mentoring. She said that lifelong learning and mentoring were
“very important” and that “people need to learn practice”. She wanted the RPNs to tell her about any problems so that she may deal with them (even if it meant increasing her workload), thereby giving the RPNs a chance to fix their practice and helping them to “become…better practitioner[s]”. When an RPN made a drug error, the RN completed an incident report; however, she told the RPN that she was not doing that because they were dumb, but to prevent repetition by other staff. Also, this RN had an ongoing banter going on with them [RPNs] through the shift…They have four patients independent of us. But because their…knowledge base isn’t what mine is,…I listen to their report as well [as my own], and ask them if they have any medications they need me to give…I tell them,] “If you have any concerns,…ask me”.

She explained that she was just trying to support their education, because this role is fairly new to them…Some of them…are quite competent…Others…need a little bit of support….I need them to be successful because if I’m busy I can’t be looking after their patients too.

Another RN mentored resident doctors about drugs that had worked well previously; however, when they asked her about doses, she told them that ordering the dose was not within her scope of practice. As well, doctors sought her advice, due to her experience. (“[Doctors] will come to me, who’s experienced,…They’ll search me out. I can see them…coming down the hall…They’ll go, ‘Oh nurse, can I ask you a question?’”)

**Technical Knowledge about Professional and Regulatory Expectations**

RNs knew about professional and regulatory expectations associated with drug therapy, and they wanted more information. One RN said, “You have to remember to practice within your scope of practice…and…keep things safe”. An RN who had not seen the College’s (2003) medication standards, wanted to. Another RN was unsure about her familiarity with the standards. (“To be honest, I didn’t even know they existed…Medication standards, we have
those?...I didn’t know that. Maybe I do know that but I don’t know that). She thought that information about the standards would be helpful.

Some RNs were unfamiliar with the Canadian Nurses Association’s (CNA) (2002) expectation that nurses “advocate for quality practice environments” that support in part the provision of “safe and competent care” and “respect” for all stakeholders there (p. 17, 18). (Included is the notion of supporting “a climate of trust that sponsors openness, encourages questioning the status quo and supports those who speak out publicly in good faith” (p. 17)). RNs were unfamiliar with the expectations that they “recognize the need to address organizational, social, economic and political factors” that influence health and participate with other stakeholders to present nursing perspectives (p. 10); therefore, they wanted more information about them. (One RN wanted to see all of the above-mentioned information from the CNA (2002)). More information about the aforementioned factors might buttress their advocacy for OAs on drug therapy and their capacity to address constraints on learning about that therapy. RNs did try to address some constraints on practice. For example, they coordinated fragmented drug care (to address organizational barriers), they communicated with families when language barriers barred dialogue with OAs (to address social barriers), they contested staffing shortages that led to fragmentation and delayed understanding about OAs’ drugs (to address economic barriers), and they contested ageist practices associated with consultations and pain management (to address political barriers). RNs’ knowledge about these and other constraints on practice is described in chapter 5.

Evaluating Drug Therapy for OAs

RNs evaluated OAs’ progress to the goals for drug therapy. Foci included OAs’ drug-
taking behavior, the therapeutic effects of OAs’ drugs, the extent to which negative effects and consequences had been avoided, alleviated, or controlled, and OAs’ (and their informal caregivers’) levels of knowledge about safe and effective drug use. More foci were the findings (e.g., laboratory results, vital signs, signs, symptoms) from RNs’ assessment. Evaluation strategies included considering whether OAs’ drugs and illnesses were contributing to their signs and symptoms (e.g., chest pain). RNs wanted to know more about foci and strategies for evaluation. An RN commented, “There’s always room for improvement”.

Summary

In this chapter, I structured RNs’ knowledge and learning needs about drug therapy for OAs within the steps of the nursing process. To assess and diagnose, RNs needed to know the diagnoses made by other HCPs, about OAs’ heterogeneity and function, and how to modify their assessment to accommodate any aging-related factors and OA characteristics that affected it, including how aging affected pharmacokinetics, pharmacodynamics, signs and symptoms of disease and of ADRs, and OAs’ psychological reactions to illness and proposed drug treatments. As well, RNs knew about drug use with OAs, about alternatives to drugs, and how to conduct and evaluate drug histories. To set goals for, and to plan, implement, and evaluate, drug care for OAs, RNs needed to know about suggested goals for members of that population, about key planning processes, and how to age-adjust their interventions for working with OAs and for collaborating with other HCPs. As well, RNs knew about professional and regulatory expectations, and about foci and strategies for evaluating drug therapy. Also noteworthy is RNs’ knowledge about conditions that influenced their abilities to find out about, and to practice with, individual OAs on drug therapy (see chapter 5).
CHAPTER 5 CONDITIONS THAT INFLUENCED PRACTICE

RNs knew about constraints and facilitators of their practice with individual OAs on drug therapy. Now, I describe those conditions, how RNs had learned about them, and their related learning needs.

Constraints on Practice

Constraints on RNs’ practice with individual OAs on drug therapy were OAs who poorly disclosed their drugs and drug practices, some HCPs’ attitudes, views about power, and inadequate management of OAs’ conditions, and conditions in the professional context for care.

Poor Disclosure by OAs

Incomplete disclosure of drugs and drug practices by OAs on admission was a constraint on practice. Reasons for poor disclosure were OAs’ functional challenges, their views, and their lack of knowledge about their drugs. One RN wanted more information about these constraints.

Functional challenges.

Functional challenges, such as physical challenges (e.g., sensory decrements) and cognitive challenges (e.g., slower processing, challenges with memory, sedation) impeded some OAs’ disclosure, and thus RNs’ ability to understand their drugs and any related needs, including needs due to health conditions. OAs with cognitive challenges failed to disclose their drugs comprehensively and in a timely manner. An RN said, “Lots of them will forget what they take”. “Three days later” they will say, “I remember I was taking a heart pill three years ago”, but they stopped taking it. Another RN said that OAs “often miss something, or…miss a dose, or…have a change in their medication that they have forgotten to mention”. That especially happened when OAs lacked community doctors and were depending on their memories. Also, often OAs
volunteered more information when they saw their RNs later, or they recalled more information over the next few days. One RN said,

Sometimes I…admit a patient, and the next day they…say, “Oh yeah,…I remember I take this pill for my heart”. And then the next day they…say, “Yeah, and I take…a water pill”…They will remember as it goes along…if…[they] don’t have a list, or…don’t bring their medications in,…or…just stopped them for no reason (she laughed).

Another RN said that OAs who found history-taking “very stressful” recalled more information the next day when they were more relaxed.

*Perspectives.*

Some OAs’ perspectives, namely their values, beliefs about drugs, fears, and misunderstandings, undermined RNs’ learning about their drug therapy. One RN said that OAs “sometimes have different ideas”; for example, they lacked will to disclose their comprehensive drug regimens, and they tended to underreport signs, symptoms, illnesses, and allergies, and to use unsafe drug practices. Here are some examples.

Due to OAs’ beliefs about drugs that are (and drugs that are not) important, some did not disclose their use of over-the-counter drugs and home remedies, again crimping RNs’ learning about their drugs and related needs, including needs linked to health conditions and to drug effects, like interactions. An RN said, “We do an admission history…And…they don’t always disclose every medication”. At times, they did not “reveal stuff like…antacids,…or the laxative…or the suppository they take every day. They…don’t reveal it as regular medication. Even…vitamins, they don’t think that those are important to reveal”. Another RN reported that a patient did not disclose his use of Questran to a doctor who did a colonoscopy and biopsy. (Presumably the referring doctor did not disclose it either.) “He figured, ‘Oh, it’s just for diarrhea’. He didn’t think it was…a ‘real’ medication.” (see more in chapter 6). Some OAs did
not disclose drug abuse. An RN said, “That’s for sure, for sure,…especially the patients that come from home…They don’t tell us about their overuse of laxatives, that kind of thing”.

Another RN agreed (“absolutely”) and said that some OAs failed to report “abuse of laxatives,…alcohol,…painkillers, sedatives”. She had learned about these tendencies from “experience. And…I’ve read a bit about that…in regular family magazines”, including “Family Circle” and “Good Housekeeping”. Also, “families will tell us that”. Thus, at times RNs used many strategies to understand OAs’ drugs at admission. (Meanwhile, other RNs found that OAs effectively disclosed their drugs.)

Some OAs withheld self-made changes to their drug regimens, thus restraining RNs’ learning about their complete regimens, about unsafe practices and risks, and about factors contributing to their overall status. For example, some OAs added alternative therapies, such as “herbal meds”, “naturopathic” products, and vitamins, to their drug regimens. Or they self-prescribed with Tylenol 3s to offset HCPs’ ineffective control of their pain, thereby confounding RNs’ ability to make sense of their status. An RN explained:

It’s a very fine line to keep…[an OA] relatively comfortable post-op…and then factor in all the meds that are probably still in their system. Those are the ones that you know about. What about the ones that you don’t know about? Or what about the little old ladies who…pop a few [Tylenol 3s], unbeknownst to us, because they are having pain,…you’re not getting on top of it,…and they don’t want to deal with it anymore?

OAs’ concerns and misunderstandings hindered their disclosure. OAs who had gotten the wrong information about Valium from impatient HCPs and were thus concerned about the stigma attached to that drug did not always disclose it. OAs’ values about privacy affected their disclosure of their drug regimens and unsafe practices. One RN explained: “I’ll say, ‘Give me all the pills in your purse just so I can review them…[and] make it better for you. And…some of
them [say,] ‘No. No, you can’t.’” She added,

That has happened to me a few times. And you just pry it out of them. You phone their druggist. You get a list of medications, when it was filled, how many times. And then you count the bottles, the pills that they’ve brought in…And you know that they’re…abusing their HS [bedtime] sedation or something like that.

When OAs valued privacy and did not divulge information, one RN consulted their histories.

OAs’ fears impeded their disclosure of remedies that they used, of borrowed drugs, and of self-prescribing. One RN said this about OAs who did not reveal products from other sources:

Yeah,…patients are afraid to say….One lady who did go to…a health food store and was taking stuff…ended up on dialysis…She didn’t want to tell anybody…She had the medication in…the little bedside drawer. And…the renal doctor kept asking…about different things. And she finally pulled out the bag…And he was quite shocked.

Some OAs under-reported their signs, symptoms, and allergies, thus curbing RNs’ learning not only about needs that may be addressed with drug therapy, but also about conditions (drug effects, including allergies) that may be caused by it. One RN said that OAs “always under-report” their signs and symptoms. A second RN said, “That is very true”.

A lot of…older [adults]…think that they have to live with [angina],…and they don’t say anything…[Or] they’ll say, “I had chest pain a couple of times today. I didn’t want to bother you”…Their biggest [reason for not reporting is]…“I don’t want to bother you”.

Sometimes when an RN admitted OAs she discovered that although their signs and symptoms “might be the same…as this illness,…they don’t consider it an illness”. Or, “They say, ‘I might have gotten sick on this medication’. But when you’re admitting them and you say, ‘Do you have any allergies?’…they say, ‘No’”.

Language barriers obstructed OAs’ disclosure of their drug histories. One RN said that the “language barrier is often a big part of it”. Another RN stated, “A lot of people…cannot communicate with us because they are Polish or Ukrainian.” She added, “We…have a
very...diverse, multicultural staff, and...lots of people who can translate for us to the best of their knowledge. But...it is very hard...So we do the best we can”.

Lack of knowledge.

OAs who lacked knowledge hampered RNs’ learning about their drugs and related needs. One RN said, “People come in and [say,], ‘Here’s my pink pill and my green pill...I don’t know what they are for’”; in fact, “a great deal of them” don’t “have any real knowledge of...why they are on it”. When she spoke about the kinds of DRI that brought OAs to hospital, she said, “Often the whole knowledge base of the medications they are on is gone”. One RN reported that while some OAs “know their medications inside and out, other ones...are not as knowledgeable”. (When she asked what drugs they took, they answered, “I don’t know”.) Another RN said that “a lot” of OAs “are hesitant because they just don’t know what they are on”. While some OAs

[type] their medication list...on their little computers...and bring them in for us,...[others] don’t have the foggiest what they are on or what they are doing. They just say, “Yeah, I take a water pill, a blood pressure pill, and a heart pill, oh, and some other pill for this”. And that’s all I get. The end.

Reasons why OAs lacked knowledge about their drugs included these. Some OAs did not know what RNs wanted or needed to know. An RN explained:

I see that,...especially herbal meds and those sorts of things,...[like St. John’s wort], or...naturopathic kinds of things...[They say,] “Oh, we didn’t think to mention it”. “Oh, I take a vitamin pill once in awhile”, or “I take a Vitamin E or cod liver oil.”

Also, HCPs in the community insufficiently taught OAs about their drugs. One RN noted ongoing shortcomings in the quality of that education. “It’s getting better...Pharmacists now will give out pamphlets on their prescriptions...But other than that, no, I still don’t think they’re...educated enough on the medications that they take.” “There’s still a lot...that has to be improved”. Not all OAs who came to hospital from other health care facilities knew their drugs.
Also, some younger RNs insufficiently taught patients at discharge from hospital.

Most of the older nurses will do it [teach]. But a lot of the younger ones…find it [the work] very overwhelming…And they are discharging these people. And…there’s no knowledge there about [their drugs]. And it’s very scary.

More reasons why OAs lacked knowledge were these. OAs who did not want to change their drug-related practices did not want any new information. Some OAs did not want to know anything. (An RN said, “Some…people don’t want to know anything [but] they think we should know everything”. They say, “Please, don’t tell me anything”, or they want to know “only tidbits”.) Meanwhile, OAs who believed that HCPs were all-knowing deferred to them and thus lacked knowledge. Two RNs said, “They put a of faith in that,…definitely”, and “A lot of times, they…go home on new meds, and have no idea…when to take them. Or [they think,] ‘Oh, whatever the pharmacist writes down I’ll do’”. Yet another RN explained that OAs did not have “a good knowledge as to why they…[were] getting these medications other than…‘The doctor ordered it for me’”. “When you do the admission histories [and]…ask…, ‘Why do you take this?’, [they answer,] ‘Cause my doctor told me to’ (she laughed)”. She had learned “a long time ago with elderly people, ‘What my doctor tells me is what I do’”. When she suggested that they should know their drugs, they said, “Oh well, the doctor knows”. She added, “Younger people will be more involved and look into it…Older people just still have that faith in their doctors”.

Moreover, OAs lacked knowledge if they hesitated to question HCPs, were unaware of their right to ask HCPs questions, were unsure about questions to ask about their drugs and related tests, lacked confidence in communicating, underreported their signs and symptoms, had poor literacy, were cognitively impaired, incompletely disclosed their drugs and practices to HCPs (as a basis for receiving more education), and lacked access to health-promotion media.
and to family doctors. More reasons were the effects of media-induced myths about drugs, the fact that research about geriatric pharmacology was just beginning, and language barriers. An RN said, “If they [OAs] don’t speak very good English, a lot of people [HCPs] won’t do a lot of teaching”. One RN said, “The language barrier is probably the biggest problem”. It makes a big difference. We have a very high Italian, Ukrainian, Polish population in our city….The doctor tells…[them] to take it [the drug, and] they take it…They might…know, “It’s for my heart”, but that’s all they really understand.

Or “people trying to describe to me, ‘I take a little blue pill’ or ‘a little white pill’, or ‘I take three pink pills’. And it doesn’t tell you much. But that’s probably all they know”. Finally, another RN cautioned about “drugs that are really similar sounding [in name] but…totally different, for instance, quinine and quinidine. You have to be very careful…You can’t always…expect an older person to annunciate…or spell it properly”.

At times, RNs had to do extensive and often hidden work to discover OAs’ drugs at admission. When OAs could not disclose because they lacked family doctors, one RN consulted many sources to learn about their histories and previous admissions.

Sometimes we have to do a lot of digging to find out what [drugs] these people do take…We dig around as much as we can to find out…Basically,…they [those sources] are pretty good. And if they…[aren’t], then we just…tell the doctor,…“This is what we can find. You have to decide what you want to do with them from here”.

She described challenges when she admitted OAs who did not know their drugs. She needed to know if they were “hypertensive or hypotensive, or [a] cardiac or a renal patient” and “what they are on and what they are taking”. When OAs did not know their drugs, medical histories, and health conditions, learning by dialoguing with them and by assessing them was a “challenge” and “difficult”. She needed all that information to make sense of everything. (For example, “If you’ve got a blood pressure of 110/50,…is it like this because you are on antihypertensives or is
it like this normally?”) When OAs could not disclose, “a guessing game” ensued.

When… somebody…doesn’t have any family…[or] know what they are on (she laughed),…it’s kind of a guessing game…Doctors will…assess them. And if they…have high blood pressure, or [if] they…say, “Well, I’ve been on a water pill” or “I’ve been on heart pill”…[unfinished], so it’s kind of a guessing game…Then the doctor will start prescribing medication…they think is right for them. But other than that, no, there’s not much we can do. It’s kind of a guessing game…It will be…if they don’t know what they are on or…[do not] have the foggiest…[about] their medical history.

**HCPs’ Characteristics**

Some HCPs’ attitudes, views about power, and inadequate management of OAs’ conditions undermined nursing practice with OAs on drug therapy.

**Attitudes.**

HCPs’ attitudes about OAs and age hindered RNs’ learning about OAs’ needs and strategies to meet them. An RN said, “Age should not be the criteria for giving care or not giving care”; however, some internists refused to see OAs for consultations. Then, RNs could not learn about OAs’ total needs by collaborating with the internists and reading their documentation, including any drug orders. The RN said, “I’ll call…internal medicine for a consult...[if] something’s gone wrong, their diabetes levels are out of whack or their liver function tests,…[and] the surgeon’s not comfortable taking care of it”. She continued,

I’ll say]…“Doctor, I have a consult for you”. [They’ll ask, ] “How old is she?”, first thing he says. If they’re over 80, [they say,], “I don’t have time to see them today”. If they’re under 30, “I’ll be there in five minutes”. Now, I’m not saying that happens all the time…But…certain doctors…say,…“What do [you] want me to do, cure them from their old age?” And sometimes they’re dismissed…..And it is unfair. They [OAs]…are treated differently,…especially the sick elderly….A fresh myocardial infarction…[is] always well taken care of because that’s an acute experience. But the chronics…are dismissed.

Another RN who had had similar experiences, and thus had learned about ageism “just from working with them [OAs]”, said,
You...feel like that person’s not worthy of that care because they’re a certain age. But they [specialist] haven’t seen the patient...You can be...80 [years old] and be a lot younger...physically and mentally...The actual age shouldn’t matter.

She told the specialist, “I’ll document exactly in the doctors’ orders that...you’re not gonna see this patient, and why”. Also, she asked them, “‘Who do you want to see this patient then?’ And...they’ll either say, ‘Have somebody else see it’, or else they’ll...come”. She explained the rationale for her actions. “It’s being assertive.” She added,

We all have to learn how to do that now, because...there’s only...three [or four] cardiologists...So they’re getting to pick and choose. And...you can’t pick and choose who you want to see, because the population is aging, and that’s just the way it is.

She handled this constraint by collaborating with colleagues who told her what they had done in similar circumstances, and by joining them to discuss the issue with the nurse manager, who then discussed it with internal medicine.

We’ve talked to the manager...[when] you realize that patient hasn’t been seen...for...five days....You have to document that,...[or] people just think that that doctor hasn’t been notified or he’s forgotten....They don’t know that he’s said he’s not going to see the patient.

Also, her nurse manager had mentored her about ageist consulting practices.

I was very shy and quiet when I started....But...[I’ve] had to learn to deal with this, because...I’ve...been put in charge....And the manager taking you aside,...[and saying,] “You did a good job”, or “Next time...it happens, go this route”.

HCPs’ impatience indirectly constrained practice with OAs. An RN said, “A lot of people [HCPs]...don’t have a lot of patience for OAs,...don’t have the time, because they feel so pressured to deal with the here and the now”, and they think that OAs “are a lot of work”.

Impatient HCPs did not teach OAs effectively. For example, when they gave OAs inaccurate information about drugs with a stigma or they did not present the information in a subtle way, OAs who worried about the stigma did not disclose those drugs.
Views about power.

Some HCPs’ views about power, together with the resulting power plays, barred collaboration about drug therapy. The hierarchy between doctors and RNs constrained collaboration. For example, some doctors branded one RN with negative labels when she approached them to discuss possible interactions between new drugs and OAs’ current drugs. “They watch me come and they say, ‘Trouble, oh no’ (she laughed),…because I’m after them”. Or they say, “Here comes trouble”, “You are like a thorn in my side”, and “You’re like the wasp that keeps on buzzing and never lets up”. Also, with “some…GPs”, she had to plan strategically before trying to learn collaboratively about more effective drug care.

If I feel…they [OAs] need something more, I would definitely [say to the GP.] “These are the signs and symptoms…Is there something…we could do to help that?”…[But] be very diplomatic [or] you get your head knocked off (she laughed).

Later (see Inadequate Management, below), the same RN described how some doctors brushed off her attempts to dialogue about better pain management. She shared her feelings about these situations. “After awhile,…I don’t really care. But…you care, too”. Previously, she noted her frustration about being viewed as just a worker. She added, “Some days I don’t feel like we are valued. I think we’re the ‘bother’”.

At times, RNs’ ability to address constraints on practice was hindered by their fear of the consequences. One RN described her actions when surgeons lacked collegiality in their dialogue with her about OAs’ drug therapy.

I would pull them aside and probably say,…“That’s uncalled for”. Or I’d…talk to our nurse manager,…and just say, “You know, I had this experience. And I don’t appreciate it. And…I feel like going further with it”.

However, “sometimes” she was afraid to address the issue. (“You’re just not sure what kind of a
response you’re going to get [from the doctor]”. Then, she and her colleagues met with the doctor to discuss the situation. Similarly, one RN had detected staff members’ fears about telling some doctors about the need to meet to explore better interventions, due to their defensiveness. She had tried to contest that hierarchy. “In the past,…we’ve had problems with a physician’s attitudes, and we got together as a floor and…had a meeting and…addressed the issues…It did get better…But it took a long time”.

Some doctors did not appreciate it when one RN suggested drug therapy.

I can say, “I think she may benefit from some Maxeran before meals”. And most doctors are receptive to that….Some doctors don’t like to be suggested to, but you know which doctors you can do that with,…for sure, for sure (she laughed).

She explained how she managed situations wherein her suggestions were not well received.

I’d probably suggest it again the next day…And either they will say, “Oh, let’s just shut her [OA] up” and give it to me, or they’ll say “No” and the patient suffers. And then, in a couple of days, the real obstinate doctors will order it [and say,] “Well I’m going to try this today”. So it depends on the physician. But if you approach the doctor correctly…., and if you make them think that they’re the kings…[and] like it’s their idea, then they’ll go for it, which is sad….A few doctors don’t take suggestions well from a nurse…If I…[was] a brand new graduate, they would have just laughed at me…And there are some doctors that…[say,], “I’m the doctor”.

Also, she described her reaction when a doctor dismissed her suggestions about medication.

I just call him an “#**#!”…under my breath. Because I usually don’t suggest something unless I really know what I’m talking about. And I’m not meaning I know a lot. But I’m the one…taking care of the patients….the other 23 hours and 59 minutes that the doctor isn’t there.

Another RN bemoaned not always having the drug orders that she needed. She said, “Often this has worked…before. And when I don’t have those orders and guidelines to follow, then why don’t I? So, it makes it hard.”

When one RN’s patients needed drugs, she had to plan strategically in order to get them
from some doctors.

You have to do that all the time, yeah, all the time…with some people [doctors]…You do a lot of suck-holing with them…You have to call and…say, “Doctor, I’m so sorry to bother you. I know your evenings are really valuable away from the hospital. But…this has come up, and I…didn’t want to leave it…for them [other staff] to call you at 2:00 in the morning”. And already you’ve softened them up a bit…“Mrs. So-and-So is asking for this…Do you mind giving [ordering] it?”…So you learn to play their games.

Another RN found that doctors who felt threatened did not respond immediately to her requests.

[I’ll] say [to the GP,]…“Maybe they could use something more for their blood pressure because it’s been this, this, and this over the past three days”. And they’ll kind of look at you. And then they’ll go off and…do some things. And then when you’re gone, they will come back and write the order (she laughed)….They feel a bit threatened.

Power plays between RNs and older doctors and between GPs and surgeons constrained drug therapy for OAs. Some doctors refused one RN’s requests for drugs. She explained: “It’s usually…the older doctors who like to be in control”, meaning, “the surgeons…I deal with all the time”. “The family doctors are fantastic. But,…we…have little to do with…[them]. They have no pull on our floor. The surgeons rule”. When, at her request, a GP wrote an order (e.g., for a bowel routine) for a surgical patient, the surgeon wrote, “Disregard all orders except mine”. As a result, “the patient suffers”. Also, “The newer doctors will automatically write ‘bowel routine’. But the older doctors…will…write the order [when they want to]”. Another RN said that some GPs “do not want to write orders on a surgical patient because…the surgeon…takes precedence over all”. When asked about territoriality, she laughingly said, “Territoriality is right….That’s the challenge for the day”. Another RN described how power plays between GPs and internists fragmented prescribing and hindered learning about OAs’ comprehensive drug-related needs on discharge (see Professional Context, below). Yet another RN thought the hierarchy between medicine and nursing had lessened: “We know that the…doctors seem to
think that they’re the authority and…we’re just their handmaidens. But it’s getting less and less like that…It is…changing gradually, but it is changing”.

_Inadequate management of OAs’ conditions._

HCPs’ inadequate management of OAs’ conditions constrained RNs’ practice. Examples included stereotypical care, suboptimal diagnosing and/or prescribing, and the ineffective management of pain.

HCPs who used stereotypes about age and OAs in their collaboration with RNs, in their assessment, and in their decision-making (e.g., drug orders), effaced OAs’ diversity, thereby stumping RNs’ abilities to learn about, and to respond to, that diversity. At times, one RN needed to validate the accuracy (“exactly”) of other HCPs’ assessment. A HCP will say to her,

“You’ve got a real doozy of a patient today. They are this, that, and the other”…[Then,] you walk in there. And because of your demeanor,…communication…tone of…voice, and…body language,…you find out…tons of information that nobody even bothered to find out about before.

Mostly by observing and reflecting and by collaborating with pharmacists and the gerontologist, RNs had learned about misdiagnosis of OAs’ drug-related problems and the consequences. Suboptimal diagnosing and/or prescribing by HCPs hindered RNs’ learning about the detection and treatment of ADRs, and about conditions that either may be due to drug therapy (e.g., confusion, constipation) or may benefit from it (e.g., arthritis). Another RN had learned “just from experience” how under-diagnosis inhibited learning about OAs. HCPs attributed confusion, constipation, and arthritis to normal aging, they missed ADRs in OAs, and they wrongly ascribed signs and symptoms of ADRs (e.g., fatigue, incontinence, confusion) to normal aging changes and circumstances, and thus did not address them. Also, sometimes doctors missed or dismissed women’s cardiac symptoms; then, the women did not get the drug
(and other) care that they needed.

Cardiac-wise…they’ll [some doctors] be more aggressive with a man….because women’s symptoms, lots of times, are so vague….They’ll [doctors] say, “Well, I don’t know what’s wrong with her. Maybe she’s just in menopause. Maybe she’s just anxious”…And it can be cardiac…pains….Because…you don’t really ever see a woman tell you the crushing chest pain like a man does. A lot of times it’s in your arms, elbows, [back], jaws. We find lots of jaws and teeth.

At times, signs and symptoms of DRI in OAs (e.g., confusion, lethargy, depression) mimicked other illnesses, resulting in misdiagnosis and more prescribing. One RN had seen that for OA confusion: “We’ve discovered after the fact that they’ve had hyponatremia” (low sodium).

Another RN said, “They’ve given Ativan to patients and it’s been an ADR to something else”. One RN called under-diagnosing ADRs and prescribing more drugs “a quick fix…Yeah, let’s just add this”. When asked about under-diagnosis of signs and symptoms and more prescribing, an RN said, “I’ve seen that even in younger people (she chuckled quietly)”. Such conditions negated or delayed learning about OAs’ needs; instead, or in the meantime, RNs observed poor care and the results. Now, when doctors under-diagnosed confusion and were going to prescribe more drugs, she questioned their actions to spur collaborative assessment and learning.

Yes, giving a patient a medication, and the doctor will say, “Well, give them this to counteract that”. [So I ask,] “Well, why is this patient confused all of a sudden? Is it because of this drug? Let’s look into it a little bit further”.

Other kinds of inappropriate prescribing that constrained practice were these. One RN said that some patients who arrived for surgery were taking “Ativan three times a day”, and “I just know it’s given to them to shut them up”. When she asked OAs why they took the drug, they said, “It keeps my nerves good…[because] my husband’s dead”. When she asked, “Does it make you feel sleepy?”, they said, “Oh, I sleep a lot”. Such prescribing initially delayed her detection of factors contributing to their postoperative status.
Then, you wonder why they’re going into withdrawal. Well, gee, they’ve been on Ativan three times a day…And now they’re postop and...on Epimorph. And the anaesthetist will say, “I’m not giving them Ativan. They’re on Epimorph”…So…they [OA] go into withdrawal...[and beg her,] “Please give me my Ativan”.

She added, “Oh yeah, you do [learn to make sense of it] with experience (she laughed)…It’s very sad...It’s very, very sad”.

Also, overprescribing was a constraint. Previously, one RN had practiced in a hospital where GPs overprescribed for OAs, even when she questioned it. “You had a lot of elderly GPs ordering medications. And [although] you would question,…‘Do you really think they need [that]?,’ [they answered,] ‘Oh yes, yes, they need that’”. Later, when she detected questionable signs and symptoms in the OAs, she had to collaborate with the GPs about their and her observations and read the Compendium in an attempt to fathom them.

They [prescribing doctor] would say,...“Did you realize this was doing this to the patient?” And I’d say, “I have signs and symptoms, but...I didn’t know [which] drug [was causing then.]”...You can read...the Compendium [and ask,] “Do you think it’s this [drug]?”...[But] there were so many...drugs a lot of them were on. It was...phenomenal. You don’t see...patients getting cupfuls like you used to.

Surgeons who rebuffed one RN’s critically reflective suggestions impaired her learning about better ways to manage OAs’ pain.

An older lady...[who] had a fractured-hip repair....came back from surgery and had massive dosages of morphine intravenously for pain control. She became really disorientated, confused,…all sorts of wild behavior. Nothing more than the morphine really, really threw her right off. And once we switched to something as ordinary as Tylenol Extra Strength or plain Tylenol...she...turned into the most wonderful older lady...She was 89 or 90. And she was like a totally different person, unbelievable.

And I remember going to the surgeon [earlier] and saying, “This lady is 89 years old. Do you really think she needs that much pain medication?'”, or “Couldn’t we try something different or...a lot smaller dosage?” He said.... “Basically, that’s what I’m ordering and I don’t care what you think”.

Also, doctors who erroneously thought that OAs did not do well postoperatively and who lacked
empathy were a constraint. For example, doctors who had never experienced out-of-control pain and thus lacked experience and empathy brushed off her attempts to advocate for better management, including when OAs were in pain and delirious; however, that only fuelled her persistence. “When it [medication] doesn’t work, and I say to them [doctor,]…‘He’s still having a lot of pain’, they just kind of brush it off”. “You have to be very diligent about carrying on…[by saying,] ‘This isn’t working….We need to try something else. What if we go this way and try that for a change. It would be way easier’”.

Some doctors lacked knowledge about new drugs for pain. One RN said, “Sometimes…I don’t think that the physicians are up to date on new medications for…OAs. Like, maybe they should be trying…the Toradol rather than a narcotic, because of the side effects, especially with Alzheimer [patients]”. That insight was “from experience, yeah. That’s from experience”. Also, doctors’ diverse views about, and approaches to, pain management for OAs constrained her practice. “Most doctors will order morphine 5 to 15 or Demerol 50 to 100…That’s our standard for most post-op patients, depending on their weight, their age, and it is up to the nurse’s discretion”. However, some doctors did not order “the proper narcotics”, wrongly believed that OAs did not experience much pain, or prescribed routinely. “For a post-op fracture, they’ll just order…plain Tylenol or 642s, which isn’t enough”. One doctor “will only order Tylenol Extra Strength” and then say, “Give morphine 1-2 milligrams only if absolutely necessary’, because they don’t want the patient more confused, or ‘They’re 95 years old. They don’t need it’”. Another doctor “orders Demerol 100 for every patient, whether they’re 60 pounds or 400 pounds”. She told that doctor, “ I’m not going to give this 90-year-old woman…100 milligrams”. At these times, she felt “overwhelmed” and “frustrat[ed]”.
Doctors who did poor follow-up assessment of OAs’ postoperative pain management constrained collaborative learning. One RN said,

[Their] follow-up is like nil. They’ll...[ask] the next day,...“How are they doing?”...I’ll say,...“They are...a bit more orientated...They look like they are able to get out of bed...and their pain is better controlled”...And [they’ll say,]...“Okay, fine”. And that’s...like the brush off and they just keep on going.... It is frustrating.

*The Professional Context*

Conditions in the organization impeded practice with OAs on drug therapy. Constraints included insufficient time, the predominant use of the medical model, insufficient services and systems, as well as physical and socially constructed environmental conditions.

*Insufficient time.*

Lack of time impeded RNs’ abilities to dialogue with other HCPs and with OAs and to check OAs’ drugs. One RN said that administrators expected RNs to do a computer update on each of their patients, for the doctors. She begrudged that expectation because all of the information was already on the computer, and doing the updates took her time while obscuring doctors’ accountability for doing patient rounds, an opportunity to collaborate. Also, her lack of time impeded collaboration on the phone: “If somebody is on the phone yakking at you and you are busy already and thinking about six other things you have to do, you don’t retain”.

Surgeons’ lack of time impeded an RN’s ability to collaborate about important issues. “The medical staff sometimes...[say,]...I’m supposed to be in the operating room in five minutes...and I don’t have time to listen to you”. Surgeons and anaesthetists’ lack of time to write preoperative notes constrained RNs’ ability to use that information. One RN explained that “often” OAs who arrived for surgery were
not well pre-doc’d [predocumented] by the surgeon…Sometimes there is an anaesthetic consult…done prior to them coming in,…to get…a handle on their meds and which meds they can…give and which ones they should hold,…[and]…the best…[way] to control pain post-op…But that’s not always the way….Again, it’s a time constraint. And if it’s an emergency surgery, there often isn’t the time.

Interdisciplinary collaboration at discharge enhanced learning about OAs’ total drug-related needs and ways to prevent fragmentation, harm, and readmission. (“If there’s a problem, we can get a heads up on it first thing in the morning”). Thus, another RN wanted a pharmacist to attend discharge rounds; however, the pharmacists could not due to their lack of time.

RNs lacked time to dialogue with OAs. An RN said, “Older people have a lot of knowledge and….you can find out a lot if you take the time…It becomes a time issue, for sure”. RNs lacked time to read OAs’ charts (e.g., histories) to appraise the fit between their home drugs and their needs and as a basis for ongoing drug therapy. One RN said, “Sometimes I just let it go,…let it go…And then you wonder why they’re going into withdrawal [postoperatively]. Well, gee, they’ve been on Ativan three times a day at home”. Another RN said,

When I come…out of report, I’m checking…[the] medications, making sure that they’re all current, and then going to the bedside…And…often it’s…when we’re having some quiet moments, that I can look through their chart and…read through their history…‘Cause it’s not…something we can do first thing in the morning often.

Yet another RN lacked time in the evening (after the pharmacists had left the hospital) to assess OAs’ drugs and detect interactions. “When the pharmacist is gone at 6:00 at night and I am giving a whole bunch of different medications, do they all jell? Do they all fit?” Neither did she have time to discern if the rationale for the drugs was valid and if the doses made sense.

Maybe you might think about it, might look at your overall picture of your meds, which I try to do, and see why the patient is getting it, and does it make sense, and does the dosage make sense. But there’s times when you don’t. You just don’t have the time.
Predominant use of the medical model.

For five reasons, use of the medical model alone impeded RNs’ practice. First, there was too little focus on strategies to protect the health and function of OAs on drug therapy. An RN who spoke about DRI (e.g., bowel obstructions from codeine), said,

A lot of this stuff, that is the problem, it’s preventable…We do a jolly good thing of dealing with the here and now and fixing it up…But what do we do as far as preparing people for their future?

Turn on the television or open up your newspaper or…magazine [and] it’s promoting health. And we are not doing such a hot job. They are reading more information in magazines and hearing [it] on the television than what we are teaching them.

(She thought that condition may also be due to a time constraint, or perhaps HCPs were assuming that people knew more than they did.)

Second, the use of the model alone discounted RNs’ ongoing attempts to learn about the links between OAs’ holistic function and their drug therapy. Yet, RNs used information about OAs’ function as a barometer of their needs for drug therapy and its effects, and to understand OAs’ drug-therapy abilities (e.g., to manage drugs) and strategies to support and to enhance those abilities. Third, the use of the model alone did not invite, recognize, or support RNs’ efforts to learn for the purposes of advocating for OAs and coordinating their care to prevent untoward drug-related events (e.g., those due to inappropriate prescribing); instead, the use of that model alone fuelled disjointed prescribing that forced RNs to learn how to coordinate. An RN said, “We’ve all had to do that [coordinate] because…meds are missed…We’ve all had to learn to do that”.

Fourth, the medical model’s curative focus and the hospital’s managerial views fortified and perpetuated each other and created conditions (e.g., lack of time, fragmentation) that curbed
learning about OAs’ total needs. One RN said the resulting care was “very rigid,…very cut-and-dry…It becomes…strictly a business and…economic thing”. Another RN said, “It’s more driven [by] like how many patients we can get out…And…if there’s patients on the floor and…empty beds on another floor, who can we move off?”; thus, administrators were not considering the whole person. Fifth, instead of inviting learning about OAs’ unique and comprehensive needs and abilities associated with drug therapy (e.g., by assessing them, by collaborating about them, by reading their orders and health records), the use of the model alone sometimes resulted in stereotypical drug (and other) care. As one RN said, “[He’s in his] 90s, and too bad”. Care was “homogenized by age”, “rigid and outdated”, and “a nice little box…We’d have a certain age group and…after that, gone…And it just shouldn’t be that way. Everybody is unique”.

*Insufficient services.*

Another constraint was insufficient services. The lack of interpreters thwarted RNS’ ability to learn by dialoguing with OAs who spoke different languages, about their drugs, drug-related knowledge and practices, and associated needs. One RN said,

> Interpreters are a big issue, at times…We do have…a pool within the hospital…that we can call for Ukrainian people, Polish people, Italian, Finn…A couple of…[staff] are French…So they do quite well with them. But it depends.

*Insufficient systems.*

Issues to do with staffing, with the documentation system, and with fragmentation constrained RNS’ practice. Staffing systems, together with the organization’s values and expectations (mentioned previously), were a constraint. An RN explained: “It’s just a time constraint…You often feel pressured,…just the whole coping with the people, workload that you have”. Other comments were, “It’s almost 20 years that we’ve had poor staffing”, and “Our
staffing levels haven’t changed forever, forever.” Poor staffing “increases the stress on the nurses”. “We cope the best way we can”. Staff missed their coffee breaks, took shorter lunch breaks, and stayed overtime to finish their work. RNs’ attempts to contest these conditions were unsuccessful because “they [administrators] only have so many dollars to spend”.

The staffing system did not reflect the growing number of OAs in the hospital and their increasingly acute and complex needs. An RN said, “With the increased geriatric population, they’re really not taking that into account…And the older people unfortunately are becoming more and more ill…They’re…multi-complex”. “A lot” of OAs “don’t have a specific problem [e.g., appendix]…anymore. Now…they’re coming in as a diabetic with an appendix, or…with a mental health issue that’s not being looked after”. Another RN said, “I’m running around doing everything myself…And…I’m totally overwhelmed sometimes, where I just, I just don’t have that time”. She illuminated the complexity of her patients and their drug-related care, and the ongoing pressure on her “to know and…do”.

All the things I’m expected to know and…do,…like the continuous epidurals,…the Epimorphs,…drawing blood from…central lines…I have more work to do. I have less patients, but my patients are sicker. The acuity…is off the wall…And there’s older patients among them,…like…hip replacements,…knee replacements, thoracotomies…The acuity is much higher. So…it’s way busier.

Another related constraint was administrators’ expectation that RNs mentor RPNs and assist with their patients’ drug therapy. An RN said, “We are now supervising the RPNs,…doing their intravenous meds…and…intravenous starts,…teaching them,…[and answering] any questions…So…we’re double loaded”. While some RPNs offered their help in return, “[a lot] haven’t learned to do that,…‘cause they’re still learning…[and] they’re…totally overwhelmed”.

The computerized documentation system supported administrators’ wish for uniformity
rather than RNs’ need to document about OAs’ unique, comprehensive, and often diverse and complex needs. One RN said,

I always found that a very tough concept. How can you just put somebody into a tight little box [e.g., their diagnosis]…, prompted by computer charting (we laughed). I’ve got nowhere to expand and…put down what I want to chart….It has to fit in these tiny boxes.

Also, the generic (versus age-sensitive) norms and expectations for adults of all ages impeded her ability to demonstrate her learning and knowing as key components of her drug (and other) practice with OAs. She stated, “One of my thorns…is computer charting and the fact that people…don’t fit the norm”. She continued,

If you don’t get your charting done and you’re into overtime, [you’re asked,] “Well, what’s your problem? Maybe you need some more computer training”…It’s not that…People don’t fit in these little constraints, and especially an older person….What’s normal for an older person? Does anybody look at any of that? No. It’s all…one normal system,…[the same norms and expectations] whether you’re two or…82 [years old].

Another RN wanted more ability to learn, and to share information, about people’s diversity, including their unique experiences (e.g., signs and symptoms).

They’re [documentation system]…not as diverse as they need to be. They need to be a little less pigeon-holing and a little more able to gather all their [OAs’] information…If we’re…defining systems, we have to…use the words that the computer has designated as…descriptors…I’d like to be a little more…able to describe what my patient is experiencing. The problem, they [administrators] say, with that is that there’s not uniformity…But people aren’t uniform…They’re…all different.

Fragmented systems for staffing, for communicating, for prescribing drugs, and for reviewing them were constraints. Due to the lack of coordinated systems, RNs had to learn about and to address OAs’ challenges in fragmented (versus integrated) ways. Staffing issues included the ongoing shortage of RNs in the emergency department, discontinuous staffing, and expectations to mentor. Due to the ongoing shortage of RNs in the emergency department, the RNs there sent OAs with fragmented orders to one RN’s unit, thus delaying her abilities to learn
about, and to respond to, their drug-related needs (e.g., possible drug-drug interactions). The RN stated, “All they’re thinking [about] is, “Okay, there’s 23 people in emerg. Ten of them have to go to your ward’…[And] things are getting missed”. Describing these situations as “scary” and “mind-boggling”, she explained: “A lot of those orders on the charts…are not done….You could have pages and pages, not done, of orders”. “A patient is admitted. An emergency doctor…orders…‘Meds as at home’…Then another doctor…[orders] meds,…[but] not knowing what the meds at home were”. Such fragmentation happened “a lot”. “The other day I admitted a lady…She had four doctors see her in emerg. And…everybody’s writing different things, but nobody’s…coordinating”. It took the RN 40 to 60 minutes to admit each OA, including entering all of the information into the computer, checking the medication administration record, and getting (from pharmacy) any drugs that the patient had missed that day.

The discontinuity of RN staffing constrained one RN’s ability to learn by observing OAs and by collaborating with colleagues, about each patient’s normal function as a basis for clarifying the goals for their drug therapy, influencing and coordinating their drug care, and detecting any drug-related functional decline. If she was lucky, a part-time staff member was working. She explained:

It’s hard because…working 12 hours,…you only see that patient for two days in a row. And a lot of those…[staff]…with you have never seen that patient [before either]….Maybe…a part-timer is on. And they’ll say, “Oh, I saw that lady the other night,…and she wasn’t like that”.

Administrators’ expectation that RNs not only look after their own patients but also mentor new RNs and RPNs contributed to time constraints that fragmented RNs’ learning about OAs on drug therapy. New RNs (from long-term care) needed teaching about skills, presumably including drug-related skills. Also, RNs mentored RPNs in part about drug therapy. However, a
lack of time and impoverished communication fragmented one RN’s ability to learn about patients for mentoring purposes. “If you’re busy…[with] your own…[patients], you don’t always hear correctly” what the RPN said about a patient. Further, “I might not know…anything about that patient…It’s a breakdown in communication”.

Disjointed systems for communicating constrained RNs’ practice with OAs. As was mentioned earlier, gaps in communication occurred between RNs (e.g., due to discontinuous staffing), between HCPs and OAs (e.g., due to some HCPs’ impatience and poor teaching), between RNs and OAs and between doctors and OAs (e.g., when OAs did not fully disclose their drugs), between RNs and the RPNs they mentored, and between units in the hospital. Other breakdowns happened between doctors and between RNs and doctors (e.g., due to hierarchical conditions fuelled by the medical model), between an RN and the hospital pharmacists (during phone conversations), and between community pharmacists and OAs. Also, at times there was insufficient transfer of drug-related information when OAs came to hospital from nursing homes or outlying areas. An RN described fragmented information about OAs’ prior function.

Coming from a nursing home to emergency [and then] to us, [but] without anything….Now what do I?…What do I see?…How were they before? Sometimes I’ll get a transfer record…[But] it depends on how…much information they’ve given you.

More fragmented systems for communicating were these. Surgeons’ and anaesthetists’ lacked time and thus did not always pre-document OAs, including drug-related information, prior to surgery. One RN could not collaborate with doctors about drug issues “in real time”; instead, she had to pass messages “on shift to shift,…or hop[e] that this doctor’s gonna see a little note on the side of the chart”. Some HCPs did not note OAs’ drug (and other) allergies and their previous ADRs on their health records.
Also, the use of the medical model alone eroded the health care team and communication, thus impoverishing learning about OAs’ complete needs. An RN explained that often it was the talk amongst the team members about OAs’ declining function that alerted them to drug-related issues, and when the team was not “meshing together” that collaborative early-warning system faltered. Further, some surgeons’ views (e.g., “I did the surgery…and that’s the end of my responsibility”) thwarted collaboration. An RN said, “I hear that all the time….It [their responsibility] should go way beyond [that]”.

Two conditions in the community – the on-call system for GPs and the lack of family doctors – fragmented dialogue about OAs’ drug-related needs. During the evening, when one RN was concerned about an OA and called their GP, sometimes she got an on-call GP who did not know the OA. Neither did the hospitalists know the OA. Thus, in order to learn more about the OA’s status, she ordered electrolytes (“[I’m] comfortable enough with…a lot of the doctors,…[that] I’ll…[order] blood work”) and did an electrocardiogram. On one occasion, she discovered that a patient was in uncontrolled atrial fibrillation because her potassium level was “out of whack”. As well, while one RN said that there were “lots of orphaned patients”, another RN said, “The family-doctor issue,…that’s huge right now, ‘cause a lot of their [OAs’] family doctors have…retired or passed on.” She and other staff had met with administrators to discuss the problems with the hospitalist program that were fuelling fragmented drug (and other) care. Yet, although the administrators “are trying to fix it,…there’s not enough doctors”.

RNs and other HCPs’ inability to access information either from family doctors or from OAs (e.g., due to poor disclosure) contributed to a lack of comprehensive and continuous drug care on admission, in hospital, and at discharge. (Also, some OAs’ complex but initially non-
acute needs were again not identified, monitored, and met after discharge, forcing many OAs back to hospital.) One RN’s “biggest concern…is that most of their physicians have passed [away], and any…documents…[about] their previous medical history are lost, lost. They’re a mental note in their minds”. Further, “a lot of them are going for repeat visits [e.g., to walk-in clinics] and they’re not being seen by the same person”. Also, that information was “not drawn in” to their care, again making it difficult to learn on admission about their drug-related needs.

Finally, disjointed systems for prescribing and for reviewing drugs in the community, on admission, in hospital, and at discharge constrained RNs’ practice. When one RN admitted OAs to hospital, she learned by reading their drug lists, by communicating with them, and by observing their blood pressure, how to detect insufficient drug review in the community. When OAs had been taking medication for high blood pressure “for years and years and years [she laughed]” and their blood pressure was “80 over 40”, she wondered, “Oh my gosh. When was the last time somebody looked at your meds?”, and she tried “to track down the family doctor” to review their drugs in hospital. Meanwhile, her ability to learn how to manage OAs’ postoperative pain was sometimes stymied by the kinds and arrangement of drugs prescribed in the community, by the reasons why OAs were taking them, and by the duration of use. At times, she wondered why an OA was still taking a drug “after such a long time”. For example, some OAs who were admitted for surgery were taking antipsychotics a lot of times, and sleeping pills as well, or tranquilizers, like “Ativan…or Serax 15 milligrams three or four times a day and something else at bedtime…, or…narcotics three times a day for back pain…[and] Percocet in between”. In the latter instance, the community prescriber had ordered MS Contin “as a band-aid solution to a back problem, like arthritis” and that had been going on “for years”.
You often wonder why they are on this [drug] for so long, or why are they on it at all. But, in particular,...it worries me now if they’ve [OA] had surgery and...been on these strong meds all along, what do I give them...for pain control, like epidurals or pain pumps or spinal Epimorphs. And now we are throwing in Percocet every four hours and maybe some MS Contin, which I’ve seen. Where do you start? Where is the safety? Everything is kind of thrown out the window.

She continued:

And you can’t wake them up, hardly. But they’re looking for the MS Contin because they are so ingrained in having...[it] three times a day. And I hesitate to give it to them. But do you fight with them? Or do you give it to them and just say, “Well, it’s ordered, so I’m covered”.

Such prescribing practices spurred the potential for postoperative problems. “If you don’t have that knowledge base...or...the experience, there could be some real serious repercussions for post-op.” Sometimes, due to these prescribing practices, she had difficulty grasping the causes of the OA’s signs and symptoms. “Then,...in a couple of hours, like, peel me off the ceiling. Is it...withdrawal from all the meds that they’ve not had all day, part of it? It’s really hard to know”. (These situations were compounded by the surgeon’s and the anaesthetist’s lack of time to provide preoperative documentation, mentioned previously.)

In terms of fragmented prescribing and review in the hospital, cursory reviews of OAs’ drugs hindered RNs’ ability to learn about their ongoing needs by reading their orders. An RN said, “There’s not great follow-up sometimes” by surgeons and family doctors, and that’s “frustrating”.

If they are a long-term patient,...the pharmacy will...run off a copy of all their current medications...The physician is supposed to read those meds over and sign that he agrees with...[them]. You can have two pages of meds for some people...And you know darn well he’s never looked at it. All he’s done is just sign it. Get...out of my hair, sort of deal.

Also, some surgeons prescribed drugs for OAs’ surgical needs without considering underlying conditions that may affect, or may be affected by, that drug therapy.
There are various expectations with renal patients that do not fit the normal surgical post-op orders. For instance, Ancef is an antibiotic that you give a lot to surgical patients post-op... They [surgeons] want one gram given every 24 hours usually. And I'm looking at that [order]... And if I don’t see that [renal condition],... we’ll just go with the surgeon’s orders... We won’t look at the renal part of that... patient as well.

Also, “They will order intramuscular injections for renal patients. That’s a no-no. You want intravenous. And you do not want Demerol... But if you don’t know that...[she did not finish].”

Doctors who prescribed at discharge without knowing OAs’ current drugs were a constraint. One RN had learned that the hospital, created through a merger of two previous hospitals, lacked a cohesive culture, and about the implications of that condition for drug therapy. She explained: “It’s terrible, but it’s still two cultures... When the doctors come together, they don’t talk”. It’s “one side against the other” and “very shocking”. On a similar theme, due to the hierarchy within the medical profession (the “GP-internist” issue), “the internist won’t talk to the GP”. Insufficient collaboration between prescribers eroded HCPs’ dialogue about each OA’s comprehensive drug therapy, delayed RNs’ learning (e.g., by reading the drug orders) about that topic, and contributed to harm and readmission. She explained that on discharge, “you have a cardiologist ordering drugs and a GP ordering drugs” for the patient, and “that’s... silly... It should be... one person writing because it’s better coordinated... They see that all the meds are... written”. “They send them [OA] home, but they might not get the cardiology follow-up for months and months”. Meanwhile, the GP did not know to follow up with the drugs that the cardiologist had ordered. To prevent “harm” and recidivism (OAs “coming back in [to hospital]”), she coordinated prescribing to fathom the patient’s complete drug regimen, and she did that even though she lacked time. “So... you end up having to talk [to the doctors]. And that takes time, having to figure that out, going and finding them, ‘cause you’ve gotta page them”.
Without that coordination, some patients went home on Coumadin but without orders for the test (international normalized ratio) needed to monitor that drug; thus, they bled and were readmitted.

Another constraint was GPs who wrote the order, “Discharge home on same meds”. She described that practice as “not uncommon” and “scary” because the OA’s current drugs in hospital may be “totally different” from their at-home preadmission prescriptions. (“You have to know what [drugs] they were on at home”.). Thus, she checked the OA’s admission list against their GP’s discharge orders, and she took the OA’s hospital drug sheets to their room and asked them or their family, “Do you know what meds you were on at home?”. She did that because you could have…cardiac meds that were changed [during hospitalization] and…they could be missed…Or they’ve been added [during hospitalization] and they won’t be on…[the] prescriptions that they [OAs] have at home…We’ve all had to do [that coordination]…because…meds are missed that way.

Again, she wanted to prevent harm and OAs’ need to return to hospital.

An RN highlighted questionable practices for prescribing and for reviewing drugs both in the community and at discharge from hospital, as well as OAs’ hesitancy to question their doctors. She said this about her previous practice in a preadmission clinic:

It used to give me the willys….Because…[OAs] would come in…[with] a list of meds….And you would say to them, “Well, why are you on these medications?”, [like]…Serax 15 milligrams,…four times a day and Ativan at bedtime. It was just on and on and on (she laughed).

Reasons OAs gave for taking the drugs included that they could not sleep, they were “going through a really hard time”, or their doctors had ordered them. The RN said, “They have been on it for years and years and years and…nobody has ever…reviewed it”. And telling an OA to question the order was futile, “because…an older person…wouldn’t do that”. They think that their doctor’s “word is the bible”. She continued:
You take them [OA] off everything after their surgery. And…they have a terrible rebound and…beg you to put them back on. But with certain pain treatments you can only have certain drugs. You can’t go back on everything that you were on…, nor should you need to.

However, although “once in awhile” the surgeon refused to reorder the medication at discharge, most of the time they reordered it unless she said, “This is what they are on” and asked, “Do they really need all this stuff? Has anybody looked at it?”. By collaborating with pharmacists and the RN consultant, and by reading “basically, just the drug books”, such as the Compendium, she had learned to question in order “to…coordinate everything” before the OA went home.

Physical and socially constructed environmental conditions.

Physical conditions in the organization, as well as socially constructed hierarchical conditions there (e.g., those within the medical profession, between doctors and RNs, and between administrators and staff), constrained practice. The “all-spread-out” layout of one RN’s unit did not provide the closeness necessary to observe patients (“You don’t know if something’s happening to a patient down the hall”). At times, she could not even see which patients’ bells were ringing. Poor lighting curbed another RN’s ability to assess for drug (and other) purposes.

One big problem…is the lack of…good lighting…When you are assessing someone in the middle of the night,…you don’t want to turn on…the lights and wake them up, but…you want to make sure that everything is okay…People…look jaundiced in certain lighting…That’s…important….You want to act on it quickly,…[check] their bilirubin and all the rest of it.

Sometimes her ability to reflectively review and evaluate for the purpose of planning care was interrupted by distractions, such as noise (e.g., phones at the nursing desk, call bells, intravenous pumps) and people telling her where she was needed. She commented, “It just goes on and on and on. And you soon lose”. Also, she worried about fragmented collaboration on the phone. “You have to have a lot of trust in the pharmacist,…which is okay. But again, it is on the
telephone. And sometimes you wonder,…‘Did they hear me properly?’”.

Due to the hierarchical nature of the hospital’s governance, administrators were not always receptive when RNs offered, for discussion, their critically reflective insights about drug-related issues and strategies that may support practice, benefit OAs, and reduce costs. Often administrators’ responses were in the form of uncritically appraised assumptions (e.g., “There is no money”). One RN said that administrators had criteria that were more important to them; thus, “they…weigh them [our suggestions] way down here on the scale”. Another RN was frustrated by administrators’ lack of interest in collaborating: “You can bring up these ideas, but…whatever they want to do they’re gonna do…You find it frustrating sometimes…It’s just, ‘No. No. No’”. “[I’m] trying to make things easier for us…I know it is a lack of money…because…they tell you, ‘Oh, we’re so much in debt’”. At times, this RN was excluded from dialogue about her suggestions: “You can tell them [your suggestion], but I don’t know what they do with it….They’ll say, ‘Well, we’ll take it back to administration’”. Also, RNs on her unit were barred from formal meetings for collaboration about issues.

You’re supposed to have monthly staff meetings. We’ve never had one. And she [nurse manager] won’t have one. So when they had to call it, they …[had] to get the president of the union to come…So then she [manager] gets human resources….It could have been stopped…long…before it escalated to…this situation,…it’s all a political thing…It doesn’t make for a working [relationship] when…everybody’s fighting….And…[the manager said,] “This is the way it’s gonna be. And that’s all there is to it”.

The same RN shared administrators’ responses to her concerns about organizational constraints and suggestions for improvement. First, when she told her nurse manager how the shortage of RNs in the emergency department delayed learning about OAs’ comprehensive drug regimens when they arrived on her unit, her nurse manager was supportive and gave her “some input”; however, “sometimes we can’t do anything about it”. Second, in years past, RNs and
pharmacists had observed a lot of DRI and readmissions due to OAs’ lack of knowledge; thus, the pharmacists began doing pre-discharge teaching. However, now that that program had been cut, “there’s nobody doing it” and “we [again] have a lot of readmissions” because patients taking drugs such as digoxin and warfarin “don’t fully understand…what can happen to them”.

(Also, on admission, the OA’s lack of knowledge impeded RNs’ learning about their needs.) Yet, when the RN suggested reinstituting the pre-discharge teaching program, her nurse manager said, “No”, stating that there was no money and the pharmacy was chronically short of staff.

Third, the RN and her colleagues had unsuccessfully contested the administrative mandate that discharged patients be moved to the unit’s lounge to expedite new admissions to beds on the unit. Again, she worried about drug issues (e.g., OAs who had not been educated about their drugs may experience DRI, readmission, and inability to disclose their drugs). Fourth, the RN had proposed instituting a discharge-nurse position to enhance coordination of OAs’ drug therapy. Currently at discharge, it was “not uncommon for …[the patient] to get missed on home care”, including a review of their drugs and prescriptions. The proposed discharge nurse would review each OA’s orders with them and provide continuity. However, administrators said there was no money for that position. The RN was upset because the position would have been perfect for two nurses who were off work due to back injuries.

Facilitators of Practice

Facilitators of RNs’ practice with individual OAs on drug therapy included RNs’ ability to communicate with OAs and their families, HCPs’ characteristics, conditions in the professional context for care, and community support. Presumably, more facilitators would be attention to the constraints on practice, mentioned previously.
Communicating with OAs

OAs who were knowledgeable about their drugs and who brought (to hospital) updated lists of their drugs and interpreters to overcome language barriers eased RNs’ ability to communicate with them about their drugs and practices. Two RNs said that some OAs “know their medications inside and out”, and some people “are very vigilant about taking their meds…They’ve got them all worked out and…have their little plastic containers”. One RN found it “very helpful” when OAs knew about their drugs; in fact, at times they taught her.

Patients…are…quite knowledgeable at times…, especially ones that are very interested in their care,…very up-to-date. They know their medications…[and] have taught me things…Like I, I quite often will combine my 0800 [hour] meds and my 1000 [hour] meds just for time constraints…And they’ll say, “Oh, you cannot give me these two meds together” (she laughed),…[or] “I can’t take my Fergon with this. Don’t you know that?”…So some of them are very knowledgeable about their meds,…usually the educated ones.

OAs with updated lists of their drugs enabled one RN to discover their needs by reading the lists and by assessing (and reflecting about) their status. She said, “They may be elderly, but they are still with it…They have their medication list typed…out on their little computers and…bring them in for us…Some are really, really good”. When “they have…an updated list of their medications, it’s great…Then I know what…they are taking…It makes things a lot easier for me to assess them.” In terms of interpreters, an RN said, “If…there is a communication barrier, they have a young person around them to fill in the gaps…They’re very knowledgeable that way”.

Communicating with Families

One RN said, “You see a lot more family more involved in health care now than you ever did [before]”. Helpful conditions were families who knew their older relatives’ drugs, brought up-to-date lists of the drugs, told RNs about OAs’ usual functional status and any changes, and
participated in meetings, conferences, and rounds with the discharge planner and other HCPs.

One RN found it “very helpful” when family members brought a list of their older relative’s current drugs to hospital. She said, “I take a photocopy…and…put it right on the chart”. Another RN had learned about the importance of “making sure” that families know their older relatives’ current medication. That “definitely” helped, because “if the patient comes in and they are a little confused or disorientated because of a reaction from the drug, or maybe they have hit their head or whatever, it’s nice to know what…[they take]”.

HCPs’ Characteristics

HCPs’ characteristics that facilitated learning about drug therapy for individual OAs were their ability to resolve issues, their political will to contest conditions, and the drug-related practices of some doctors. While at a leadership conference, one RN had learned about the need “to work through things with other people”, and related strategies. That information eased her ability to dialogue with administrators about drug (and other) issues and to identify helpful solutions. She said that the younger nurses on her unit wanted the older nurses “to always…[do] the fighting” for change; however, she disagreed with that view.

You can’t always expect the older nurses to…[do] the fighting,…like going…to the administration or…manager and saying,…“We don’t like…the way we’re doing this. Is there any way we can change it?”…But…at least somebody’s brought it to their attention instead of…sitting at coffee every day and… crabbing…You have to do something.

During the same conference, the RN had picked up three principles that eased negotiation with administrators. First, “You can bring your problems, but you have to have at least some solutions” or “it’s like arguing…And as soon as you’re arguing, people…shut down. They don’t want to hear [it]”. Second, staff should not expect “one person” (the nurse manager) to have all of the solutions. Third, was the need to “to see both sides” of the issue; for example, while
administrators were worried about money, she wanted to “benefit…the patient”.

Colleague involvement in political action eased collaboration. Earlier, an RN said that sometimes when she was trying to advocate for an OA and a doctor treated her in a hierarchical manner, she was afraid to address the doctor’s behavior. When asked what might help, she said, “I would probably get my colleagues involved and…go as a group”.

Doctors who based their practices on accurate information about OAs’ abilities and each OA’s unique needs and who thoroughly assessed OAs postoperatively bolstered practice. An RN who previously described how poor follow-up by doctors hindered her ability to collaborate about better management of OAs’ postoperative pain said,

Just to get them to stop and take some time to really assess their patients a lot better than they are…If they were in the same situation once in a while,…they would know what it is like to…have your pain out of control and not know where you are…I don’t think that they have a lot of experience with that.

Prescribers who ordered “a window” or “range” for the dose of pain medication helped an RN to communicate with OAs about their needs and then gauge the dose accordingly (e.g., start at a lower dose “and…gradually go up if needed”). She said that for a post-op hip, I would like a window. Dr. X will order Demerol 1 mg to 100 mg…So we’ll…give him [OA] 12.5…If that isn’t enough,…we’ll go to 50 next time…We gauge it…Dr. X is the only doctor who will give us a window like that. I mean, Demerol 1 mg is silly….So is 100 mg on a 95-year-old. But we need more of a window for the analgesics. And we need more support from the physicians.

Also, doctors who ordered Ativan “to shut them [OAs] up” should stop (“Don’t give them the Ativan. They don’t need it.”), because it delayed learning about their postoperative needs.

Instead, they should tell OAs to exercise, join seniors’ clubs, or read, or send them for therapy.

The Professional Context

Conditions in the professional context for care supported RNs’ practice with OAs on drug
therapy. Examples were the availability of human resources, supports, and systems for care.

*Human resources.*

Human resources that facilitated practice included dieticians, nurse managers, and more cardiologists, as well as staff (unspecified) who alerted RNs about harmful drug effects. Dieticians who handled nutritional issues were helpful. One RN described the dietician as “very proactive…Instead of asking for medication, she will change her formulations. And…she’ll ask for blood work to be done to…make sure that everything’s okay”.

An RN who earlier described her challenges when she tried to manage the postoperative pain and confusion of OAs with Alzheimer disease, thought her nurse manager was “very supportive…She helps a lot…She’ll encourage you to sedate…but restrain…at the same time if it [sedation] makes them worse”. Also, at times her nurse manager took over frustrating situations, like when sexism prevented the RN from getting orders for her patients. “In a way, [it’s] a very slight disadvantage, the sexism [is]….Sometimes I’m brushed off, not often, but certain doctors will do it…..whereas…someone younger….get[s] more attention”. She added,

I’m not there to flirt….That’s not my game. But it…can…[be] a disadvantage…if I need something for the patient….[So, I’ll] go back the next day, or…call a family doctor,…or leave it to my nurse manager…I’ll only ask her when I get really frustrated. And when I get frustrated, I get mad…So she’s very calm. And she’s able to…[get the orders] for me.

More facilitators were having more cardiologists to do consults as precursors to drug (and other) therapies for OAs, and having staff who gave reminders to prevent drug-related domino effects. An RN said, “Usually we’ve got enough backup staff that those reminders are out there”.

*Supports.*

Helpful supports were the use of a broader (than the medical model) model for care, as well as having the following: standing orders, the drug orders that RNs’ needed, 24/7 access to
the drugs in the hospital pharmacy, more time, administrative support, and conditions (physical and socially constructed) that braced collaboration and assessment.

The use of a broad model supported the provision of comprehensive drug care (versus curative therapy for disease and surgery only). RNs identified essential components of a broader model. Two RNs valued prevention. (While one RN said, “I think prevention is probably key”, the other RN said, “I like prevention…Prevention’s a lot more effective”. “I would love to see…a lot more prevention for them, and a lot more information for…an OA…about things that matter to them.”) One RN thought that surgeons who did not already do so, should recognize that their responsibilities “go way beyond…[the surgery]”; then, their prescribing practices would reflect OAs’ total (versus surgical only) needs and support RNs’ learning about them. Also, the model should support continuity of drug therapy in the community (An RN said, “It would be great to have something like that”) and thus RNs’ learning about OAs’ total needs on admission.

The use of a broader model supported RNs’ abilities to learn by communicating with OAs and their families, by collaborating with other HCPs, by observing OAs (during assessment), and by reading (e.g., OAs’ lists of drugs, their preoperative documentation), how OAs’ characteristics may affect their drug therapy, and about OAs’ holistic function as an indicator of their need for medication and its effects. For example, by reading preoperative documentation and by dialoguing with family members and colleagues about OAs’ preadmission and ongoing function, RNs had learned how to prevent drug care that was based on stereotypical views about chronological age. Also, a broader model invited consideration of the needs of families who were trying to meet OAs’ often complex needs at home. An RN said, “There are a lot of aging families that can’t cope…Yet they are coping…[And] until they [their older
relatives] go to hospital, they don’t realize how much…of an impact it’s made on their lives”.

One RN preferred a model for care that enabled her to examine both the benefits and the risks of drug therapy. Previously, when she mentioned how she cautioned doctors about the use of three different drugs to reduce a patient’s risk for heart attack and stroke, she stated that the use of more drugs also augmented the risks; thus, “You have to look the other way too.”

Finally, the use of a broader model invited RNs’ learning (e.g., by observing HCPs’ practices, by collaborating with other HCPs, and by reading drug orders for OAs) about socially constructed constraints on practice (e.g., ageism, inappropriate prescribing) and strategies to address them, and about facilitators of practice. Also, RNs’ use of a broader model supported learning (e.g., about “the whole patient”) for the purposes of advocating and coordinating care.

Having standing orders would help one RN who sometimes found it challenging to ask doctors for postoperative orders for OAs.

A standing order…would be so much better. Of course, it’s surgical. I don’t know….It may help [sometimes],….not all the time. But it may help having to call the doctors in the evenings if someone’s constipated or…needs HS [evening] sedation.

In any event, she wanted the drug orders that she needed. (“Often this has worked…before. And when I don’t have those orders and guidelines to follow, then why don’t I? So, it makes it hard.”)

Also, one RN wanted the hospital pharmacy to be open 24 hours a day so that she may access the drugs that her patients needed. That would negate her need to have the drugs delivered to the hospital by an outside pharmacy.

Another support was more time to assess OAs, to communicate with them, and to collaborate with other HCPs. One RN wanted more time to talk to OAs and their families about their concerns. (“[That] would make it much easier”). Other reasons for more time were OAs’
often greater acuity and complexity and RNs’ resulting need to be more attentive to risks (including constraints) that potentially/fuelled drug-related harm. Also, at times, RNs had to consult other resources to understand OAs’ drugs and what was happening with the OAs. RNs wanted more time to read and evaluate the information in OAs’ drug histories, to assess OAs’ drugs in the evening when the pharmacists were not on site and, in the morning, to read and reflect about OAs’ drug therapy (e.g., drugs, DRI, suitable doses), as well as information in their charts (e.g., histories).

Strong administrative support for OAs and their drug (and other) care eased practice. An RN said, “Attitude is a big part of dealing with OAs”. Institutional attitudes that supported OAs’ diversity helped to avert drug therapy that was based on generalities about OAs, including erroneous assumptions that they did not do well, all of which led to ineffective management of their postoperative pain. Also, administrators whose expectations of staff were informed about OAs’ needs eased practice. Then, said an RN, if she was into overtime, no one would ever again ask, “What’s the matter with you? You only had four patients”, because they would know that “those…patients were…elderly and needed a lot of…care if you are…doing a proper job”.

Some in-hospital physical conditions were helpful. Low levels of noise, interruption, and distraction (e.g., from pumps that were “beep, beep, beeping”) eased one RN’s ability to collaborate with pharmacists on the telephone, while good lighting helped her to observe OAs for drug (and other) purposes as they slept during the night. (“Lighting is so important to…proper assessment”.)

Collegial relationships between doctors and RNs supported practice. Earlier, an RN who was “very definitely” aware of inter-professional struggles for power, described situations that
were “frustrating” and “hard”. She wanted to be on an equal footing with other HCPs and thought that some doctors needed to be more collegial and respectful of RNs.

I guess to be looked on as someone that is…an equal part of this whole health care scenario, and not inferior to somebody that is writing the orders and telling me what to do. And then when it doesn’t work,…they just kind of brush it off.

She added, “I wish there were other ways of communicating more effectively”. “If they [doctors] have…a positive demeanor…and…actually stop and listen, [it] can make for a way better overall picture”. When she explained how the use of the medical model alone constrained collaboration, she said that she did a lot of advocacy for OAs, and it would be easier if her contributions to collaboration and decision-making were valued. “It would be nice to know that we are valued [by doctors]”. “People need to pay attention to what you have to offer.” “I want to be valued for…[my] expertise…and the fact that I’ve been in the profession for a good number of years”. “When I started my practice 25 years ago, the physician…was on the pedestal and you were down low”. Although that view had fuelled her initial deference to doctors, now she wanted collegiality to support collaboration.

Yes, you have to be respectful. But…they should be respectful of us, as well…It’s getting better, at times. But other times it’s…not that great. And I don’t understand why…If there were more men in the profession there is no way that some of the stuff that happened before would be allowed to happen now.

When asked what, if anything, may undo that socialization, she stated, “I think it’s just communicating and building teams and continuing to advocate for patients.”

Doctors who considered RNs’ suggestions about drugs facilitated collaboration. One RN said, “The newer doctors tend to be more receptive. We work more as a team”. When she mentored them, she and they learned by collaborating and by reading texts.
The brand new doctors,…the residents…with the physicians, I’ll say, “Dr. B. this has really worked well in the past”. [They’ll say.] “Oh, has it?...What’s the dose?” And I said, “Well, I can’t order the dose. But let me get the…[Compendium]…and we’ll flip through it.”…The residents are very, very receptive to the nurses’ suggestions,…especially…residents that are with a doctor who really doesn’t want to have a resident, and they are really intimidated by…[that] preceptor. They do use us a lot.

One RN said that the chances of an RN’s suggestions being rebuffed by a doctor were fewer if the RN was experienced, knowledgeable, and had a good relationship with the doctor. Moreover, at times her suggestions spurred more collaboration. (“If they oppose it,…[they explain why]”.)

Finally, administrators who invited RNs’ views about drug-related issues eased dialogue about solutions. From being in charge of her unit, one RN had learned about “all the things that can go wrong, and people coming to you with problems,…and…it’s so much easier if you’re approachable and stop the problem in the beginning, instead of letting it escalate”.

**Systems.**

Various systems eased RNs’ practice with OAs on drug therapy. Examples were the use of a team approach and the system for delivering drugs to the units. More examples were systems for coordinating drug care, for reviewing drugs, for communicating, and for staffing.

The use of an interdisciplinary approach fostered collaboration, due to the need to involve many different HCPs (e.g., pharmacists, doctors, RNs) in care. While one RN said, “Patients aren’t just medical. It’s more complex now”, another RN wanted a more concerted approach by everyone involved when choosing the best drugs for OAs. As well, the use of a team approach prevented fragmented drug therapy, thus enriching HCPs’ communication about drug-related issues and their ability to problem solve. One RN said that staff members who worked in geographic triangles could periodically brainstorm about the causes of patients’ challenges.
They are…like [geographic] triangles. And maybe…once…or twice a week…picking a patient from that area…that is longer term or not doing well…and just…[brainstorming]…So we are not so fragmented…We are…all part of a team,…all important. And we each have our own values to bring to the table.

Also, a cohesive team supported communication about drug-related (and other) causes of functional decline. An RN said, “It’s often the communication between us,…[for example,] ‘They [OA] were so…bright yesterday. And today they are not. And I wonder why’”.

Coordinated, including continuous, drug care for OAs in the community, on admission to hospital, in hospital, and at discharge enhanced RNs’ ability to learn about OAs’ drug-related needs by collaborating with other HCPs (e.g., community pharmacists) and by reading (e.g., prescriptions, consults, drug orders, transfer records, and preadmission assessments). Conditions that enabled such care were these: each OA’s use of only one community pharmacy, nursing-home staff who coordinated OAs’ drug therapy prior to sending them to hospital, coordinated prescribing in the emergency department and prior to discharge from hospital, systems for reviewing drugs, better ongoing assessment by some surgeons and GPs, the return of the hospital’s preadmission clinic, surgeons and anaesthetists who documented preoperatively, surgeons with a broad view of their responsibilities, the creation of post-discharge hospital clinics, the use of community systems and models that supported continuity of care, community prescribers who kept good records, and more GPs coming into the hospital. Here are RNs’ comments about some of these helpful conditions.

The return of preadmission clinics would ease RNs’ practice. Practicing in such a clinic had enabled one RN to learn from OAs about the drugs that they had taken that day, about their drug-related knowledge, and about the drugs that they had been taking “for years and years and years” without any review. (Then, she tried to find OAs’ family doctors and asked them to
review the OAs’ drugs in hospital.) As well, she met OAs’ families. All of those conditions
enhanced her ability to compare OAs’ postoperative status to their preoperative status. (“When
you got them back after surgery…you had an overall picture…of what they were like before”).
Also, having an “overall picture” of each OA’s preoperative status helped her to coordinate, and
to ensure the continuity of, their drug care in hospital and at discharge.

Having preoperative documentation from the surgeon and the anaesthetist about each OA
(e.g., their status, drugs), along with information about their normal baseline function (mentioned
above), enabled RNs to learn (e.g., by reading the documentation, by observing OAs’ ongoing
function, and by dialoguing with OAs and their families and with HCPs in the hospital and those
from sending agencies) about OAs’ current needs and challenges (e.g., their drugs, drugs that
may/not be given, drug-related changes in function), along with suitable interventions (e.g., for
managing pain postoperatively). Also, RNs learned about any risks and protective strategies. An
RN said, “You need to know their allergies” (e.g., to morphine, to cardiac drugs), and “It’s very
important…that you…put that [allergy] armband on [them]”.

Coordinated prescribing in the emergency department prior to transferring OAs to other
hospital units helped RNs to learn by reading OAs’ drug orders, about their comprehensive
needs. One RN said, “If they would have been properly cared for in emergency, maybe a lot of
this [fragmentation] could have been stopped”. Also, it was easier to learn about, and to respond
to, each OA’s comprehensive needs when only one doctor wrote all their drug orders at
discharge (e.g., the Coumadin as well as the international normalized ratio). One RN appreciated
the hospital’s medication system, because all the patients’ medications arrived “pre-done from
pharmacy” and “in their boxes, ready” for her to administer.
An RN thought that the use of post-discharge hospital-based clinics would ease practice. Then, RNs may learn about OAs’ needs (e.g., by communicating with them, by monitoring their status, and by collaborating with other HCPs) and respond to them by delivering comprehensive and continuous drug care aimed at health promotion and protection and preventing readmission. Thus, to offset constraints (e.g., fragmentation) on RNs’ ability to learn by reading drug orders at discharge, as well as constraints (e.g., OAs’ poor disclosure) on RNs’ ability to learn by communicating with OAs on admission, one RN had proposed an international-normalized-ratio clinic and administrators were considering it. Also, she had suggested a congestive-heart-failure clinic. (“You could prevent a lot of these people from coming in so sick.”) Services would include teaching OAs about the signs and symptoms of heart failure and when to contact the nurse, as well as doing blood work and, when necessary, getting their diuretics adjusted.

Another facilitator was community doctors who kept good records. One RN said, “Most…physicians are fairly good at keeping very good records of their patients, and [on admission] we just have to phone them and find out what [drugs] they take”. The use of effective systems or models for maintaining OAs’ records in the community would ease learning about OAs who lacked family doctors. An RN said, “Probably the most pressing issue…[is] getting these people a family doctor…[and] to develop a system for…maintain[ing] their records”. She described a model that would support continuity of care.

In the community,…consolidate the area so you always went to the same clinic or…out-patient area…Like, you’re from this…area of town,…[so] that’s the physician you…always go to see. And you’d always have their records there for follow-up.

Learning about OAs’ comprehensive needs by collaborating was facilitated when OAs’ GPs came to the hospital. An RN explained that the locums did not “know these patients” (e.g.,
their histories, normal function) like their GPs did; thus, “stuff” (e.g., OAs’ need for blister packs) “gets missed”. Administrators were “trying to get more…GPs to come back into the hospital”. Meanwhile, the locums were helpful (“We would never survive without [them]”.)

The use of systems for reviewing OAs’ drugs in hospital and in the community helped RNs to learn about OAs’ comprehensive needs. An RN described a system of team review.

When my mother-in-law was in chronic care, we had a drug meeting…with the head nurse and the pharmacist and so on,…as to what meds she was on and why…But…I never see anything like that happening in acute care.

Added facilitators were if more HCPs asked questions about OAs’ drugs (e.g., “Why are they on six different anti-psych meds when they don’t need them?”), and internists who regularly reviewed OAs’ drugs. When speaking about preventing unnecessary drug use, an RN said, “[Given] the drugs that are out there and what they are using,…I think a lot of the internal medicine doctors would be valuable. They are very knowledgeable”. Now that the specialists did drug reviews and culled unnecessary drugs (“You have the specialists…saying,…‘We don’t need this one, this one, this one’”), another RN no longer saw patients getting cupfuls of drugs.

Effective communication systems eased RNs’ ability to learn about OAs’ drug therapy, for example, by reading orders, and by collaborating with other HCPs and reading their documentation. Systems included continuity of staffing, effective inter-agency communication, communication with OAs that revealed accurate information about them, and a documentation program that invited RNs’ knowledge about OAs’ diversity and about age-specific norms and care. More facilitators were face-to-face communication in teams, timely communication, and having enough interpreters to overcome language barriers. Here are RNs’ comments about some of these helpful systems.
Continuity of RN staffing (also, see staffing facilitators below) and effective inter-agency communication eased RNs’ ability to dialogue with other RNs about OAs’ previous and ongoing functional status relative to drug therapy. For example, one RN appreciated it when staff from long-term care told her about an OA’s risk for choking.

An RN said that the use of stereotypes about age impoverished communication with OAs and learning about them; thus, she tried to dialogue with OAs in ways that illuminated accurate and comprehensive information about them and their needs. For example, by building rapport with OAs, she learned a lot of information that no one else had bothered to unearth.

One RN valued her ability to expand her entries in the computerized documentation program. (“There are lots of areas where we…can go under… ‘Others’ or ‘Notes’ and…express ourselves differently…[about]…the patient’s progress and abilities”). Other RNs wanted program enhancements. While some RNs wanted a program that invited their knowledge about OAs’ diversity and about age-specific norms and approaches to drug care (An RN said, “What’s normal for a young person and what’s normal for an older person are two different things”), another RN wanted “to be a little more…able to describe what my patient’s experiencing”.

Timely and face-to-face communication supported practice. One RN said that the surgeons were “fairly good at calling back” when she called them to dialogue about issues. Timely notification from doctors about impending discharges enhanced an RN’s ability to learn by communicating with families, about their concerns and strategies that may promote effective drug management and prevent adverse events. For example, if a family member said, “I’m not sure about giving her meds”, she suggested blister packs. One RN wanted to “deal with things [issues] in real time” instead of passing messages on or hoping doctors would see little notes on
the sides of charts. Also, instead of “talking on the phone” with other HCPs “or leaving…a message to call”, she wanted “more of a face-to-face” system for collaborating.

Staffing facilitators were more RN staff, continuity of staff, and support for mentoring. More RN staff increased RNs’ time for reading OAs’ drug orders and records, for dialoguing with OAs, for observing and thinking about their drugs at admission, and for assessing OAs’ drugs in the evening. Continuity of RN staff supported collaborative learning about OAs’ status (normal and ongoing) and the detection of drug-related functional decline. An RN explained:

They used to have…two teams,…one team on Monday, Tuesday and…the next,…Wednesday, Thursday. So there was never…a mix…Now,…some rotations…are six weeks and five weeks. So there’s…overlapping…Then, you…have somebody that was…[working] a few days…prior.

The overlapping of RN staff supported coffee-break exchanges and detection of functional decline. For example, when this RN asked another RN, “Did you see that patient?...I had her the other day and she was…fine…What happened?”’, it would dawn on them, “Oh, the medication”.

Because administrators expected RNs to mentor RPNs in their expanded role (to include drug administration), an RN who had just moved from a part- to a full-time position did that. However, her ability to refuse to mentor new RNs as well was a facilitator. “I’ve already told my nurse manager I’m not prepared to do that”. “New [RN] staff,…no, I don’t mentor them. I’m not prepared for it”. An RN who looked after her own patients while mentoring new RNs had learned, and was concerned, about gaps in communication caused by her lack of time and of information about the new RNs’ patients; thus, she wanted a one-half-time release to support in part her learning for mentoring.

Community Supports

Community supports of collaborative practice were RNs’ ability to contact OAs’
community HCPs about their drugs when OAs came to hospital, and comprehensive education about drugs for community-living OAs and their families. An RN said,

A lot of people…have one pharmacist. And they are really good about faxing their drugs over or talking to you on the phone. If…people come in and [say,] “Here’s my pink pill and my green pill, and I don’t know what they are for”…that’s often the best way to go.

Another RN said that community pharmacists were “very good that way…[because] they want to make sure their…clients are put on the proper medications, too”.

Yet, the same RN thought that although education about drug therapy for community living OAs and their families was improving, there was still a need for more teaching. (The lack of teaching impoverished RNs’ ability to learn about OAs’ drugs and related needs by communicating with them on admission.) She said, “People have to understand what they are taking. And…having somebody there to explain things to them better, too, would make a big difference…The language barrier…is a huge factor sometimes”. When asked what might help to overcome language barriers, she said,

That would be more up to…the doctor…who’s prescribing the pills…They just tell these older…[adults]…“You need them”…They may tell them what for, but they don’t understand why…They would probably need more of an advocate in the office, or have the family record them. But…it is getting better.

While pharmacists used to “hand you your stuff”, now “they are getting a lot more involved with…patients [by] going through it”. Yet, she still thought that OAs and their families needed more education about OAs’ drugs (e.g., “why they are taking them,…what they are for, and the effects”). While some OAs read about their drugs and then experienced every side effect and stopped taking them, other OAs took them but did not know why. Thus, she suggested that community pharmacists “try to get a happy medium there,…more explanation,…and maybe sometimes too much information is not good either”. (They should “assess the individual” and
give “more generalized” information to avoid scaring them.) Also, GPs should teach OAs. She said about people who came to the hospital, “It would make my job a lot easier if they even understood that [why they were taking their drugs].”

Summary

In this chapter, I identified conditions that influenced RNs’ practice with individual OAs on drug therapy. Constraints were OAs’ poor disclosure of their drug regimens, some HCPs’ attitudes, views about power, and management of OAs’ conditions, and conditions in the professional context, specifically insufficient time, services, and systems to support practice, the predominant use of the medical model, and physical and social conditions. Facilitators were OAs and families who bolstered learning about OAs and their needs, and specific attributes of HCPs (their ability to resolve issues, their will to contest conditions, and the practices of some doctors). More facilitators were conditions in the professional context (access to resources, supports, and systems for care) and in the community (RNs’ ability to contact community HCPs, and effective teaching about drugs for OAs and their families). Also noteworthy is RNs’ knowledge about constraints and facilitators of their learning about drug therapy for OAs generally. That information is in chapters 7 and 8, respectively.
RNs used many strategies to acquire knowledge about drug therapy for OAs. In this chapter, I share RNs’ comments about knowledge and ongoing learning, followed by their thoughts about their preferred modes for learning and their learning strategies, including the combinations of strategies that they sometimes used.

RNs’ Comments About Knowledge and Ongoing Learning

RNs valued knowledge and life-long learning about drug therapy for OAs. An RN said, “A lot of it, you learn as you go along….You can get the knowledge…That’s an important part, especially for new people…[who ask,] ‘Where do I go to get that knowledge?’” Other comments were, “There’s always room for learning”, and life-long learning and mentoring “[are] very important to us”. When speaking about the information that other experts identify in the literature, one RN said, “It’s good to know all that”. RNs wanted more information to bolster their learning and knowledge, and to support, enlighten, and/or improve their practices with OAs, for example, their abilities to make decisions about giving drugs, to detect problems, to prevent unjustifiable problems, to advocate, and to teach. One RN said, “If something’s going to make me think twice about giving a medication or watching [for drug-related problems, then] sure. Why not?”. She wanted to learn more about OAs’ greater susceptibility to ADRs so that she may teach it. “I like to learn, like to advise people about that sort of thing, even...to have a...hands-on something to give people, so that they will know it’s true”.

RNs believed that perpetual learning was critical because drug-related information was always growing and changing; thus, they had to stay current with newly emerging information and to appraise their existing knowledge continually for the purposes of reaffirming concepts.
that were still valid and culling those that were no longer sound. In terms of staying current, an RN said, “There’s…ongoing learning. We have to be up to date on it all”. Previously, an RN who was “always learning” said that she constantly looked up new drugs to stay current and that she had to do this. She added, “I’m always reading up on different…things regarding elderly people”. Earlier, another RN said that she acquired new information every day and that was “great”. Yet another RN’s learning was ongoing because there were always new drugs and changes in practices. She said, “It’s ongoing…because it does change”, as it did with Vioxx.

Another RN wanted to learn everything that other experts in the literature identify because “we are dealing with them [geriatric patients] more and more all the time”. She had seen many of the drug-related situations that the other experts suggest, and she wanted to see that literature to validate or improve her knowledge and practice. (“Yeah. I like to…know that what’s going on [in my practice] is…a common problem…or common ways of doing things…If there’s a better way, great”.) The same RN strongly believed in ongoing learning as a way to gain new knowledge and validate her existing knowledge. She said, “I like knowledge. I like information”. “If there’s a problem,…I want to be proactive,…not research it for a day or two and then deal with it. That’s not fair to the person”. “I strongly believe in…[lifelong learning]…We’re learning new stuff. It’s supporting…[what] we…know”. Earlier, she said that she had a lot of knowledge and liked that the information that she read in nursing journals affirmed what she already knew. She added, “We should have a lot of reaffirmation of the knowledge”.

When asked about her satisfaction with her knowledge about drug therapy for OAs, one RN said, “It’s hard to put a percentage on that. I’m definitely not 100%, but I’m above 50%”. “There’s certainly lots to learn, especially if we’re looking at adverse drug side effects….I’m not
up to date on that. Um, 65%,...it’s hard to say”.

Learning Strategies

Initially, RNs described their preferred learning practices without linking them to topics. One RN valued learning by collaborating with others and by reading authoritative texts:

“Dialoguing with the other professionals is good. Pharmacy’s good…Reading the…[Compendium] is valuable”. Another RN said, “Sometimes it’s…the internet. Sometimes it’s…the…[Compendium]….[I’d] most likely…pick up the phone and talk to the pharmacist”. Also, she had learned from experience unspecified, by collaborating with her nurse manager and other HCPs, and by reading authoritative texts (e.g., textbooks) and other texts (e.g., magazines). A third RN had learned by collaborating (e.g., with hospital pharmacists, hospitalists who were well informed about OAs, colleagues, dietary staff), by reading authoritative texts and electronic resources (e.g., the College’s Communique, the Compendium, the hospital’s drug website, the intravenous drug manual), by reading other texts (e.g., newspapers), by watching television, and from unspecified work experience. A fourth RN had learned from unspecified work experience, by reading authoritative texts and electronic resources (e.g., the Compendium, nursing journals, books, the internet), and by collaborating with other HCPs (e.g., RN colleagues, hospital pharmacists, doctors). She said, “I should be able to get answers from all those groups”.

Later, RNs identified explicit strategies by which they had learned about many aspects of drug therapy for OAs. The strategies included experience (unspecified or personal), observing and reflecting (sometimes combined with intuition), listening to authoritative experts, reading authoritative and other texts, communicating with OAs and their families, and collaborating with other HCPs. At times, RNs used combinations of strategies.
Unspecified work experience was a predominant learning strategy about drug therapy for OAs. One RN said, “Mostly through experience, that’s where it’s coming through….It’s all [emphasis added] through experience.” When asked if the HCPs with whom she worked were educated about OAs, she explained the paramount role of experience in learning.

I don’t know. It’s probably never come up in conversation…But my job has always been looking after a wide range of 18- to 118-year-old people on a surgical floor. So I’ve always dealt with the elderly….Anybody who comes to our floor is trained to deal with an age from 18 to 118…. It just comes with experience…I’ve never…had any type of geriatric course, per se…That’s [experience] is all I’ve had, yeah.

Through experience, an RN had learned about her need to assess older (versus younger) adults more specifically due to OAs’ greater vulnerability to drug-related harm (e.g., a gastrointestinal bleed from heparin and enteric-coated aspirin).

I know that…But I don’t know how I know that. Did I learn that?...Probably it’s just experience….I was probably taught that in school. But I…don’t think that you take all of that knowledge and put it together until it actually happens….I think as I’m getting older and more knowledgeable, I am aware that…there’s certain things that…will happen to older people…sooner than to a younger person…I think that’s through experience. Maybe a bit of knowledge and I’ve expanded on that. I’m not sure. I think it’s experience.

Learning about postoperative delirium in OAs with Alzheimer disease happened mostly through experience and somewhat by collaborating with the geriatrician. Another RN said,

Analgesic can make even the most normal person confused. There’s usually an electrolyte imbalance post-op…on a normal person…I…know that they’re eventually going to get over this post-op psychosis….A normal person does, so I know that the Alzheimer patient will eventually get better…I think from experience, yeah….It is experience. If I was a brand new grad I wouldn’t know that. But I…know that…99% of the time they…come around to their pre-op status…I would say from experience. Dr. X is very helpful, the geriatric physician…In the last few years he’s added…to my knowledge base. Um, mainly experience.

Experience taught an RN how changes in nursing affected her model for care: “Just from
working and having the model of care…changing.” She added, “Now you’re…driven by…the total patient and the care”.

When another RN mentored other RNs about potential hypotension in OAs, she used knowledge gleaned from monitoring her own blood pressure. From personal experience, she knew that Indocid by suppository was generally more effective than intravenous morphine for women who had had hysterectomies. RNs’ awareness of blister packs came from experiences in practice and with their family members who used them.

Observing and Reflecting

Observing, including watching trial-and-error care, and reflecting were major modes for learning about drug therapy for OAs. An RN said, “A lot of it’s just experience,…the things that have happened in the past that I’ve cued, cued into now, and I watch for that sort of thing.”

Topics that RNs had learned about included fragmented drug care and the consequences, HCPs’ prescribing practices and attitudes, assessing and diagnosing OAs on drug therapy, drug-related interventions, OAs’ characteristics, and family members’ reactions.

Fragmented drug care.

By watching and reflecting, RNs had learned about fragmented drug care and the effects and consequences. For example, RNs had learned about the outcomes of multi-doctor prescribing and of poor coordination and follow-up. Sometimes multiple illnesses led to the use of many drugs with the potential for interactions. An RN said that “a lot of times” the specialist the OA saw for one illness did not know that the OA was then admitted with a drug reaction to another illness. At times, two doctors ordered different drugs for an OA who then did not know which one to take. Or a specialist from another city told an OA to take a drug forever, but when the OA
returned to their home hospital, another doctor discontinued it. Also, fragmented prescribing at discharge, often accompanied by fragmented care post-discharge, led to harm and readmission.

By watching and thinking, another RN had grasped that when discharged OAs did not get “routine follow-up” care from family doctors who knew their histories and could “tie all that in and coordinate care”, they fell between the cracks. (They lacked care for needs that either responded to drug therapy (e.g., diabetes) or were drug-induced (e.g., urinary retention)). She explained: “These…people…come back [to hospital],…or…come to emergency because they are in major crisis”, and they “stay in hospital longer”. Another RN had learned that OAs who lacked community HCPs to teach them signs and symptoms to watch for, to monitor their blood work, and to readjust their diuretics as necessary arrived at the hospital “so sick” with congestive heart failure. Also, she had observed that OAs who were treated with drug (and other) interventions and then discharged with insufficient information about their conditions returned to hospital. As well, OAs who left without information about their drugs (e.g., symptom control) returned with problems. She worried how the readmissions affected OAs and their families.

Oh yeah, just from seeing them coming back in…It is, for some, like a revolving door. And…you see them. But what about the family…at home…You see this poor little old lady coming, in this kind of weather,…on a bus. And you know this isn’t healthy for her.

HCPs’ prescribing practices and attitudes.

Observation and reflection furnished awareness of some HCPs’ prescribing practices and attitudes associated with drug therapy for OAs. One RN had learned about the categories of drugs most often prescribed for OAs “just from working” and seeing them. When asked about her ability to participate in decision-making about drugs at admission, an RN said, “Again, it’s all experience,… ‘cause I’ve known what’s happened in the past.” An RN had observed that
some doctors tended to prescribe more drugs for older women than for older men.

By watching and reflecting “over the years of nursing” and through her experience with a relative, another RN had learned how staff attitudes about pain management led to functional decline. When her grandmother fell and broke her hip, the hospital staff gave her only Tylenol for pain. As a result,

she wouldn’t move, and she just went downhill… I said, “Can you give her something stronger for pain?” [They said,] “It will make her confused”. [So I said,] “She already is. She has Alzheimer’s. But at least maybe she’ll get up”….My priority is getting those people [OAs] up and… moving before they develop a pneumonia. It’s critical. It’s very important to them.

By watching a shocking situation, one RN had learned how staff attitudes and resulting practices negatively affected OAs, their families, and the health care system.

One lady who came from a…[long-term-care facility] was on Warfarin,…[and] had never had her…[international normalized ratio] done…Her…[ratio] was 16. And the nurses…at the home,…I thought would know… that you wouldn’t give somebody…Warfarin for weeks…and not get it checked. I found that very shocking….She had fallen and…[had] massive bruising…And the amount of work that…it [then] takes from us…to get her…[ratio] down…[by] giving her drugs and stuff…And…she’s in a lot of pain with her hip….And…having to get…[intravenous lines and Vitamin K and platelets] into her, and…her [to] lay still so you can run these medications. It’s very hard….And the patient was a known Alzheimer patient, which was very hard for her…You have to keep reinforcing.

The RN ended up getting the OA’s children, who were “close to retirement” themselves, “to come in and work shifts…to help keep the patient in bed…so you can get all of this into her”.

You feel bad for the family….They’re not used to…having to work the night shift, because…we haven’t got the…staff to look after this patient…A lot of them [families] don’t want them [OA] tied in with a magnetic restraint…[because] you’ve [OA] got a bruise…and you don’t want that aggravating the bruise even more.

She was embarrassed about the ageist views and the unjustifiable nature of the situation (“Truly, I was embarrassed to be a nurse.””) She explained:
They [nursing-home staff] should of at least asked the doctors...[for] an...[international normalized ratio]....A lot of people have this conception...with Alzheimer patients...[that] that’s the end....Like, they have their Aricept and that’s it. But...she’s still...very highly functional...So it’s very hard for a patient. And you’re kind of embarrassed...[because] it could have been prevented very easily.

Another RN had learned about some younger RNs’ attitudes and resulting disrespectful treatment of OAs who were confused, possibly due to their medication. She said,

If I see that they’re...not treating someone with...respect..., I might say something to them, or, or kid them about it. And...it does change the way that they interact with those people...I’ll say,....“He doesn’t deserve that...It’s not his fault he’s confused”.

Yet another RN had learned about ageism, RNs’ “need to do more of that [advocacy]”, and her need for more time to advocate.

We really have to be an advocate for the older patients, because...[they are] dismissed faster than a beautiful 30-year-old...They’ll [doctors] walk away from the older patients without listening to them...You’re definitely an advocate for the older patient. I’ll say, “Doctor so-and-so, Mrs. Smith...has another question for you”.

By watching and reflecting, one RN had learned about OAs’ need for more time and society’s lack of knowledge about the labor-intensive nature of OAs’ care.

It’s a lot of work...And it can’t be done quickly and then move on to something else...Our society has become very fast-paced, and get things done and move things on....There is not a good understanding of elderly people and the fact that they take longer to do things and to do them properly.

Assessing and diagnosing.

By observing and reflecting, RNs had amassed knowledge about assessing and diagnosing OAs on drug therapy. One RN had learned how to assess OAs, including approaches to use and OAs’ different norms: “Just from nursing...and experience again, and just watching and doing hands-on...assessment and going with it”. Another RN had learned about under-diagnosis and admission.
We know quite a bit...about that. We’ve seen it. We’ve seen the constipation that led to an ileus or a bowel obstruction. It doesn’t seem to happen so much in our practice...but as a result of things that have happened in the community.

As a result, people came to hospital. Or, “They come in because...they had a little blood in the urine and didn’t realize that it was due to retention”.

By observing and thinking, RNs had learned how to detect signs and symptoms of common diseases in OAs, about many kinds of DRI, and how to spot signs and symptoms of ADRs. Ability to identify signs and symptoms of common diseases in OAs came partly from listening to authoritative experts during in-services and lectures, but mostly from observation. One RN said that spotting ADRs “comes with experience and some bad scares”. She had learned how to differentiate disease and ADRs by observing and reflecting about OAs’ renal disease, blood pressure, drugs, skin, and hemoglobin. She said, “That’s all kind of interrelated. So it comes down to experience again.”

RNs had learned about many of the untoward drug-related effects mentioned previously. Examples included the kinds (signs and symptoms) of ADRs that OAs experienced and the contributing conditions. One RN had learned how OAs’ forgetfulness (and the resulting overdoses or missed medication) led to DRI and hospitalization.

An RN who saw OAs arrive with DRI and then understood both the causes and the consequences of it, stated that she would rather comprehend those dynamics ahead of time. She said this about the more common adverse drug events experienced by OAs.

Usually when they come in [to hospital] is when we’re finding out that this is potentially what could happen to a patient...And that’s the biggest, that’s how you [learn]. And you would rather not find out that way sometimes (she laughed gently).

She had learned how to differentiate normal aging changes, signs and symptoms of disease, and
signs and symptoms of ADRs by watching and thinking about admissions.

That’s something you’re just learning by…patients coming in….A lot of these patients,…they’re diagnosed in the office…Their GPs put them on these medications and they go home. And they don’t…think anything of it, what can happen to them.

One RN had learned how to differentiate aging changes, disease, and ADRs by watching, including watching trial-and-error care. “That gets better with experience…I’m not super good at that”. She may learn more by listening to authoritative experts and reading authoritative texts.

A geriatrician often gives presentations about the geriatric population,…lectures on medications, Alzheimer’s, when not to give this new drug. [I could] probably…learn from those, and readings…Our nurse manager is quite good about putting…information about new drugs on the floor….Pharmacy does…[too].

By watching, (including watching trial-and-error drug care) and thinking, an RN had learned about drugs that most commonly caused ADRs in OAs.

I just know the ones from my…cardiac/medical unit. And if there’s no cardiacs, you…get…medical patients…And…you see all the medications -- a lot of patients have antibiotics -- [and] what they can do to people.

An RN had learned that chronic bowel problems occurred when analgesics were not stopped appropriately. Also, she had watched the ‘snowball-effect’ of drugs on OAs’ function, whereby OAs became drowsy, lethargic, and less mobile. “So then they don’t eat as much…And then it just…compiles [compounds]…because…they have no energy. And it just, you know, snowballs.” RNs and doctors had witnessed drug-related functional decline. For example, when an RN saw decline in an OA and reported it to a doctor, the doctor said, “It’s amazing what it [medication] can do to an elderly patient”. An RN had observed that some hospitalized OAs experienced preventable cycles of drug-related harm and reduced function that resulted in placement in long-term care.

By watching, including watching trial-and-error practices, and reflecting, RNs had
learned about drugs with additive adverse effects (e.g., one RN said that if you did not know about the effects before you gave the drugs you found out after you gave them), about what Ativan did to people who reacted adversely to it, about drugs associated with certain ADRs (e.g., problems with vision or cognition), and not to give 90-year-old and a 30-year-old persons the same amount of a narcotic. An RN explained: “Once you’ve given her [OA] that big dose and she goes flat,…you know you’re not going to give her a big dose again”. Earlier, an RN described watching the consequences when an OA added products from a health food store to her drug regimen. Another RN had learned by observing “big problems” with interactions amongst prescribed drugs, over-the-counter remedies, supplements, and herbal products.

RNs’ reported observational learning and intuitive learning. Previously, an RN said that when she assessed OAs for ADRs, what she reported depended on how normal her findings seemed to her, and at times she depended on gut feeling. Another RN said, “Sometimes you…get a feeling” about drug effects. Then, she consulted a pharmacist.

*Drug-related interventions.*

By observing and reflecting, RNs had learned about drug-related interventions. Knowledge about treating ADRs came from observing, including watching trial-and-error activities. Previously, an RN said that her knowledge for addressing ADRs came from having been around for awhile and witnessed strategies that worked. RNs had learned that people, whether they had Alzheimer disease or were 20 years old, needed analgesic for pain, and that some older (versus younger) adults had a higher pain threshold. Also, previously an RN described how staff members’ fears shaped their practices for postoperative pain.

Another RN had learned how the untoward effects of HCPs’ lack of knowledge about
proper drug practices contributed to drug-related domino effects, hospitalization, and more prescribing. For example, an OA from long-term care had arrived with terrible thrush due to staff’s improper administration of puffers and non-detection of the harmful effects. She described the domino-like dynamic that had occurred.

Giving somebody puffers,…do they…[know] to rinse afterwards? Or do I see…[them] with a beefy red tongue and a horrendous throat two weeks down the road…And then I’m putting them on another medication for it. Like, it’s a fix…This is the problem now because of…lack of knowledge…[by] the institutional staff that were giving the meds….And [the OA says,] “I don’t [want] to eat.” Of course…Of course…their throat is sore. It’s horrendous…It’s this sort of domino effect…It…[causes] one disease process and then…another disease process….It just keeps adding and building. And then you…have multi-system problems.

She said that such scenarios also happened in the hospital.

By watching and reflecting, the same RN had learned that some new and inexperienced RNs had blind faith in doctors’ drug orders for OAs. They

won’t look at all the factors as far as age, physical attributes, other medications they [OAs] are on. They will strictly look at what the doctor has ordered [for pain] and…go with it. And it’s not always right…For you or I it might work okay. But for somebody elderly, it rarely works and doesn’t work well at all.

OAs’ characteristics and family members’ reactions.

By observing and thinking, RNs had learned not to rush OAs and how some OAs’ characteristics affected their drug therapy. One RN took time to teach and explain.

Just growing up with older people, or maybe just…my nursing experience….a lot of it is, or just watching…and seeing that if you try to hurry them,…without giving them a good explanation, they don’t do well. But if you take the time to give them the explanation and to process it they do much better.

Another RN said, “They don’t like to be rushed. They get really offended….You have to move more slower with them.” Also, some OAs brought bags of pills with them to hospital, including discontinued drugs and current drugs. When one RN went through her deceased father’s
belongings and found he kept discontinued drugs, she began to help OAs who were going to be discharged to eliminate the drugs that they no longer needed, in order to prevent self-prescribing.

That was a big thing with my dad. When he passed away,…[I discovered that] he had so many medications. And…I’m thinking, “I hope to God he never took stuff like this”, because it’s expired Tylenols and different pain medication.

By watching and reflecting about what had happened with her father-in-law, another RN had learned that when community-living OAs phoned their family doctors to reorder their drugs (e.g., puffers), they were not always updated about new practices (e.g., the use of an aerochamber); as a result, they were hospitalized due to illness (e.g., pneumonia). Also, RNs had learned about their need to consider the many possible causes of OAs’ problems associated with medication management, along with preventive strategies. An RN explained:

When you’re sending them home with all these medications, you have to think about what’s gonna happen. Like, are they gonna follow through with it,…taking all these at the different times….So, if…they’re…close to being discharged, maybe you should think about a blister pack.

Another RN had learned about some families’ reactions to postoperative challenges, such as drug-related confusion, and she empathized for them.

You just don’t know sometimes like what…their [family members’] expectations are. And I often look at them when they see these people come back [from surgery]. And they are downright scared because they’ve never experienced anything like this before and they don’t know where to go with it.

It is really upsetting for family to see someone who had come in walking and talking, quite alert and orientated,…and then seeing them 24 hours after an anaesthetic and surgery, and how they’ve become.

*Listening to Authoritative Experts*

RNs had learned about drug therapy for OAs by listening to authoritative experts during their pre-service education and while attending in-services, conferences, and programs developed
by nurse educators. During her pre-professional nursing education, one RN had learned about the safe use of different drug forms and her need to question under-diagnosis and more prescribing.

Somebody who is under-diagnosed and they are…[giving them more drugs], I want to know why…Like, if you’re not sure, then why are you giving them drugs?....I want to know…what I am giving them for…That’s just from nursing school.

During her pre-service education, another RN had learned about the importance of knowing OAs’ drug (and other) allergies and putting allergy armbands on them at admission. As well, she had learned about team nursing, disease (e.g., diabetes), and associated tasks (e.g., giving drugs, assessing blood pressure). “We were…just taught the disease, not…the follow through with all of it,…their discharge,…and the different disciplines [involved]”. It was “team nursing…You were driven by tasks” (e.g., give the drugs) and “didn’t know the patients” holistically.

Nurse educators researched and designed programs on topics of interest. One RN said that she may acquire more information about drugs that were (and drugs that were not) appropriate for OAs through a course provided by the clinical research staff.

While at a cardiac conference, an RN had learned about the role of in-hospital clinics for patients who needed international normalized ratios, for patients at risk for congestive heart failure, and for patients with hyperlipidemia (a high level of lipids in the blood (Stedman, 2005)).

I went to another city to a cardiac conference…They have an [in-hospital international normalized ratio]…clinic…for all patients,…that’s run by nurses.…So…[everything is] followed through. They [patients]…know…[their drugs]…and what dose they’ve gone home on, and who the doctor is following [them].

She stated that some patients in her hospital who were fine and wanted to go home, had to stay in “for days” and hold up hospital beds because their ratios were not high enough. They would be willing to go home and return to the hospital clinic every few days to have their blood taken. Patients on Lovenox, a blood thinner, may also attend the clinic.
It’s saving money…[and] that’s what the hospital is [concerned about]….If…[patients] are on the Lovenox injections, they’ll keep them in. Because if they go home, the patient…[pays] for that Lovenox,…which is hundreds and hundreds of dollars,…and [for] the home care…But a lot of the home care [services] find…[that] it’s too expensive,…or [that] they haven’t got enough manpower [to do the injections]. So these patients stay in.

While at that conference, she had also learned how staff in hyperlipidemia clinics tried to reduce patients’ cholesterol to prevent cardiac events and admissions, and how RNs in heart-failure clinics followed at-risk patients, thereby preventing many admissions due to high morbidity.

Reading Authoritative Texts and Non-Authoritative Texts

RNs had learned about drug therapy for OAs by reading authoritative texts and other texts. Authoritative texts included hospital pharmacists’ documentation and advisements, documents from nursing organizations, professional literature, OAs’ laboratory results and health histories, a unit notebook, the hospital’s drug internet site, and documents from the staff-education department. Non-authoritative texts included magazines, newspapers, and television.

Texts from hospital pharmacists.

RNs had learned about drug-related considerations by reading hospital pharmacists’ advisements and written reminders, including the information that they documented on OAs’ progress notes for RNs’ and doctors’ attention, and by collaborating with hospital pharmacists. An RN said, “We generally get reminders…with our meds, you know, ‘Make sure this is okay’. Or ‘Check this’…They’ll [pharmacists]…write…down things for us to watch for, or phone [to] pass on information. That’s a lot of it”. Similarly, one RN said that there were no policies and procedures associated with drug therapy for OAs; instead, it was “up to…the individual nurse, and the pharmacy writing you notes, like…‘Keep an eye on this for this patient’”.

The information needed to regularly review OAs’ drugs (e.g., to ensure the use of the
lowest possible doses or to illuminate a need for parameters for withholding drugs), came from reading authoritative texts (e.g., notes about unfamiliar drugs and related cautions that pharmacists made on the medication administration records), from collaborating with pharmacists, and from common knowledge.

By reading pharmacists’ notes, RNs had learned about laboratory results and ensuing drug-related strategies, and about interactions. One RN said that the pharmacists “are always documenting,…[for example,] ‘This patient’s creatinine is high. This Ancef should be dropped down to only every 12 hours’, or “We should not be giving this drug with this drug. If you do, you’ve got to give it an hour before or after”’. When an RN assessed patients and advocated for them, she used knowledge about the combining effects of cardiac drugs that she had acquired while working at another hospital and reading the cautionary notes that pharmacists had written on patients’ progress notes after teaching them about their drugs. By reading a poster that those pharmacists had reviewed with patients, she had learned about the interactive effects of alternative therapies (e.g., home remedies, herbs) and cardiac drugs (e.g., digoxin, warfarin).

Another RN had learned by reading pharmacists’ notes on the medication administration record. “Everything is written out to the point…where this [drug] has to be taken…a half an hour before this one….They [pharmacists] are very good”.

By reading hospital pharmacists’ notes, RNs had learned how to prevent, to minimize, and to treat toxicity. An RN said, “Pharmacy’s very valuable, especially when we’re monitoring drug levels,…especially with OAs whose creatinine levels are higher, and…their metabolism”. Another RN stated, “The pharmacists are good”. When patients were taking “certain drugs”, the pharmacists wrote notes to ensure that “you’ll be aware what can happen if they are toxic”, to
ensure that the doctors knew that they “should be monitoring the blood…every so many days”, and to alert RNs when a drug needed “to be lowered or elevated”.

*Documents from professional and regulatory nursing organizations.*

RNs in Ontario have many practice-related organizations. Examples are a regulatory body (the College), a union (the Ontario Nurses Association), and provincial professional associations, such as the Registered Nurses Association of Ontario and its interest groups (e.g., the Gerontological Nursing Association of Ontario). National professional associations include the CNA and the Canadian Gerontological Nursing Association. RNs had learned about drug therapy by reading nursing documents; however, because some of their knowledge was proceduralized (tacit), they did not always link it to that learning practice. For example, when I asked one RN about the College’s (2003) medication standards, including the RN’s advocacy role, she said, “Those are just things…we do…It’s an expectation of my practice. I just do it…We do all those things because that’s…one of the expectations of my profession,…that we’re gonna be advocates”. “I guess it’s just engrained in me now. I never really thought about the…[College]”. Thus, some of the information in this section may be more a comparison of RNs’ learned knowledge with the information in these documents.

By reading documents from nursing organizations, RNs had learned about the following: their scope of practice, responsibilities for creating contexts for care, medication standards, a broader model for care, a team-and-collaborative approach to care, mentorship, ethics and rights, legislation, advocacy and related documentation, and RPNs and medication. Some of these topics tended to overlap. Next, I review some of these topics and the associated documents.

RNs knew about generic expectations, such as their scope of practice (College, 2002) (An
RN said, “Just to be reminded of where our…safe scope of practice lies”) and expectations about safety. Their desire to promote the safety of patients on drug therapy (CNA, 2002; College, 2002) was obvious in their goals for drug therapy and for teaching. One RN had learned that “employers and nurses have a shared responsibility to create environments with strong organizational attributes” that support competence and quality outcomes (College, 2003, p. 22).

RNs had learned about specific topics such as medication standards (College, 2003). (An RN said, “the same five rights,…you know, right patient, right dose, right time, right route…”.)

More learning was obvious in RNs’ attempts to avert the use of unnecessary drugs (see College, 2003), for example, by influencing drug therapy and asking OAs to cull discontinued drugs.

RNs’ preference to use a broader model of care for OAs on drug therapy reflected their learning about professional expectations associated with health promotion (CNA, 2002), coordination (including continuity) of care (College, 2002), holistic care (CNA; College), collaboration (CNA; College), and the need to understand how practice environments affect practice (College). For example, RNs’ need to know about each OA’s holistic function as a basis for activities such as advocating, influencing drug therapy, clarifying the goals for therapy, coordinating HCPs’ drug-related activities, and detecting negative drug-related effects, reflected their learned expectations about holistic care. RNs influenced OAs’ drug therapy to protect their health and well-being; thus, they knew about their need to help to optimize patients’ health (see CNA). Also, RNs used team-and-collaborative approaches to drug therapy (see CNA; College).

When necessary, RNs helped other HCPs to fix their practice. Their will to do this reflected expectations about sharing knowledge with, and mentoring, other HCPs (CNA, 2002; College, 2002). Most RNs needed to know the professional expectations of RNs and of RPNs
and each staff member’s relative competence.

RNs’ respect for OAs’ dignity and privacy (see CNA, 2002) was evident when they communicated with OAs, mentored younger RNs about ageist practices, and considered OAs’ holistic needs relative to drug therapy. Information gleaned from professional organizations may have fuelled RNs’ will to provide needs-responsive care and to support the dignity and the uniqueness of OAs (CNA); for example, one RN tried to thwart routine prescribing (e.g., 100 mg of Demerol for every patient).

RNs promoted OAs’ autonomy by helping them “to express their health needs and values and…to obtain desired information and services” (CNA, 2002, p. 11). For example, RNs respected OAs’ choices not to change their drug practices, and they helped OAs to acquire the information and the consults that they needed. These actions were also congruent with the College’s (2002) standard about ethics. By reading “the booklets” from the College, one RN had learned about the legislation about restraints. That RN also said, “Every now and then our newsletter…may touch on drug therapy,…but mainly from a legislative point of view for nurses, like a legal aspect”. “I don’t get a lot of information from them”.

Many RNs advocated for OAs (see CNA, 2002; College, 2002, 2003). When RNs advocated (e.g., by contesting ageist consulting practices, influencing drug therapy, questioning suboptimal diagnosing), they displayed their learning about their needs to help OAs to receive “a share of health services and resources proportionate to their needs” and to promote social justice (CNA, 2002, p. 15). RNs knew how to document drug therapy (see College, 2005); for example, when an RN spoke about recording to support advocacy (“the proper way of documenting if you are withholding a medication”), she said, “It’s not good enough to write, ‘Held’. You have to
have a reason behind it”.

*Professional literature.*

RNs had learned about drug therapy for OAs by reading professional literature, such as the Compendium, nursing magazines and journals, drug books, and physical-assessment texts. At times, one RN buttressed her tacit knowledge by reading texts about drug interactions and doses.

I’m just so experienced. I’m not saying it’s a good experience. But…I’m so experienced that I just know what I have to do, and I just do it. And if I…need to delve more, I will…There’s still some things I get confused about, especially…drug interactions and how much should I give and that kind of thing…Then I look for things…[Otherwise,] I just do it…And a new grad will say,…“How do you know that?”…I’ll say, “Well, think about it. Go look here….Read up on that”….Experience.

By reading the Compendium, RNs learned more about drugs; then, they reflected to link the drugs to OAs’ diagnoses. One RN said, “If I don’t know what they [drugs] are, I’ll look them up in the…[Compendium] and try and get them to fit with the [admission] diagnosis”. In the Compendium, RNs found information that they used to assuage family members’ concerns about drug-related information on the internet. Also, RNs had learned about important pharmacological considerations when prescribing for OAs, about the more common kinds of ADRs, and about drugs that they did not know, including associated ADRs. One RN had learned about drugs associated with certain ADRs (e.g., confusion), drugs with additive adverse effects, the side effects of drugs used by OAs, symptoms that might indicate interactions, and the notion that even chronically used medications may lead to DRI: “All that stuff is…pretty much highlighted in the…[Compendium]. A lot of it is, anyway. So we read a lot of it”.

RNs read the Compendium to discover links between OAs’ drugs and their laboratory results, when they mentored resident doctors about drugs that had worked well for OAs, and to learn about new drugs. RNs said, “ I look up medications. I’m always looking up stuff, new stuff,
keeping up to date. You have to”. “If they [OA] tell me why they are on it but it doesn’t quite fit, I’ll even more tend to look it up and figure it out because it’s hard to keep up with the new psych meds.” One RN had learned about the reasons for drugs in part by observing and reflecting about previous experiences, but mostly by reading the Compendium.

just basically my experience,…patients I’ve had in the past and…meds I’ve given them…I’ll look it up in the…[Compendium] if it’s something I have no clue as to why they are on[it]. If they tell me why,…but it doesn’t quite fit, I’ll even more tend to look it up and figure it out, because it is hard to keep up with the new psych meds.

By reading nursing journals, RNs had learned about OAs’ metabolism and about new drugs. Also, journals were useful for reaffirming RNs’ current knowledge. One RN said,

There’s lots of knowledge that you can gain…even from nursing magazines and Canadian nursing magazines…[about] new drugs,…what dosages are available,…their indications,…their use,…side effects,…route of administration, and so on. There is a lot of reading that way.

Another RN commented,

There’s a lot of things I know that I appreciate. Even the nursing journals, I read the articles and it just reaffirms the things that I know, things that I’ve believed all along, and/or things that I’ve learned in the past, that they’re still true. I like that.

Learning about normal aging changes and older (versus younger) adults’ sometimes different presentation to disease and to ADRs came from reading authoritative texts, such as medical-surgical books and advisements about OAs (e.g., lower doses) found in the Compendium.

When one RN did not feel right about something or wanted more information, she read her own drug books and physical-assessment texts, but only some of that information was about OAs.

An RN had learned about assessing and diagnosing OAs on drug therapy by reading professional texts. “We have medical-surgical books on the floor, not necessarily pertaining to OAs, but that would be the first place that I would start, and then the…[Compendium]”. One RN
did not trust the internet much and preferred using more concrete resources, like medical or pharmacology texts about OAs.

*Other authoritative texts and non-authoritative texts.*

RNs had learned by reading other authoritative texts, including OAs’ histories and laboratory results, a unit notebook, and the hospital’s drug internet site. Information about how aging may affect OAs’ signs and symptoms of disease came from reading authoritative texts, such as nursing journals and OAs’ histories. Information about normal aging changes in OAs, including physical changes and biochemical changes, came from reading laboratory results. One RN saw differences in blood work for members of the geriatric population: “The creatinine might go up higher than someone else’s when they’re on a drug that…affect[s] their renal function”. Another RN said it had taken her 10 years to understand electrolytes (e.g., potassium and sodium) and liver function tests, and to put all that information together.

On one unit, RNs put new information that they had acquired into a notebook. An RN explained that the entries included, “Watch out for the side effects of Cogentin”, and “Don’t give Cogentin with this and this”. Having read the notes, “you keep that in your mind and…refer back to it”. One RN used the hospital’s drug internet. “We can just get right on to the hospital website, internet site, and…look up…any…drug we want”, including data pertinent to OAs’ care.

One RN had learned about problems with specific drugs by reading authoritative texts, such as articles and medical notices that the members of the staff-education department provided.

There are medical notices for things that haven’t worked out well…. [For example,] the dyrogesic patches are being used indiscriminately by a lot of people. And they don’t realize the risks involved with them…. While we sort of understand… [these kinds of problems], and…it’s in the back of your head, when they bring it to the forefront… [with a medical notice] you’re a little more vigilant.
RNs had learned by reading non-authoritative texts, such as magazines, newspapers, and television. Previously, one RN said that many OAs who came to hospital were taking St. John’s wort and unaware of the number of drugs that were contraindicated with it. She had learned that “probably [by] reading…a Family Circle or a Women’s Day magazine”. RNs had learned about interactions by reading newspapers. An RN said,

Sometimes just reading the newspaper,…there will be links with herbal medication and naturopathic types of medication,…and reminding people of the necessity of letting the physician know they are on these medications and how do they interact with Coumadin and their antihypertensives.

One RN said that contemporary drug recalls or side effects were in the media (e.g., newspapers), whereas in previous years they never were. Finally, an RN had learned about new drugs by watching television.

*Communicating with OAs and Their Families*

RNs had learned about drug therapy for OAs by communicating with older patients and their families. Topics included cultural differences and functional challenges that affected communication with OAs, effective strategies for communicating with OAs, OAs’ views, experiences, and drug-related practices, and families’ concerns and learning needs.

RNs had learned about cultural differences (e.g., OAs’ preferences about ways of communicating and about what should, and what should not, be discussed) and the use of interpreter services. When asked about ethnic differences in communication as they related, for example, to collecting drug histories, one RN said that she had acquired her know-how “mostly from trial and error…A lot of it’s just experience”. Also, RNs had learned about functional (e.g., sensory) impairments that affected OAs’ communication and strategies to deal with them. An RN said, “They are always saying, ‘What? What? I didn’t hear you’”.
RNs had learned about communication strategies that eased drug therapy. One RN said, “Over the years,…it’s gotten a lot better. At first, I was a little more standoffish, because I was very young when I…started nursing (she laughed). But now…I quite enjoy speaking to them [OAs].” RNs had learned how to build rapport with OAs to ease their disclosure of drug-related information and their adherence to their drug regimens. One RN said that trust helped OAs to overcome their fears.

If you build…trust and confidence in them with you, they’ll confide in you…They really have to trust you….A lot of elderly people, if they don’t [trust],…won’t…take stuff as easily as younger people will….Like, you…put pills down on a patient’s table and say, “Here’s your pills”. And they’ll look at you and say…, “I’m not taking them”.

Conversely, a 20-year-old would take them. OAs who did not trust “may not…take anything…because they are afraid. ‘Oh geez, you are poisoning me’ (she laughed). I’ve even had people say that”. Another RN said, “If they have been diagnosed with something new,…there is a fear of going home, a lot of times,…and…‘How am I gonna handle this?’…And a lot of patients won’t tell you that”.

RNs had learned how OAs’ views and experiences affected their communication. One RN “always” saw communication barriers. Some OAs felt ignorant about medical information, lacked confidence when communicating, viewed their HCPs as all-knowing, and deferred to HCPs and thus did not question them about medication and related tests. (An RN said, “There is no saying to them to question because…an older person just wouldn’t do that”). Some OAs lacked education about their right to ask HCPs questions and did not know the pertinent questions to ask. Another RN said, “They just say, ‘Well, whatever the doctors says’. [When she asked,] ‘Well, do you know what you are having done?’, [they responded,] ‘No, never asked’”. She added, “Some will say, ‘Well, it’s just blood work that needs to be done’”. But when asked
what the test was for, they said, “Nobody explained”. Yet another RN said that some OAs did not want their families “to know what medication they are on”.

One RN had learned that “a lot of them [OAs] have not gone to school”, and sometimes that condition affected their abilities to read and write. Another RN said, “A lot of them are…less than literate”; thus, she did not always use written documents when she “talk[ed] to them about things”. An RN had learned that some OAs either lacked drug-practice knowledge or had forgotten previous teaching about that topic.

Some people…don’t even know how to use their puffers properly…[or] what an aerochamber is…It’s just all the little things that are put on the back burner…Or they just don’t remember that the doctor [or the pharmacist] taught them.”

By communicating with OAs, RNs had learned about their drug-related practices. Some OAs were set in their ways (e.g., about the times for their drugs), or they self-prescribed and ended up ill and back in hospital. One RN had learned that OAs who self-prescribed without telling their community HCPs were admitted. Some OAs self-prescribed previous drugs. “They come with a bag of medications [that]…they’ve stopped…But [they] keep them in with their new [current] ones [drugs].” “And…if they start taking medications on their own,…they’re gonna end up back in [hospital]”. Other OAs increased their narcotics. The RN explained that today, more patients (e.g., with arthritis) were at home whereas previously they were institutionalized. So, “you see a lot of narcotics, a lot of patches. And…[some OAs tell her], ‘If one is good, two is better’,…..and…‘The patch didn’t work, so…I changed them every second day’”. However, because they did not “bother to phone the doctor” about the ineffective pain management and the self-directed changes, they experienced “a lot of problems”, such as lethargy and not eating well, and were admitted.
Some OAs told her about other adjustments, such as taking “a whole bunch” of drugs “together” that should be spread apart because they interact, taking a drug “at the wrong time of the day and then [complaining,] ‘It upsets my stomach’ or ‘keeps me awake all night’”, and stopping medication (e.g., antidepressants, cardiac drugs, antihypertensives). An RN said that some OAs “stop[ped] them for no reason (she laughed)…[They say,] ‘Oh, I…[didn’t] think I needed this anymore’”. Other OAs stopped them because they did not want to take them any longer or to live any longer or due to side effects. An RN said some OAs “phone you” to say they stopped taking their drugs due to side effects.

You know how you get these pamphlets from prescriptions, pharmacists stuff them in the bag [with the pills]?...They [OAs] read them and half an hour later they have every side effect [on the pamphlet] and stop taking their pills (she laughed). And that happened even though “it takes a week for this [drug] to even work (she laughed)”.

One RN said that some OAs told her about doubling up on their Lasix or self-prescribing “based on previous experience” with discontinued drugs. For example, OAs said, “The doctor told me to stop taking it, but I needed it today”. According to another RN, some OAs told her they had been “on Zantac…and the doctor took them off Zantac. But they still have Zantac in their cupboards”, along with “Losec and Tagamet…And they’re still mixing those in whenever their stomachs are upset”. Also, some OAs reported adding alternative therapies (e.g., herbals, naturopathic products, vitamins) to their drug regimens.

On admission, some OAs brought lists of drugs that did not reflect their current regimens. One RN said, “Their list of medications is not always…up to date”. For instance, OAs said, “I’m taking it two times a day but it only says once a day here”. Some OAs with cognitive challenges reported forgetting to take their pills. (An RN said, “They don’t take their pills…It comes with
age, forgetfulness”). While OAs who lived alone told an RN that they often forgot to take their
drugs, when OAs had partners, those persons reminded them and put their drugs into the pill
boxes for them. From her discussions with OAs, another RN had learned that for some,
adherence was “hit and miss as to what they have taken and if they’ve taken it or if they have
missed the whole day”.

Family members told an RN that when doctors discharged their older relatives late at
night when there were no hospital pharmacists on site, they worried about finding a community
pharmacy that was open so they may get the drugs for discharge; thus, she helped them to do
that. By communicating with families for teaching purposes, one RN had learned not only that
some families lacked information about their older relatives’ drugs and why they did, but also
about the effects and the consequences of that condition. For example, when, in response to
family members’ anxiety she taught them about their older relatives’ drugs, including those that
had been initiated in the community,

They’ll say, “Good heavens, nobody has ever told me all that kind of information
[before]”. And you…shudder because it should…[have been] explained by the
[community] pharmacist or…doctor….And lots of times nobody has picked up that…So
they have just gone home with this stuff and [then wondered,] “What do I do with it?”

At times, it was evident that the families of OAs who were taking Coumadin, “[did not] even
have the knowledge…to…get their blood checked every other week or once a month”; as a
result, “they [OAs] come in with major bleeding problems.”

**Collaborating With Other HCPs**

RNs had learned by collaborating with hospital pharmacists, doctors (gerontologists,
aanaesthetists, surgeons, nephrologists, internists, doctors unspecified), RN colleagues, dieticians,
and the nurse manager. To learn about conditions that complicated assessment of OAs’ needs
(e.g., OAs’ atypical presentation of disease and of ADRs), one RN had collaborated with the geriatrician, her nurse manager, and hospital pharmacists. By collaborating with pharmacists and doctors (e.g., the gerontologist), another RN had learned about links between OAs’ nutritional status, hydration, drugs, and aging changes (e.g., that some “medications are potent and…affect their kidneys”). Thus, she said,

When I first went there [to work], all these little old ladies…just drank tea all day long, and [ate] toast… That that was nothing for them…But I wouldn’t make it for them for supper now…It’s okay…if you’re feeling sickly. But you really need to get back…eating as soon as possible.

Information about special considerations and cautions associated with specific categories of drugs came mostly from listening to pharmacists and doctors. Also, one RN said, “A bit of teaching from some of the doctors [about the reason for a drug]…They’ll say, ‘Oh, let’s get them on this because it’s good for them to be started early’”.

RNs’ close relationship with hospital pharmacists was foundational to their abilities to learn by collaborating with them and reading their authoritative texts, about many of the drug-related considerations just mentioned and more. One RN said her learning from pharmacists was ongoing. Another RN said, “Basically, it’s pharmacy you rely on”. A third RN stated,

Pharmacy’s usually really helpful….Sometimes we get so busy. And when you’re not up to date on all these meds, and sometimes we don’t understand the interaction and how it affects them [OAs], and they’re [pharmacists]…like a resource…They’re very important. They make us think [in terms of prevention].

During the day when the hospital pharmacists were on site, RNs learned by consulting them about these topics: new drugs, drugs that RNs did not know, suitable doses, over-prescribing (e.g., frequency, duplication), behavior management, and potential drug effects (e.g., interactions) and related considerations and cautions. More topics were intravenous drugs,
steroid puffers, parameters for drug use, drugs associated with certain ADRs, side effects and strategies to eliminate (or reduce) them, and strategies to minimize the negative consequences of DRI (e.g., how to address ADRs to optimize OAs’ function and independence). RNs (and doctors) had learned from pharmacists about drugs that did not metabolize well in OAs, about strategies to prevent DRI, and about doses that were too high. Here are examples of collaborative learning with pharmacists about those topics.

To learn about suitable doses for OAs, one RN read the Compendium and collaborated with pharmacists. When pharmacists caught doctors’ prescribing errors it spurred more collaborative learning.

The…[Compendium] or the pharmacist are the two big ones [learning practices]…It’s like, these are the normal dosages. So we…start with that…..If the doctor writes something bizarre, like a horrendous dose, maybe we’d pick it up. But maybe we wouldn’t…if it’s not something commonly given. So then…[a pharmacist] would call…and say, “This is quite a large dose for an older person….You should call the doctor and get it checked before you give it”. So off and away we go.

(Alternatively, the RN collaborated with the OA’s community pharmacist about the dose.) When the same RN felt “shaky” because something did not “quite jive” or she was unsure about the dose, she read “the…[Compendium] first, or a drug book that is current”. Then, she phoned the pharmacist. She stated, “I would…definitely question it before I gave it. I would rather not give it…if I’m not sure”. Another RN had learned that sometimes (“not often”) pharmacists suggested reducing a dose due to the patient’s age, and usually the doctors followed that advice.

Interactions occurred in the emergency department (due to fragmented prescribing) and on hospital units. An RN described collaborative learning about interactions. “The pharmacist…phones us through the day and lets us know…, ‘They shouldn’t be on both those meds’. Or…something as simple as a urinary antibiotic, like Septra, can potentiate the effects of
“blood-pressure meds”. She continued: “I would never had known that [about meds that are not related at all]...So,...without that...acknowledgement from the pharmacist, I would never pick up on it.” One RN said that pharmacists “write notes and question the doctors constantly,...[for example,] ‘You are ordering this, but this patient is already on this. They shouldn’t be taking both these drugs’”. That dialogue was “always” going on. At times, learning by listening to pharmacists spurred more collaborative learning with pharmacists and doctors; for example, when an RN heard about a potential interaction, she asked a pharmacist if she should space the drugs or hold one of them. When a second RN heard from a pharmacist about symptoms that may signify an interaction, she alerted the doctors.

Another RN had learned about an interaction “the hard way”, initially by observing and then by collaborating with a pharmacist. When a patient had...diarrhea,...[his] doctor put him on Questran. And the [second] doctor...did a colonoscopy...[and] a biopsy...And it [Questran] stopped the absorption of Vitamin K. So...[the patient]...bled and...had to be transfused...The pharmacist knew right off the bat...He said...[Questran] stops the absorption of Vitamin K into the body.

One RN had learned collaboratively about cautions. When OAs were ordered Lovenox, pharmacists said, “A patient of this age,...we should watch their creatinine”. Another RN learned about new drugs (“The pharmacy’s really good at providing us with information about new drugs as they’ve been presented”).

Information for deciding about the drugs that OAs should take prior to surgery (e.g., when their blood pressure was high but they had not taken their antihypertensive because they did not know which of their drugs it was) came from assessing and from observing during previous experiences. However, when one RN was uncertain, she consulted the anaesthetist usually, or the doctor, the pharmacist, or other older RNs (“We bounce it off each other”).
When an RN managed OAs’ postoperative pain, her actions reflected her assessment findings and what she felt “comfortable doing”; however, when she needed more information, she collaborated with other HCPs.

If I’m…not satisfied, or things…aren’t turning around, or the family is on my back [saying that] she needs something for pain and I am reluctant to give her anything more, generally,…I’ll call the anaesthetist if it’s a fresh post-op,…call the surgeon, talk to some of my cohorts that are older like me, that I feel comfortable with their judgment.

When asked how much time she spent collaborating about pain-management issues to make sense of them, she said, “It depends on the type of patient that you have. It can be a couple of hours, it can be five minutes…in an eight-hour shift…It’s hard to know”.

One RN described the gerontologist as “very helpful”. Another RN said the gerontologist gave on-request, impromptu teaching sessions about conditions (e.g., sodium depletion) that may be due to drug therapy or conditions (e.g., congestive heart failure) that may need it. Also, the gerontologist was “really good” at identifying signs and symptoms of common diseases in OAs. She commented, “It’s great because…every day you learn something new”.

One doctor had explained the need to reduce Vancomycin when a patient’s creatinine was up. By listening to the gerontologist, RNs had learned about drugs and OAs, and about preventing misdiagnosis of DRI (e.g., confusion) and more prescribing. One RN said, “We’re a lot better dealing with that…[misdiagnosis] now that we have a gerontologist on staff….He’s got it figured out”. Another RN said,

The gerontologist…[is] very informative. If we’re having a problem with someone that’s…delirious…or…not recovering like they should,…he’ll…assess the person and then discuss them with you…Not that I always have time to…listen to him. But…he’s very good that way, very informative.

RNs had learned by listening to nephrologists and to internists. Another RN said, “Some of the
nephrologists are really good about saying,…‘I don’t want that patient to ever have Demerol, and I don’t want any intramuscular injections given because of the bleeding properties”. Another RN said that an internist will often give “little talks”. Or she asked them questions, such as, “Why do you want this patient on restricted fluids?” or “Why is this patient in this rhythm?”. Due to being older, having been put in charge of her unit, and having learned through experience collaborating with doctors, one RN was more comfortable asking them questions, and making suggestions, about drug therapy.

RNs had learned by collaborating with other RNs. When an RN was concerned about drug-drug interactions and the hospital pharmacists were not on site, she and the other RNs “bounce[d] ideas off each other”. She said to them, “This is what I see. This is the picture that I have. What do you think?” By collaborating with younger RNs who questioned why OAs were being treated and made comments, such as “[OAs] are old, and we just don’t have the time for them”, RNs had learned about ageism. By collaborating with dieticians, RNs had learned about strategies to reduce the risk of DRI, such as drug-food interactions, and about strategies to prevent, to detect, and to manage drug-induced malnutrition.

Combinations of Learning Strategies

At times, RNs used combinations of learning strategies. In terms of assessing and diagnosing, one RN had learned about some OAs’ failure to disclose drug abuse from “experience. And…I’ve read a bit about that…in regular family magazines”. Another RN had learned about assessing and diagnosing by watching and by collaborating. She said, “I have a lot of…background knowledge…because of stuff that I’ve…seen in the past…I’ve been around for a long time….So I see a lot. And…a lot of doctors…are very great teachers”.

Sometimes RNs used combinations of strategies to learn about drug-related considerations. By observing and thinking (assessing blood pressure) and by reading magazines, one RN had learned that older (versus younger) adults responded less quickly to blood-pressure medication. She explained:

repetition, having the same person over a number of days, experience, just reading, [my] knowledge base,…just any sorts of general magazines, or Canadian Living or Healthy Adults, Fifty Plus, what to look for,…health issues related to people my age and older,…how there are definite changes, what to expect over time.

By observing OAs and thinking (e.g., monitoring blood pressure), from gut feeling, by talking to OAs about their signs and symptoms, and by collaborating with pharmacists, RNs had learned how cardiac drugs combined to lower OAs’ blood pressure, resulting in their feelings of tiredness and weakness at home. Information about new drugs (e.g., for Alzheimer disease), came from reading authoritative texts, such as the Compendium and readings provided by nurse managers and hospital pharmacists, and from listening to hospital pharmacists and the gerontologist. One RN described the gerontologist as “a wealth of knowledge”. When another RN was unsure about the effects of new drugs, she consulted doctors, reflected, and collaborated with her nurse manager. She explained.

If I don’t get the answer that I am looking for [from doctors], then I might…work it a little bit in my mind and…talk to my boss about it…Because I feel that she has maybe more knowledge, more experience than I have.

Alternatively, she consulted a pharmacist. Finally, an RN had learned about proper practices with steroid puffers by observing, by reading authoritative texts, from her experience (working, personal), and from her pre-service education. “That’s just…basic common working knowledge. Where did I get that knowledge from? I don’t know. Personal experience, from the pharmacology that I had in my training, just…working, the…[Compendium],…all those things.”
She added, “If you’ve ever been on a [steroid] puffer and got…thrush from lack of rinsing afterwards,…you recognize the problem right away and…do…all that you can to prevent it”.

At times RNs used many strategies to learn about perioperative challenges. By watching and reflecting, and by collaborating with doctors, RNs had learned that doctors who used erroneous assumptions about OAs and aging as a basis for their drug (and other) care contributed to functional decline in OAs. An RN explained:

It’s just an age thing automatically….There is an assumption made that because you are elderly…you are not expected to do well [postoperatively], or you are expected to have problems…But…lots of people…in their 90s…have a wonderful quality of life….They’ve done well. And then bring them into hospital…[for] surgery or whatever and they are just gone, just gone. And…they never regain [their prior levels of function]…[Some doctors say,] “Well, we’ll just look at placement.”…Try to put yourself in that position and [to] know what it’s like to lose your home,…livelihood,…all the things that are so important to you. It’s tough.

Through a combination of practices, RNs had learned about advocacy for OAs. According to one RN, the ability to advocate for more effective pain management came from experience advocating, from listening to authoritative experts (e.g., pre-service teachers), from reading authoritative texts, and from collaborating with other HCPs. She said,

experience, personal experience, I guess, over the years,…pharmacology courses, reading [the]….Compendium], finding out….where things are metabolized and how they [OAs] are affected, and what seems to be the norm for elderly people versus young people. I talk to the pharmacist a lot….We have an RN…at the hospital that deals mainly with pain issues, and she is often a consult if you are not sure which way to go….She is quite willing to….assess them and deal with whatever she feels might be more effective.

One RN had learned how to advocate by observing and thinking and by dialoguing with doctors.

The way we look after older people can be a problem. I’ve just learned over time how to deal with them because…I’ve been introduced to those problems either as a young grad or right through….And you learn how different doctors deal with it. So then you can anticipate how they’re going to react to something that you’ve said. And it helps to have…the experience to know what….would trigger them to act.
Earlier, she said that when she dialogued with doctors about patients, she tied in concepts like medication to consolidate the patients’ information for the doctors. She did that because doctors dealt with many people each day, just as she did.

RNs used combined strategies to grasp issues associated with RPNs giving medications. An RN who mentored RPNs in hospital, shared her concerns about their greater role in drug therapy in long-term-care and in hospital. She had unearthed these concerns by collaborating with RPNs, by thinking about their educational readiness, and by reading a College document.

It’s a feeling of frustration sometimes and guilt, knowing that I’m sending…[an OA] to a long-term facility where they have one RN on nights and a bunch of RPNs.…That, that is hard…The family has anxiety plus, plus…They know that it’s not safe because of staffing constraints…It’s the education of the staff…giving medication…as well, often…not…an RN but…an RPN…that has a pharmacology…course….They are, as far as I know,…giving most of the meds. And the RN is just kind of overseeing everything….I don’t feel a two- or three-month pharmacology course is sufficient to give medications safely for the most part…You pick up College Communique and there’s your RPN giving…insulin to someone with a really low blood sugar,…or not giving somebody that’s end-stage cancer their morphine, or [not] giv[ing] it…proper[ly]. The knowledge base isn’t the same [as RNs’]….From the experience that I’ve had with them, going from…a year ago [when they were] not giving meds at all to suddenly giving everything now except for intravenous meds,…there’s been some big problems. Because the experience isn’t there…[The knowledge about] the long-term effects…[isn’t] there. And the knowledge base…isn’t there. That’s sad.

Examples of some in-hospital RPNs’ lack of knowledge were these:

Giving medication because it’s been ordered. And…all of a sudden the blood pressure will be 80 over 40 and nobody’s picked up on it. Or giving Lasix with low potassium…It’s also happening [in my hospital], yes, for sure.

Summary

RNs used many practices to learn about drug therapy for OAs. Their practices included experience (unspecified, personal), observing and reflecting, listening to authoritative experts, reading non/authoritative texts, including texts that were not OA specific, communicating with
OAs and their families, and collaborating with other HCPs. Sometimes RNs combined learning practices. Due to RNs’ and other HCPs’ lack of knowledge about drug therapy for OAs, learning by observing and reflecting was not always a reliable practice; instead, RNs learned about impoverished care and the consequences. RNs wanted to learn proactively to prevent those scenarios. In chapters 7 and 8, I describe constraints and facilitators of RNs’ learning and, when divulged by RNs, how they had learned about those conditions and their associated learning needs.
CHAPTER 7 CONSTRAINTS ON RNs’ LEARNING ABOUT DRUG THERAPY FOR OAs

In this chapter, I describe constraints on RNs’ learning about drug therapy for OAs, how RNs had learned about the constraints, their related learning needs, and one RN’s attempt to contest a constraint. Constraints were HCPs’ characteristics, conditions in the professional context for practice, and conditions in the drug industry.

HCPs’ Characteristics

HCPs’ lack of knowledge about drug therapy for OAs, and their inadequate management of OAs’ conditions, undermined RNs’ learning about effective drug therapy.

Lack of Knowledge

HCPs’ lack of knowledge about the care of OAs impeded RNs’ learning. One RN did not know if the hospital pharmacists had been educated about drug therapy for OAs.

I…suspect that they have…the same hit-and-miss kind of knowledge that we do. It’s never questioned,…[when] someone is 90,…“Why are they getting Valium five times a day?”, or something like that. I’ve never had a phone call like that.

The head of the hospital’s pharmacy was roughly her age and seemed to be “quite knowledgeable. But whether he could target OAs and drug dosages, I don’t know”. Another RN said, “Mostly through experience, that’s where it’s coming through. Because… you weren’t really taught much when you first started. It’s all through experience,…most of it”. When she spoke about keeping up to date with “the new drugs that are out there”, she said, “It’s…hard for us. Because…I never took any type of gerontology course or…course for older people. So we’re learning as it’s [new information] coming along”.

Inadequate Management of OAs’ Conditions

HCPs’ inadequate management of pain, of agitation, and of postoperative fluid replacement constrained learning.
Ineffective management of pain.

RNs’ and other HCPs’ lack of knowledge about OAs, including their needs and strategies for meeting them, eclipsed RNs’ ability to learn proactively about effective pain management. Related constraints were HCPs’ stereotypical expectations of OAs, HCPs’ diverse goals for postoperative care, the fact that neither the RN consultant nor the hospital pharmacists were on site 24/7 (see Professional Context in this chapter), and the drug industry (see Conditions in the Drug Industry in this chapter). Together, these conditions impeded RNs’ abilities to learn by collaborating with prescribers and other HCPs about OAs’ age-related (and other) needs, and by reading texts (e.g., drug orders for OAs). Thus, at times, RNs learned by watching trial-and-error and often risky practices that contributed to functional decline in OAs.

HCPs who based their expectations and practices on stereotypes about chronological age (rather than an understanding of OAs’ diversity and needs) thwarted learning. Some prescribers gave poor rationale (e.g., age alone) when they ordered drugs for postoperative pain. Also, prescribers who ordered routine postoperative drugs and doses or who used hit-and-miss ordering practices hindered RNs’ learning about more effective prescribing for OAs.

One RN described hit-and-miss and routinized prescribing and functional decline.

Older people often become sort of practice subjects. Their medications rarely seem to help them…when it comes to having problems with behavior or…mental status. It’s just hit and miss, “Let’s try this. Let’s try that”, [and it] often makes them worse, not better…There is not a lot of thought put into ordering meds. It’s the same thing for someone that is 25 years old or…80 years old. And I think there is a lot of difference in dosages and what is safe practice for OAs.

She continued:

Morphine and Gravol,…or let’s give them Tylenol 3 with all that codeine and have them bugged up and…start hallucinating…Right. When maybe Extra Strength Tylenol day two,…on a regular basis with meals, might be the way to go.
Also, she described stereotypical prescribing. “Generalities are made about older [adults], ‘Oh, he’s in his 90s, so we’ll just do this or we’ll do that’, without really looking at that person as an individual”. While noting her need to practice within her scope and to keep patients safe, she again described hit-and-miss prescribing and prescribing based on impoverished rationale.

Sometimes the explanations that you are given [usually from the surgeons, sometimes…from the…family practitioners] just don’t quite cut it…“Let’s try this. Let’s try that.”….And…their explanation is they [OA] are 90 years old…But I don’t really consider that a decent explanation.

Those practices had fuelled one of her main reasons for participating in this study -- to learn why drugs did not always work for OAs, including why they caused functional decline. She said, trying to differentiate why medications don’t always work for OAs. They might be just fine in the dosages they recommend for younger people that can metabolize things well. But for older people, there is a real safety issue…And I think they [prescribers] often tend to over-medicate, over-sedate, and get into big problems with low oxygen, confusion, behavioural problems…[So,] instead of helping, it…makes them a lot worse, particularly if they’ve had an anesthetic.

Due to her own, and other HCPs’, lack of knowledge, another RN was unable to learn collaboratively about factors that contributed to the postoperative status of OAs with Alzheimer Disease, and about effective ways for managing their pain and delirium. Thus, she tried to learn by watching and reflecting about trial-and-error practices that resulted in more suffering, decline, risks, and interventions for OAs.

It happens more often than not,…a post-op fractured-hip patient…[with] Alzheimer…and we’re starting to give them analgesic for pain because of the surgery. They’re…confused…when they first come in. [Now] they’ve had this trauma and…we have to have their pain medication under control. And it sends them right off the wall. And I always wonder why…Is it their Alzheimer process? Is it the medication?…Is it [that] they’ve missed…their pills because…they have been NPO [nothing by mouth]? And I always find it mind boggling as to how they become so confused that we’re restraining…You hate to see these 85-year-olds restrained…They just scream and cry….But we’re restraining…because we don’t want them to hurt themselves.
She continued:

A lot of surgeons will say, “Well then, don’t give them anything for pain. Just give them Tylenol.” …[But] then the pain makes them more agitated….worse. So the most challenging thing is the post-op recovery, trying to just keep them comfortable [and]…to keep their confusion level down.

Due to HCPs’ lack of knowledge, together with their diverse goals for postoperative care, another RN had tried to learn about the effective management of pain and confusion by observing and reflecting about trial-and-error practices. Thus, OAs were again exposed to added risks and suffering. She described this situation as “an ongoing problem”.

An ongoing challenge with the elderly is drug reactions…We give a lot of analgesics post-op, and they…get very confused…I know they’re in pain;…yet, they [doctors] want us to withdraw narcotics to take them out of their delirium…But in the meantime, they’re still suffering…So…[it’s] often a challenge to find a way to deal with their pain…We try using non-steroidal anti-inflammatories and aspirin-based products, but sometimes that isn’t enough…Geriatric people, in general, tend not to process the morphine or the Demerol that we give them as well, and…sometimes become quite delirious….[Most of them] usually clear within a week or so….But…in that first 24-to-48-hour period…they’re quite uncomfortable…So…[I] feel poorly because I’m not managing their pain….It’s hard because….they’re so confused [and moving in every which way and form] that they don’t seem to be in pain…But you know it’s gotta hurt…[Assessment is] very difficult, yes.

She had gleaned that information “over the years, I guess….That’s all just pulled out of the sky from people that have talked about it, like the anesthesiologists,…a gerontologist here.” She illustrated doctors’ and her disparate goals and her associated learning needs.

Because my experience leads me to…want to deal with this pain,…and the doctors often want to deal with the delirium,…we’re struggling. So if I can offer something to the doctors to deal with the delirium and the pain,…that would be super.

*Ineffective management of agitation and of postoperative fluid replacement.*

As a result of HCPs’ lack of knowledge, RNs tried to learn how to manage agitation in OAs and how to replace fluid in members of that population again by observing and reflecting
about risky, trial-and-error practices. One RN said this about agitation:

What is a fast medication to use instead of, “Let’s try Ativan”. “Let’s try risperidone”. “Let’s try Haldol”, you know, and giving the exorbitant amounts that I can give? And then the patient goes from being wild to…semi-comatose…There is no in-between. I mean, if he’s semi-comatose, it makes my job, in some aspects, easier…because he’s not there to be watched 24 hours a day. But at the same time there are real issues…Are they still breathing? What about eating, getting their regular meds in? There is just no way. You don’t do it.

Earlier, an RN said that when she followed a physician’s order to give a postoperative OA 1000 cc of intravenous fluid over one hour, the OA went into heart failure and required Lasix.

She explained: “It is often by trial and error…That’s how I learned about it as a young grad”.

The Professional Context for Practice

The dearth of resources and services, specifically, insufficient time, gerontological resources, and pharmacy services, as well as the predominant use of the medical model for care, impeded RNs’ learning.

Lack of Time

Organizational values and expectations put tremendous pressure on RNs’ time, thereby constraining their learning. One RN agreed with other experts’ (in the literature) suggestion that organizations that focused on time, efficiency, beds (e.g., getting patients in and out), and workload, and that employed fixed staffing systems (versus systems that reflected the diverse needs of patients and of staff) restricted learning. Another RN reported that hospital administrators’ major values were “time and money”. She explained:

Their big thing is…[patients] have to be out by 1100 hours…Every morning…when we go into report, [we hear] how many patients are in emergency waiting for beds…So we have to get…patients discharged as fast as we can…[and] get these other people in…It’s the revolving [door]…The average is 10 patients waiting a day for cardiac beds.

She added, “You’re put under pressure….to get…all these patients in by a certain time”.
Another RN said, “It’s a short-of-beds scenario where we are always moving people off to…other…floors, to long-term care, wherever we can find a spot”. Administrators said, “‘We have to get that patient out’, and they’re not looking at the whole person”. A surgical RN said that administrators talked about needing the beds and keeping people moving “all the time”.

Earlier, one RN said that some surgeons thought that their responsibilities ended after the surgery. She added:

> It’s an expected thing to move…that patient along. Open up that bed for my next surgery….It’s coming from discharge planning…Let’s get more people quickly through,…whether they are ready to go or not.

The rewards for meeting administrators’ expectations eroded RNs’ ability to learn about the diversity of OAs and the complexities of their drug (and other) care. An RN said,

> You’re not judged by your ability…at the bedside. It’s how many people can you look after in an eight-hour period….If you hit the high spots,…you are rewarded…You are criticized for putting in for overtime unless you’ve got very specific…[rationale. And that] doesn’t look at your…patient load or the ages of your patients…It looks strictly at why didn’t you get your work done in eight hours.

Another RN said that she was “always” thinking about time, “always, always”. The busy pace eroded her ability to learn and created risky conditions. “You’re not up to date on all these meds”. “Sometimes we don’t understand the interaction and how it affects them”. Also, she lacked time to reflect about her learning needs. She said that our discussion had stimulated her “thinking” about topics, “like the high-risk drugs and the most common side effects [in OAs]. I haven’t really thought about that. I guess I don’t have time to think about that…Time, it’s the time…There’s…never enough time”.

RNs lacked time for continuing education. The busy pace of one RN’s practice hindered her abilities to read authoritative texts, to concentrate, and to learn about drugs, DRI, and suitable
doses for OAs. RNs lacked time to attend sessions (e.g., when the gerontologist discussed OAs and delirium) and in-services (e.g., about congestive heart failure), and to read the authoritative documents about new drugs that their nurse managers and the hospital pharmacists provided.

One RN highlighted the tension between her lack of time and her need for ongoing education.

Ongoing education’s really, really important. It’s just the time, the time. It’s the time. We have our families…We need our down time…to regroup on…our days off…so we can help others…But then we do need the learning…to upgrade….to know about the new drugs…So, I don’t know where that balance is. I don’t know how we learn that.

**Insufficient Gerontological Resources and Pharmacy Services**

There were insufficient gerontological resources (e.g., texts, journals) in the hospital to support RNs’ learning (e.g., about age-related changes in drug metabolism). Although the Compendium was available, an RN found its structure constraining.

The…[Compendium] is often overwhelming when you’re trying to research a drug…Plus, they [drugs] are listed individually. So it doesn’t…list…which drugs will do those kinds of things [cause certain ADRs]…Or it doesn’t group things like this [e.g., drugs that most commonly cause ADRs in OAs, high-risk drugs].

Another RN did not “trust the internet”. “I don’t always feel that the internet is 100% right”. “I would rather go to something more concrete, [like]…medical…or pharmacology books relative to OAs”. As well, although a few of the doctors were good teachers, time was a factor.

“Sometimes there is a bit of teaching from some of the doctors….A few of them are good teachers. But…not very many…take the time.”

Yet another RN said that there used to be a very good poster about drug-related interactions on the wall of her nursing station, and RNs who had difficulty remembering the signs and symptoms of drug interactions referred to it. However, when she asked for a similar poster, her administrators said that they did not want anything attached to the walls.
Also, insufficient in-hospital pharmacy services constrained RNs’ learning. The fact that neither the pharmacists nor the RN consultant for pain were on site 24/7 impeded one RN’s ability to learn collaboratively about the postoperative challenges that OAs often experienced during evening shifts and night shifts.

We only have a pharmacist that we can even consult ‘til 6:00 hours at night….Then they are on-call by phone…[But] it’s often in the evenings or the night shift, more than day shift, that you need help finding something that is appropriate…Generally, during the days, they’re [OAs] not too bad…because they are just coming back…after surgery,…an anaesthetic, and they are still…in that sleep mode…But once that starts wearing off,…you start seeing, about 3:00 in the afternoon,…it just really gets very frustrating.

She continued:

You can…phone…[the pharmacist]…But the tendency is not to bug them after 6:00 at night unless you are really, really unsure of something. We sort of got that message…So…it’s a bit of a problem…[because] it tends to be in the evenings when you see people go really sour or…flippy or [have] behavior problems.

Because the pharmacists did not always welcome such calls, sometimes she and the other older RNs collaborated in an attempt to fathom OAs’ needs.

**Predominant Use of the Medical Model**

The predominant use of the medical model in hospital and in the community cramped RNs’ abilities to learn, for example, by dialoguing with doctors and by reading drug orders. Previously, an RN said that whereas patients’ needs used to be just medical, today their needs and care were more complex. Concurrently, although the medical model’s major focus on using drugs to cure episodes of acute illness and to address surgical needs was crucial, it was too myopic to support RNs’ learning about the comprehensive and complex needs of OAs on drug therapy. For example, there were few opportunities to learn about links between chronic illness and drug therapy. Previously, an RN said people experiencing myocardial infarctions were well
looked after because that was an acute episode; however, persons with chronic illness were dismissed. “They’re not considered as important”.

Conditions in the Drug Industry

Conditions in the drug industry limited RNs’ abilities to learn by reading texts (e.g., drug orders) and by collaborating with other HCPs. As was mentioned previously, the Compendium was not organized effectively. More constraints were the stupefying number of drugs available, the number of new drugs, the changes in drug practices, the lack of guidelines and standards for drug therapy for OAs, the paucity of research about geriatric pharmacology, and the fact that some drugs had similar names.

Due to the lack of documented information about all of the new drugs and their interactive effects, one RN was unable to learn by reading.

There are just so many new things coming out. It’s impossible to keep up with it all…And then how does this drug work with what they’ve been on before?...Does it potentiate the effect of Coumadin or…the effect of a blood-pressure med? Because our meds don’t mesh well. And maybe there is no documentation, if it’s a brand new medication they are trying,…[about] what… it is doing to the rest of their meds. You might not even know that. [You might only find that out]…by monitoring their vital signs...[or] blood work.

She added, “It is hard to keep up with the new psych meds”. Another RN found it difficult to stay current due to all of the marketing about new drugs. She commented, “No kidding”, and “I mean, how many arthritic medications are out there now? Every day there is something new coming out”. Also,

New drugs and all the advertising on television (she laughed). It’s just amazing….There is stuff on television I haven’t even heard of…I think, “Here comes a new one (she laughed)…that we need to learn…about”. And…people in the hospital [ask,] “Well, what about that new drug I saw on television. Will that help me?”…The advertising…has gone a little too far.
RNs lacked considerations, guidelines, and standards to support their learning about aspects of drug therapy for OAs, including preventing interactions, managing postoperative pain alone or with confusion, managing postoperative care generally, and changes in drug practices. While practicing in another hospital, an RN had discovered that two conditions -- the lack of guidelines about drug therapy for OAs, together with prescribers’ tendency to order high doses of digoxin -- had constrained her learning about suitable doses. Only later did her collaboration with the hospital pharmacists and the doctors there reveal the consequences of high doses -- post-discharge build up of the drug that necessitated readmission – and the need to use smaller doses. She explained:

Digoxin,…I’ve given that since I started [nursing], digoxin 0.250…And then, say…five years ago, they dropped it down to 0.125, is the average dose. Now, you see a lot get 0.0625, a very small dose in the elderly, because of the potential…of them going home and the build-up of it.

Also, due to the lack of authoritative texts, when a drug was removed from the market, she did not know which drug OAs should take instead.

It does change…We’ve seen that with …Vioxx…coming off [the market]…That is a drug a lot of older people were on…We did see patients coming in with myocardial infarctions and stuff like that [from Vioxx]…And then having to…take them off [that drug]. And then…what is your back up?

Summary

HCPs’ characteristics, along with conditions in the professional context for care and conditions in the drug industry, curbed RNs’ learning about drug therapy for OAs. Due to these constraints, sometimes RNs learned reactively about ineffective practices and the consequences, about strategies that may offset or address the consequences, and about OAs’ extant and comprehensive needs and effective practices for meeting them. All of these conditions hindered
RNs’ abilities to learn by observing and reflecting, by dialoguing with other HCPs (e.g., pharmacists, prescribers, the RN consultant), by reading authoritative texts (e.g., drug orders, the Compendium, guidelines and standards, drug-related documents), by assessing OAs, and by participating in ongoing education. Instead, often RNs learned by trial and error and by observing and reflecting, about impoverished drug therapy and the consequences for OAs. Sometimes RNs used practices (e.g., watching and reflecting, and trial and error) in an effort make sense of the complexities that resulted from constraints on their learning. One RN had tried, but unsuccessfully, to contest the lack of learning resources.
CHAPTER 8 FACILITATORS OF RNs’ LEARNING ABOUT DRUG THERAPY FOR OAs

Many conditions eased RNs’ learning about drug therapy for OAs. At one point, RNs synthesized organizational supports and systems and HCPs’ characteristics into an informed and responsive approach that would ease their abilities to learn by collaborating with other HCPs, by reading texts (e.g., drug orders), and by observing and thinking (e.g., about HCPs’ drug practices and OAs’ conditions). One component of the synthesized approach was HCPs who understood OAs (e.g., their needs, diversity, and differences when compared to younger adults). Other components were more time, the use of a team approach, more thinking by everyone involved about the best medication to use, coordination, and having access to OAs’ information. An RN who wanted to know more about this synthesized approach said, “Just using the time and effort and expertise and teamwork is really an important way to go. It would be the best”. Also, RNs identified three specific facilitators of learning – HCPs’ characteristics, conditions in the professional context for practice, and external pressures. I describe the specific facilitators, while alluding to how RNs had learned about them and identifying their related learning needs.

HCPs’ Characteristics

Facilitators of collaborative learning about drug therapy for OAs were greater commitment, expertise, and effort on the part of some HCPs. One RN said that it would be “important” for HCPs to have expertise, and that there “definitely” was a need for better education of HCPs about OAs’ care. Enhanced expertise included greater understanding about OAs and their needs, different expectations for older (versus younger) adults, and more thinking about the best medication for them. Greater effort and commitment on the part of HCPs meant attitudes that were informed by accurate information about drug therapy for OAs, positive views
about OAs (e.g., their diversity, needs, abilities, and care), and engagement in practices that were age-adjusted. One RN thought it “would be of great benefit” if HCPs were educated about OAs’ experiences and about health-protective strategies that did not involve drugs.

The Professional Context for Practice

Facilitators in the professional context for practice were resources and supports for learning, along with systems that promoted and supported learning.

*Resources and Supports for Learning*

Having access to resources (knowledgeable HCPs, authoritative texts) about drug therapy for OAs and to supports for learning (continuing education, more time, administrative backing), enabled knowledge acquisition.

*Human resources.*

Having HCPs available to dialogue with supported collaborative learning about drug therapy for OAs. Examples were 24/7, in-hospital access to hospital pharmacists and the RN consultant for pain, and having available a clinical nurse specialist in gerontology, a full-time gerontologist or gerontologically prepared nurse/practitioner, a hospitalist with a specialty in internal medicine in gerontology, and a dietician. Here are RNs’ comments about these facilitators.

One RN stated that during the day, the hospital pharmacists phoned to alert her about drug-related challenges, for example, interactions between drugs that were unrelated and strategies for prevention. However, another RN said that “it would be wonderful” if the hospital pharmacists and the RN pain consultant were gerontologically prepared and on site 24/7 to answer her questions. (Currently, their positions were “straight day-shift types of jobs”.) A third
RN said that the hospital pharmacists “are not there 24 hours a day…We…have one on call…[But] I’d rather have a pharmacy open 24 hours. It’s [our hospital] a trauma center”.

Different RNs made these comments about human resources: Having “a gerontologist on staff…all the time…that we can…use as a resource…would be…great”, having “a nurse or a nurse practitioner…would be super”, and having one hospitalist with a specialty in gerontology was “a really great help for us”. One RN stated, “It’d be nice to have a clinical specialist…for eight hours or twelve hours…Often we don’t have ongoing problems that you need her there 24/7”. Another RN said that “a lot of…[the] meds” that she gave to OAs eroded their appetites. Through experience, she had learned that having the same dietician on her unit eased her ability to learn collaboratively how to manage those effects.

**Access to authoritative texts about drug therapy for OAs.**

Having on-hand access to authoritative texts about drug therapy for OAs eased learning. Examples were the Compendium, gerontological-nursing journals and texts, and pharmacology texts and medicals texts that included information about OAs. More examples were user-friendly resources, the internet, guidelines for drug therapy, a poster about interactive effects between drugs and herbal products, and the use of age-adjusted laboratory values.

One RN wanted “24-hour-a-day access” to “medical books…or pharmacology books relative to OAs,…with specifics to OAs”. Another RN wanted texts that supported her learning about doses for, and adverse drug effects in, members of that population.

A good pharmacology book with adverse effects…and dosages that are more suited to OAs…That’s a really good resource…[HCPs] will pull those out, on a different shift from day shift…where they don’t have the resources of the pharmacy always there, and…read…And…if you do that, you tend to retain it.

When another RN spoke about gerontological-nursing texts and journals, she said that she
wanted access to “anything that focuses directly on the OA”. (Her rationale, stated previously, was that more and more patients were older but getting the same medication that people 50 years old were receiving; thus, she wanted to know that OAs would process it properly.) Her preferred learning practice was to read it [the information]…in black and white, instead of just being told by people [other HCPs]…I’ll read the odd nursing journal that might give me some information that way. But…I’d like to read it, see something concrete, and deal with it…that way.

She yearned for text information about why OAs experienced DRI in part to have some leverage when she advocated for OAs. When she read the suggestions from other experts (in the literature) about why OAs experience DRI, she said

This is all really good…It’s nice to have it there so you’ll give it a second thought…They are twigs to think about…You can access it, read it,…prove your point (she laughed),…[say,] “I have rationale. It’s not just my idea. This is documented”.

Another RN also wanted to learn by reading literature about drugs and OAs.

Access to user-friendly authoritative texts and electronic resources was a facilitator for an RN who wanted such resources “for research reasons, for checking out this or…that. As long as they are laid out properly so that I can see what’s available for each chapter…instead of having to read the whole book”. “Even if it was laid out in the internet. Because a lot of us are computer literate,…and it may talk about drug interactions for this or that drug, and that’s good”. One RN found reading the Compendium valuable, while another RN found it “overwhelming”.

Another facilitator was guidelines for pain management. One RN wanted “pharmacy recommendations” about postoperative pain management. She said, “Possibly…some sort of a graph from pharmacy”. A second RN wanted guidelines about the management of pain and confusion. Earlier, she said it would be super if she could offer doctors something to address
both pain and delirium.

More facilitators of learning were a drug-related poster and the use of age-adjusted laboratory norms. One RN wanted a poster with information about how home remedies and herbal products affect prescription drugs, such as digoxin and warfarin. Another RN said,

We are so bombarded with…lab results now. The normal is what we look at….If it was age-related…, it might help a bit. I’m not saying it would be used as much as other things. But it definitely would…help.

Continuing education.

Continuing education about drug therapy for OAs and support from the organization and the College for continuing education were facilitators. An RN said that education is “an ongoing need for all of us [HCPs]”, except hospital pharmacists who were “pretty up to date”.

RNs’ preferred modes for continuing education were listening to authoritative experts and reading authoritative texts. Valued modes included short information sessions and drug-update sessions from hospital pharmacists, presentations from the gerontologist, sessions from the pain-management team, evening in-services from gerontologically prepared presenters, paid in-services at work with extra staff to cover attendance, paid in-services that were mandated by the College, coffee-break in-services, a refresher course, and information booths. Here is more information about each of these modes.

RNs wanted education from the hospital pharmacists. One RN said,

The more information we can be given, either written, or maybe have pharmacy meetings once a week and target…a group of meds, like…diabetic meds,…anti-hypertensives,…renal meds, just…common drugs and what we need to know to administer them safely, and what we should be passing on, just to refresh our memory,…and in relation to OAs especially.

An RN who described her learning as ongoing, commented, “It would be helpful if the pharmacy
would come up and…give a little blurb once a month about drugs”, because practices changed.

Previously, she mentioned having seen that with Vioxx. Yet another RN wanted more in-services about geriatrics, more staff to cover attendance, to be paid to attend, and the College to mandate continuing education.

More in-services on geriatrics…while we’re at work…Maybe more staff can be brought in during the day so we could attend them,…maybe paid weekend…workshops…If they really want us to learn,…they’re gonna have to start paying for us to go to them…. Full-time workers don’t want to go to these things and waste a day off….We need our…days off…But then we…need the learning…about the new drugs….So I don’t know where that balance is…unless it’s mandatory by the…[College]…Maybe they have to mandate that.

RNs wanted sessions from the gerontologist. One RN said that two conditions, having more information about OAs and drugs and listening to the gerontologist, would give her more confidence in the use of new drugs, such as Risperdal for Alzheimer disease. Another RN stated, “A geriatrician often gives presentations about [the] geriatric population” on topics such as “medications, Alzheimer’s, when not to give this [drug, and] new drugs”. She suggested,

Information booths,…[or] maybe…mini, 20-minute in-services by the pharmaceutical companies that come in…Bring our coffee and…listen. I wouldn’t have any problem doing that. But…[I won’t] stay…at the end of every shift to do that.

A different RN said that it “wouldn’t hurt” to have “the odd refresher course” about drug reactions and interactions. One RN thought that in-service education was improving. “Our services are pretty good…There’s…in-services…for geriatric patients….So it is getting better”.

Renal doctors provided in-services “about renal medications and patients”, and “clinical teachers and leaders on our floor…arrange in-services with physicians…[about] the elderly, surgeries,…and…pain medication”. One RN wanted information from her hospital’s pain-management team about “adjunctive therapies…for pain control”.
More time.

RNs needed more time for ongoing education. Previously, an RN said that she knew that ongoing education was very important, but her lack of time constrained that activity. She thought that RNs, like teachers, needed planning time.

Teachers have one-half hour [of] planning time. I believe it’s daily if not three times a week. And…nurses need that…planning time at least twice a week to do…research,…to look up drugs, to read…the policy and procedure books, that kind of thing,… ‘cause there’s…never enough time.

Stating, “Oh, I’d love those [learning sessions]”, she explained how RNs may use the time.

You’d have to go into the room for your one-half hour and…read this and this and this. Or there would be suggested readings. Pick the two that interest you and read…and learn…[Then,] you’d be more knowledgeable. You’d help your patients. You’d be more confident. You’d be able to…[say]… “I read about that…That could be a [drug] reaction. That could be a symptom of that”…And it all comes together (she laughed)….And…you would have to do it. If…[administrators] said,…“I’ll give you one-half hour [of] pay to go home tonight and…do reading on that”, I won’t do it. But if I’m at work, I’d have to do it.

Another RN wanted “a good pharmacology book”, more time to consult it, and some quiet time to review/evaluate and plan care. Given her current working conditions, often she had to do that reflection at home and to use older resources.

There are times when I go home and…go through my drugs,…my old physical books and so on,… because something’s…[not] right…Or I want to go in there tomorrow with…a….knowledge base that is more up to date for that person.

Administrative backing.

Strong administrative backing for OAs and their drug (and other) care eased learning. Examples were support to negate ignorance about aging and to promote the care of OAs, positive attitudes about OAs, and expectations that were informed about their needs. One RN said that administrative support to counteract ignorance about aging and OAs and to champion the
provision of geriatric services and systems was “getting better…I…see more support for aging patients…That’s growing…That’s a good thing”. Another RN was awaiting that support: “It would be good to have…some kind of administrative support in terms of aging and older patients”. Yet another RN said that more information about strong administrative support “would be a big help”.

**Systems That Promoted and Supported Learning**

Systems that promoted and supported learning about drug therapy for OAs included teamwork, communication, and staffing.

**Teamwork.**

The use of an interdisciplinary approach eased collaborative learning, due to the need to involve many different HCPs (e.g., pharmacists, doctors, RNs). Earlier, an RN said that she wanted a more concerted approach by everyone involved when choosing the best drugs for OAs. Effective teams were collegial and built on trust. A team that was built on trust supported mutual learning through mentoring. One RN said that life-long learning and mentoring are “very important to us…We’re a cohesive team. And if you start cutting people down,…no one’s gonna trust you”.

**Communication systems.**

Effective communication systems helped RNs to learn about drug therapy for OAs by reading texts (e.g., drug orders, HCPs’ documentation) and by collaborating with other HCPs. Relationships built on trust supported collaborative learning amongst HCPs. Earlier, an RN noted her need to have an abundance of trust in the pharmacist. Another RN consulted pharmacists whose knowledge she had “tested” and who knew and responded to her level of knowledge.
A lot of them are brand new pharmacists…We don’t always call a brand new pharmacist. I’ll call someone that I’ve dealt with…over the years. It’s more out of trust. And it’s a relationship that we’ve built.

She continued.

There’s no judging for my lack of knowledge. They are just there to provide knowledge. So the older pharmacists, I’ll deal with on a regular basis. And…as soon as we get to know the newer pharmacists, we’ll deal with them, as well.

She added, “They know our knowledge base…They’re not speaking in terms that I can’t fathom…I’m not a big chemist, so I need to know in concrete terms what to do and how to deal with it”. Finally, she said,

That’s really important, that…you have a relationship with them [pharmacists and physicians], that you build a trust, that they know that you’re…assessing properly. That’s the other thing…They need to have the trust in you as much as you need to trust them to do the right thing.

Staffing systems.

Having more RN staff eased learning by increasing RNs’ time to participate in continuing education. One RN wanted staff relief during the day so that she and her colleagues may attend off-unit in-services about drug therapy for OAs. An RN commented, “Maybe it means having a smaller patient assignment”.

External Pressures

Conditions that supported collaborative learning about drug therapy for OAs were the growing numbers and lobbying power of older Canadians and of RNs who provided them with care, the fact that OAs were getting more aggressive care, and greater societal awareness of drug-therapy options for OAs. One RN wanted more information about these conditions. Earlier, an RN said that she was caring for more and more people who were 70, 80, even 90 years old. RNs reported spending anywhere from 50 to 80% of their time with OAs (see Table 1). They
said the following about the age demographics of patients. “The geriatric population is increasing. Most of your patients…are elderly. It’s an oddity” to deal with younger people. Patients are “just getting older and older all the time”. Now, “75 up” was the average age of cardiac patients. One RN said it was not uncommon for cardiac patients to be in their 80s (e.g., 88 years) and even 94 years old. An RN said that OAs were getting “better care”, including “more aggressive tests” (e.g., angiograms), procedures (e.g., bypass, angioplasty), and drugs. (“A lot of drugs that we give now, we would never give to older people” before.) Another RN said there were “more fractures and…joint replacements now” than ever before. “All the coronary-artery bypasses” are “in hospital before and after [for] so many days of antibiotics”, and “they’re all geriatrics”. In terms of drug options, yet another RN said that “People are becoming more aware of what’s out there and…available for them”.

Summary

In this chapter, I identified the conditions that eased RNs’ learning about drug therapy for OAs. One facilitator was the use of an informed and responsive approach to drug therapy for OAs. That approach included HCPs who understood OAs, teamwork, more time, more thinking by everyone involved about the best drugs to use, coordination, and having access to OAs’ information. More facilitators were HCPs’ characteristics (greater commitment, expertise, and effort), conditions in the professional context (resources and supports for learning and systems that promoted and supported it), and external pressures (e.g., changing age demographics, more aggressive care for OAs, and greater societal awareness of drug-therapy options for OAs). Also evident in this chapter are the practices (experience, observation and reflection) by which RNs had learned about these facilitators, as well as their associated learning needs.
CHAPTER 9 DISCUSSION

RNs’ knowledge was complex, extensive, emergent, and supported by their ongoing use of diverse learning practices. RNs learned in order to support their multifaceted and crucial role in drug therapy for OAs. At times, their propensity to learn about individual OAs on drug therapy enriched their knowledge about drug therapy for all OAs. Their extensive knowledge, together with their disparate motivations for learning, their use of many learning practices, and their resilient will and effort to learn despite facing many constraints on that activity, reflected their high level of development and engagement in practice. Thus, of note is the heretofore untapped but readily available opportunity to maximize hospital RNs’ role as knowledge workers in drug care for OAs. Next, I elaborate on these concepts with the help of available literature.

RNs’ Multifaceted and Crucial Role in Drug Therapy for OAs

Gunderman (1995) claims that RNs “assume the major responsibility for the day-to-day management of health care problems” (p. 1). Rankin and Campbell (2006) assert that hospital units depend on nurses to see what needs to be done and do it, and to detect what is going wrong and fix it, even when these activities are not in their job description. On that theme, Varner (2006) claims that nurses play a key role in ensuring that drug use is appropriate, safe, and effective. All of these expectations were evident in the findings from this study. By sharing their knowledge and learning needs, the RNs illuminated their crucial and multifaceted role in drug therapy for OAs in hospital. That role included knowing OAs, including their drugs and related needs (e.g., for age-adjustments), their health status, and their ongoing holistic function. RNs collaborated with other members of the team. They advocated for OAs, including by assessing their drug orders for appropriateness and by influencing their drug regimens. Assessment
involved looking for drug-related effects and any need for drug therapy or for changes in their regimens. RNs monitored OAs’ drug therapy, reported adverse effects, coordinated OAs’ drug care, and taught OAs, their families, and other HCPs about drug therapy. All of these findings are congruent with the claim that nurses can play a significant role in drug therapy (Linton, 2007), for example, by taking the lead in providing OAs with preventive care (Zwicker & Fulmer, 2008), and by being well positioned to promote OAs’ function (Jacelon, 1999).

Ironically, at the same time that RNs’ practice in drug therapy was impeded by many conditions, it was crucial for at least two reasons. First, through their collaboration, advocacy, and coordination, RNs provided the ‘clinical glue’ that held the members of the health care team together, thereby retaining the focus on OAs’ holistic and ongoing needs. Rankin and Campbell (2006) agree that hospital nurses’ work “holds a clinical environment together” (p. 4). It is taken for granted that for the praxis of present-day health care to flow smoothly or at all, nurses must create and sustain “the necessary terrain”; yet, these activities are always muted, never prominent in accounts of their work (p. 4). Second, in their strategic position at the fulcrum of care, RNs were the sense makers who identified and acted on their needs to find, and to infuse drug care with, information to protect OAs from harm. For example, RNs were the front-line detectors of inappropriate prescribing and untoward drug effects.

Through these actions, and perhaps inadvertently, RNs helped themselves and other hospital stakeholders (e.g., other HCPs, nurse and other administrators) to avert any breaches of formal expectations, such as those in the hospital’s mission statement and in documents from legislative, professional, regulatory, and accreditation bodies. For example, one of Accreditation Canada’s (n.d.) system-wide standards is “Effective Organization”. A subsection of that standard
highlights the organization’s ability to appraise “trends in the environment, including the service needs of the populations it serves, and to plan its structures, management systems, and services accordingly” (Adapting to the Environment, para. 1). Another system-wide standard is “Managing Medications”. These standards stress collaboration to avert and lessen adverse drug events “by addressing all aspects of a medication use process, from selection and preparation to administration…and ongoing monitoring” (Accreditation Canada, para. 1). Four subsections of the standard include working collectively to promote drug safety, prescribing appropriately, checking quality, and achieving positive outcomes. According to Accreditation Canada’s Performance Measures, one patient-safety indicator is medication reconciliation at admission. (Medication reconciliation is the process in which HCPs, patients, and their families work together to ensure precise and comprehensive transfer of drug information at interfaces of care, including admission and discharge from hospital, and any change in care setting, service, or level (Queen’s University, 2009, para. 2)). Meanwhile, the College of Physicians and Surgeons of Ontario (2007) identifies values that are key to physicians’ practice. While service includes maintaining competence, putting patients first, and “collaborating with and supporting colleagues and other health professionals” (p. 8), altruism includes putting patients first, and trustworthiness includes competence and the provision of safe and effective care.

Yet, at times RNs tried to protect OAs from conditions that arose because other HCPs and administrators were not fulfilling their responsibilities. Those conditions fuelled indirect constraints on learning (constraints on drug practice with singular OAs that impeded RNs’ ability to integrate any new and relevant insights into their knowledge about drug therapy for OAs generally), as well as direct constraints on RNs’ learning about drug therapy for the OA
population. Schon (1987) asserts that when professionals “violate their own ethical standards, fall short of self-created expectations for performance, or seem blind to public problems they have helped to create, they are increasingly subject to expressions of disapproval and dissatisfaction” (p. 7). Thus, in addition to the risks already mentioned, HCPs and administrators may be vulnerable to public scrutiny.

The Extensive, Complex, and Emergent Nature of RNs’ Knowledge

RNs recognized the intricate, dynamic, and context-specific nature of drug therapy for OAs. Thus, the knowledge that they needed was both practical and abstract in its type. Also, it was complex, extensive, emergent, shifting, and supported by their ongoing will and efforts to learn. Many authors note the intricate nature of OAs’ care. Bowar-Ferres (2008) states that the complexity of health care is escalating, and this is happening when the number of OAs who are over 65 years of age will soon comprise the majority of the population. Boltz et al. (2012) claim that OAs “are overwhelmingly the majority of hospitalized patients and are, by far, the most complicated patients to care for” (p. xv); thus, acute-care nurses have tremendous responsibility when they provide care to OAs in the quickly changing health care environment. Boltz et al. contend that reasons for the complexity include these: OAs experience normal aging changes, endure many coexisting and complex medical challenges, take several drugs, are the most susceptible to iatrogenic events, experience protracted hospital stays, and are more apt to die in the hospital than elsewhere. Importantly, geriatric syndromes are increasingly perceived as being linked to preventable iatrogenic complications that result in grave adverse outcomes for OAs. Also, the authors claim that informed nurses may avert and even prevent complications; yet, most nursing programs and medical programs “are just now incorporating geriatrics into the
curriculum” (p. xv). (In chapter 1, there are many authors with the same view.)

RNs’ extensive knowledge and learning needs (see chapter 4) encompassed the topics identified in chapter 2 and went far beyond them to include more knowledge about drugs, about prescribing, and about approaches to drug therapy for OAs. Gunderman (1995) describes knowledge as “a repertoire of examples, metaphors, images, practical principles, scenarios, and rules of thumb that are used in a professional’s practice” (p. 131). RNs’ knowledge about drug therapy for OAs rested on their know-how about drug therapy for adults. However, RNs had tweaked that knowledge to include, for example, how OAs differ from younger adults, and the implications of the differences for drug therapy in older persons. Differences included OAs’ unique aging-related changes and norms, and their sometimes atypical presentation of disease and of DRI. In addition, RNs knew about the following: how to use function as a barometer of OAs’ drug-related needs and the quality of their care, OAs’ greater risk for DRI, the many causes of DRI in OAs, along with its manifestations and consequences, and how to age-ready their interventions. Due to their awareness of OAs’ greater vulnerability to DRI, RNs targeted their goals and knowledge largely to health protection (risk reduction).

RNs’ knowledge went beyond the nexus for care. For instance, they knew about political conditions that blocked learning from practice and contributed to DRI, and they tried to contest them to buffer OAs from risks. (For example, when prescribers who lacked knowledge underestimated and intended to order more drugs, one RN advocated.) Years ago, Kahl et al. (1992) identified problematic prescribing for OAs and HCPs’ need for more knowledge. Other authors (e.g., Hale et al., 2008) noted another condition, the lack of research about OAs and drugs.

Due to the ever-changing nature of RNs’ habitats for practice and of information about
drugs and about gerontological care, RNs’ quest for information was ongoing, making both their knowledge and their learning needs emergent and plastic. RNs tried to be both the keepers and the shapers of their knowledge. Yet, their efforts were truncated by barriers to learning within their hospital and beyond it. While some health care stakeholders’ knowledge about drug therapy for OAs seemed to be inadequate, RNs struggled constantly and valiantly to get the information that they needed, to provide enlightened care, and to inform other stakeholders about their related responsibilities. Through their ongoing learning, RNs dispelled the notions that there might ever be a clearly defined and fixed body of information about drug therapy for OAs, and that they may ever have all of the information that they required for that care.

How RNs Learned

Merriam et al. (2006) state that although most of our knowledge about adult learning focuses on the mind, meaning cognitive processes related to amassing, storing, and making sense of new information, “the whole person is always involved in learning” (p. 187). Meanwhile, Reagan (2005) cautions that although we tend to “confuse ‘formal schooling’ with ‘education’”, it is important to remember the difference (p. 248). RNs illuminated the difference. Just as Gunderman (1995) found, RNs’ learning was ongoing, their learning needs were dynamic and diverse, and they met their needs in general ways that traversed practice boundaries. Just as Krawczak (1995) found, RNs learned in varied ways. Sometimes they used more than one strategy to learn about a topic. Most of RNs’ learning was informal. Similarly, the learning activities identified by Bevis (1971) in her Job Activity Survey were predominantly informal. As Gunderman (1995) found, RNs learned mostly by using more independent (self-planned) and unstructured performance strategies that were linked to work and aligned with practice.
Examples were learning by observing and reflecting, by collaborating, and by reading authoritative texts. These activities were similar to the self-planned activities described by Cervero and Dimmock (1987). Similarly, Ndosi and Newell (2010) found that most nurses got the greatest portion of their drug-related information at work through independent learning and practical experience rather than formal instruction. (One difference from Ndosi and Newell’s findings was that RNs did self-directed and deliberatively educative learning at home (e.g., reading general magazines) and at work. Also, they learned through group instruction (e.g., staff education) that was planned by others.) RNs’ resulting practical knowledge was always developing (also see Gunderman). Just as Gunderman suggests, RNs needed to keep learning from practice. Similarly, Wenger states that learning drives practice “and practice is the history of that learning” (cited in Stamps, 1997, p. 39). Like the RNs in Gunderman’s study and in Cervero and Dimmock’s study, RNs used self-planned, self-instruction strategies that were deliberately educative and distinct from everyday care. Examples were reading authoritative and other texts. Thus, and as Gunderman suggests, people nurture their own growth.

At times, RNs did not know how they had learned, perhaps because they had proceduralized the knowledge. That was evident when one RN spoke about learning by reading the College’s (2003) medication standards, and when another RN said that she used well rehearsed tacit knowledge until she needed to consult authoritative texts. At other times, RNs could not explain how they had learned about a topic, possibly because over time many learning practices had enriched – synergized and synthesized -- their knowledge. For example, one RN had learned about older (versus younger) adults’ greater vulnerability to drug-related harm during her preservice education but mostly through experience. Hence, my earlier comment that
at times RNs’ learning for practice with individual OAs on drug therapy enriched their insights about therapy for OAs generally. That cumulative process occurred when they learned by observing and reflecting, by communicating with OAs, by collaborating with HCPs, and through experience and combinations of practices. For instance, by conversing with individual OAs, RNs had learned about communication tendencies in, and strategies for, older persons. By watching inappropriate prescribing for individual OAs, RNs had learned about the problematic nature of those practices for all OAs. Also, while practicing with singular OAs, RNs had learned about the following: OAs’ tendencies associated with drug therapy, the categories of drugs most often prescribed for OAs, common adverse events experienced by OAs, drugs that commonly caused ADRs in OAs, signs and symptoms of ADRs in OAs, the detection of common diseases in OAs, differentiating aging changes from disease and from ADRs, links between OAs’ clinical status and their drugs, interactions and toxicity in OAs, and the management of OAs’ pain.

RNs critically reflected about their learning practices. One RN was not always satisfied with the information on the internet. Another RN suggested improvements to the Compendium and preferred to consult older pharmacists whom she trusted.

While RNs’ learning practices mirrored most of those identified in the section, “How RNs Learn” in chapter 2, RNs focused less on technological instruction and on formally taught sessions (e.g., seminars, workshops, courses), perhaps due to unavailability. As well, RNs heavily reported learning by observing and reflecting and through experience, strategies that are absent in that section but evident in the section, “Adult Learning”, also in chapter 2.

RNs’ Learning and Adult-Learning Theories

RNs’ learning was holistic and reflected many adult-learning theories. Their learning was
transformative and experiential, for example, reflective in nature or situated in a community of practice. They reflected both on their actions and as they acted. At times, RNs’ learning was dialectical. Sometimes it was critical, driven by their quest for justice. RNs learned through narratives and through their bodies. Occasionally, they attempted to learn collaboratively by trying to make headway through HCPs’ diverse views about, and approaches to, care (e.g., pain management). Oft times, they sought both practical information and abstract information.

*Self-directed Learning, Transformative Learning, Observing and Reflecting, and Critical Learning*

RNs’ learning was self-directed, as described by Knowles (1975). For example, RNs read texts, communicated with OAs, and collaborated with other HCPs. RNs’ learning was transformative. Jarvis (2006) maintains that the process of changing episodic experience and interiorizing it is the essence of learning. Mezirow (2000) describes the notion of a “disorienting dilemma” and the process of transforming “our taken-for-granted frames of reference” to make them more valid guides for action (p. 7). These concepts were evident. One RN who had learned from previous experiences, watched for the same scenarios. When another RN saw an OA go flat on a narcotic, she began to temper the dose for all OAs. When yet another RN and her colleagues were concerned about a doctor’s lack of collegiality, they met with that person to discuss the issues. In essence, they formed a cell of resistance and became “active agents of cultural change” (Mezirow, p. 30). Thus, by critically reflecting and dialoguing about their experiences, RNs enriched their frames of reference with new realities, thereby enhancing their validity as guides for future action; as well, RNs enriched their agency.

Due to constraints on learning, observing and thinking (e.g., watching ineffective care
and the consequences) were often RNs’ default modes for gaining information. (Essentially, by being open to what was happening, they enabled higher levels of cognition and richer understanding (see York-Barr, Sommers, Ghere, & Montie, 2001)). For example, by watching and thinking about admissions, one RN had learned about the more common adverse drug events that OAs experienced. Another RN had learned about the snowball effects of drugs on OAs’ function. Their learning perhaps epitomized Fenwick’s (2003) notion of thinking about concrete experience to create personal meaning or knowledge. As well, RNs had learned by reflecting on their actions (see Schon, 1987). One RN said that as a young graduate, she had learned by trial and error (e.g., about uninformed fluid replacement and the need for Lasix). By trial-and-error, another RN had learned not to ask OAs who were confused, about their drugs; instead, she consulted their significant others or their community pharmacists.

An RN illuminated Schon’s (1987) description of the “sequence of ‘moments’ in a process of reflection-in-action” (p. 27-28). She said that she had so much experience that she just did what needed to be done; however, when something (e.g., an interaction) confused her, she looked for more information (e.g., asked a pharmacist if she should space the drugs or hold one of them). Drawing from Schon’s description, this RN brought her “spontaneous, routinized responses” (p. 28) to the situation. Her use of those tacit responses led to an unanticipated outcome (a potential interaction) that grabbed her attention and fuelled her critical reflection. As a result, she restructured her strategies, her understanding, or her ways of structuring problems. Then, she created and tested new and more effective strategies (Schon).

RNs’ learning was critical in nature. Graves (1997), who writes about ‘grace’ in a spiritual sense, claims that grace has “profound implications for pedagogy” (p. 15) and is...
transformative. An RN displayed grace when she learned how to advocate for better pain management for OAs. Her insights came from experience advocating, taking pre-service pharmacology courses, reading the Compendium, and dialoguing with the pharmacist and the RN pain consultant. Thus, and using Graves’ words, she opened up the possible by “cut[ting] through the boundaries” (in this case, the margin of age) and “working toward something good” (p. 19) (in this case, fairness for all patients). Another RN wanted more information about why OAs experienced DRI to enhance her leverage when advocating. Drawing from Brookfield’s (2001) work, these RNs “recognized the predominance of ideology” and willed to learn to contest it (p. 20) “to reclaim reason” -- “something to be applied in all spheres of life, particularly in deciding values by which we should live” (Brookfield, 2005, p. 56).

At times, RNs’ learning reflected a feminist perspective. Through her notion of poststructural feminist pedagogies, Tisdell (1996) highlights “the psychological and the structural factors that affect learning” and the links between them, in an effort to ease learning that is emancipatory in both psychologically and socially transformative ways (p. 311). An RN who understood how previous socialization practices in the nursing profession had fuelled her deference to doctors and to the privileging of medical knowledge, now wanted to be treated equally and to have her contributions valued. On realizing how her deference had fuelled and perpetuated the hierarchical conditions that discounted her and her colleagues, she shed that stance and began to contest those conditions, thereby increasing her agency. (When a doctor did not treat her and her colleagues collegially, they met with the doctor to address the issue.) Still using a gendered lens, she thought that the presence of more men in nursing might prevent some of those conditions and the ensuing dynamics.
**Narrative Learning, Embodied Learning, Dialectical Learning, and Spiritual Learning**

RNs had learned through narratives, through their bodies, and through dialogue. Through stories, learners may grasp knowledge that is relevant to practice, and they may forge connections with ideas and with other learners and eventually construct a learning community (Merriam et al., 2006). By sharing critical incidents, RNs had learned, for example, about under-diagnosis and more prescribing, about drug-related functional decline, and about the harmful consequences when OAs did not disclose their comprehensive drug regimens (e.g., while one OA ended up on dialysis, another OA bled and had to be transfused.) On hearing these stories, RNs restoried suddenly (see Randall, 1996) and transformatively.

At times, RNs’ learning was embodied (see Merriam et al., 2006). While one RN had learned how to detect signs and symptoms of ADRs by feeling stressed while watching OAs experience them, another RN had learned about drug effects from gut feeling. According to Benner (1984), experts no longer rely on an analytic rule to link their comprehension of the situation to a suitable action; instead, and due to their wealth of experience, they intuitively understand each situation and strategically target the heart of the problem without wastefully considering a variety of fruitless other diagnoses and solutions.

Just as Schon (1987) describes, RNs tried to deal with indeterminate aspects of practice by illuminating problems, inventing solutions, and dealing with value conflicts. Thus, RNs’ learning was dialectical, meaning that it was discussed and reasoned through dialogue (Merriam-Webster, 2003) that was enriched by information from helpful resources (see Baskett & Marsick, 1992). For instance, due to HCPs’ conflicting values, RNs had tried to learn dialogically about better management of OAs’ postoperative pain and delirium. One RN had learned about
postoperative delirium by dialoguing with anaesthetists and a gerontologist. An RN had dialogued with older GPs who prescribed cupfuls of drugs, to flush out the causes of OAs’ resulting signs and symptoms. By consulting pharmacists, RNs had learned about many topics (e.g., suitable doses for, drug effects in, and drugs that did not metabolize well in, OAs). Cervero (1988) states that professionals are constantly in a dialectical relationship with dilemmas that “are characterized by uniqueness, uncertainty, or value conflict” (p. 31). Schon claims that due to the conflicting values, “there are no clear and self-consistent ends” to influence the technical decisions about means; thus, these challenges cannot be addressed with “the canons of technical rationality” (e.g., theories, techniques) (p. 6). Instead, practitioners must improvise by creating and testing strategies.

The dialectical nature of the interviews, coupled with their focus on professional challenges, helped RNs to gain insight about their learning needs. Although initially an RN said that she was comfortable with her knowledge about ADRs and interactions in OAs and that the odd refresher course would be helpful, later she expressed a strong interest in learning more about symptoms that may indicate drug interactions. Some RNs reported context-specific knowledge that dissipated through dialogue. For example, although at first one RN said that she did not see ADRs much because she practiced on surgery, later she stated her wish for more information about ADRs and side effects in OAs and that the interviews had helped her to realize that need. Also, although initially a surgical RN did not think that information about alternatives to drugs would be as useful to her as it would be to RNs on medicine, later she expressed her wish to know more.

From a spiritual sense, RNs had learned to collaborate with other HCPs to maintain the
focus on crucial issues, to promote teamwork (see English, 2000), and to raze barriers (see English; Graves, 1997) due to age. For example, an RN who had learned that some doctors walked away without listening to OAs, told them when OAs had more questions.

Learning Tied to Practice and in Communities of Practice

Much of RNs’ learning about drug therapy for OAs was tied to practice and thus ubiquitous (also, please see Gunderman (1995)). Sometimes RNs’ learning was a precursor of practice (e.g., when they consulted resources to learn about new drugs prior to giving them). At other times they learned through experiences in practice (e.g., when an RN gave a big dose of a narcotic and the OA went flat and had to be revived. This example also illuminated the at times urgent nature of RNs’ learning needs and learning.) In both examples, learning was spurred by a disjuncture and resulted in a “more experienced” self (Jarvis, 2006, p. 13); as well, there is evidence of Dewey’s (1938) essential principles -- interaction and continuity. Also, RNs learned reactively (e.g., on discovering that OAs with ADRs had been under-diagnosed and prescribed more drugs).

Wenger (1998) claims that we foster learning in our relationships, communities, and organizations. Similarly, Lave and Wenger (1991) claim that learning occurs when learners engage in their local contexts (communities of practice) and in the larger social world. Thus, “learning is a way of being in the social world, not a way of coming to know about it”; in short, “learning is a practice” (p. 24). The interest, rather than being on self-contained “cognitive processes and conceptual structures”, is on the kinds of social encounters that support learning (Hanks, in the forward to Lave & Wenger, p. 14). RNs’ learning was ongoing, demonstrated by their sustained involvement in their local habitats for practice and beyond. RNs said that they
were always learning and evaluating their knowledge either to affirm, or to update, it. Their engagement in the world beyond their local habitats, together with their learning, were evident when they suggested (to administrators) strategies that they had learned about at conferences, when (by reading magazines) they discovered some OAs’ tendency to disclose their drugs incompletely, and when they shared their insights about conditions that influenced learning.

Just as Wenger (cited in Stamps, 1997) describes, RNs’ learning created communities of practice and thus was a source of emerging social structure. RNs’ communities existed within the hospital and extended beyond it. Co-participants in their communities included OAs, other RNs, pharmacists, a geriatrician, and hospital dieticians. RNs dialogued with co-participants for many learning-related reasons; for example, by communicating with OAs, they learned about OAs’ characteristics (e.g., functional challenges, ways of communicating, views, drug practices, and needs (e.g., for more time)) that affected their drug therapy.

RNs identified attributes of co-participant relationships, as well as social conditions, that eased collaborative learning in their practice communities. Attributes included collegiality and trust. Social conditions included access to hospital pharmacists and an RN pain consultant who were gerontologically prepared. Meanwhile, constraints on collaborative learning included the lack of 24/7 access to on-site pharmacists, and conditions in the drug industry. Due to HCPs’ questionable knowledge about OAs, many of the learning practices that RNs employed, such as consulting other HCPs, reading drug orders and health records, and attending in-services provided by other HCPs, may have been suspect in terms of their ability to engender valid information about drug therapy for OAs (please see Ndosi and Newell (2010) and Dewey (1938)). As Dewey stated, mis-educative experiences stop, distort, or restrict growth from future
experience. That happened when RNs tried to learn how to manage pain.

Drawing from Fenwick’s (2000) situative view, some of RNs’ knowledge was embodied, enabling them to develop relational abilities, technical competence, cultural proficiency in the organization, and a penchant for anticipating and trying to solve organizational challenges, including constraints and contradictions. Still from Fenwick (2003), by engaging in their communities of practice, RNs tried to alter social activities for the purposes of fine tuning practices (e.g., doses), designing new practices (e.g., for coordinating), and discarding harmful practices (e.g., under-diagnosis and prescribing). Similarly, Rossiter (2005) explains that relational learning occurs in relationships with self, other persons, concepts, the community, and the world, and it helps learners to recognize and grasp links between concepts and circumstances. Knowing is relational. In that sense, learners are social beings who actively participate in learning and, as a result, redefine themselves vis a vis their communities (Rossiter). The relational nature of RNs’ learning about drug therapy for OAs was evident in their engagement with self (e.g., watching and reflecting), other persons (e.g., collaborating with HCPs), and concepts (e.g., information about OAs and drugs), in their awareness of conditions in the hospital and beyond it that affected learning, and in their use of inclusive language (e.g., “we”, “us”) when they discussed their knowledge, learning needs and strategies, and constraints on learning. Also, it was evident in the always shifting nature of their knowledge and contexts for practice.

Just as Hanks (in Lave & Wenger, 1991) suggests, RNs dialogued with many HCPs in their communities to acquire and to share information about drug therapy for OAs. The ensuing polyphonic condition supported Hanks’ notion of “distributed” learning (p. 15). As Wenger suggests, practice was produced by the co-participants “through the negotiation of meaning”
(Wenger, 1998, p. 52-53; also cited in Stamps, 1997, p. 39). This mediation of different views occurred when, through their dialogue with pharmacists, RNs enhanced their own learning and doctors’ learning about inappropriate prescribing (e.g., too high doses) and about interactions. Yet, Lave and Wenger caution that inequitable relations of power may “truncate possibilities for identities of mastery” (p. 42); for example, the use of the medical model alone curbed RNs’ chances to learn about links between chronic conditions and drug therapy.

Hanks (in Lave & Wenger, 1991) states that while preexisting structures may slightly influence thinking, learning, and action, they do so only in a non-detailed and illustrative way, and they may be restructured in the local context of action. This view retains a constitutive role for the activities that learners engage in, while avoiding the drastic position which denies any pre-forged content in what they learn (Hanks). Kolb and Kolb (2005) claim that learning is a transactional process between people and their environments and it involves relearning. By dialoguing with other HCPs about critical events in practice, RNs created new knowledge structures while reconfiguring previous ones. For example, while one RN described her ongoing collaborative learning about associations between normal aging changes, narcotics, and delirium, another RN spoke about changes in practices associated with Vioxx and with digoxin. Hanks further states that it is the “common ability to co-participate that…provide[s] the matrix for learning, not the commonality of symbolic or referential structures” (p. 21-22); however, at times the two may be entwined. Constructive and distributive learning occurred when RNs dialogued with pharmacists. One RN said she was not a chemist and pharmacists did not judge her for her lack of knowledge. The result, as Hanks suggests, was joint learning about drug therapy for OAs, even though the participants may have used diverse views, language, and/or codes.
Tensions in Professional Learning

Although RNs’ learning supports all of the tensions in professional learning reported by Baskett et al. (1992), here I speak about only two of them. First, given RNs’ lack of pre-service education about OAs, their learning dilemmas were mostly unpredictable (versus predictable) and unsolvable with encoded expert knowledge; instead, RNs were always learning so that they may age-adjust their drug-therapy practices in diverse situations. Second, and in relation to the tension between knowledge that is formally principled and that which is contextually specific, Benner (1984) claims that close ties between theory and practice are required to advance knowledge. Similarly, Cervero (1990) cautions that although we may assume that learning occurs through the collaborative construction of knowledge within a community of professionals and a practice setting, it takes both abstract knowledge and practical knowledge to enhance wisdom (see Baskett et al., 1992). At times, RNs sought both kinds of know-how (e.g., they had learned about normal aging changes by observing and reflecting, by reading laboratory results and journals, and by collaborating with doctors). Now, I try to explain why that was the case.

In her Job Activity Survey, Bevis (1971) included the learning activity, “discussed a patient’s hospital care with a specialist” (e.g., dietician, clinical nursing specialist, physician) (cited in Krawczak, 1995, p. 122). Although RNs in the current study collaborated with other HCPs, they did not know whether any of the HCPs were knowledgeable about drug therapy for OAs, or what, if any, learning practices they employed to support their knowledge (see Ndosi and Newell (2010)). (Some RNs made assumptions about HCPs’ knowledge.) Thus, due to watching harmful outcomes of drug therapy for OAs, RNs perhaps realized that years of experience had produced inept practices and that abstract information was needed to enlighten
them (again, see Cervero, 1990, 1992). Further, and again using a relational-learning view, at times, RNs employed a combination of learning practices, suggesting a need to engage with the relevant concepts in many ways. RNs’ concern about how their own, and other HCPs’, lack of knowledge cramped learning and contributed to unjustifiable risks and harm may have been one reason why they at times sought both abstract information and practical information about a topic. As a result, they may have enriched their dialogue with other HCPs and the resulting distributive learning. Also, the breadth of RNs’ learning strategies again suggests that their comprehensive needs for information will never be met solely through formal sessions that are designed by other persons, even if the sessions are localized in RNs’ realities.

**RNs’ Motivations for Learning**

RNs’ motives for learning were indeterminate, just as their learning strategies were. As the potentially autonomous custodians of their knowledge, RNs continually assessed it, and they tried to learn in order to reshape it to reflect current needs and conditions. Thus, RNs were vigilant about, and responsive to, their needs to acquire new information (e.g., about changes in drug practices), to reaffirm the currency of their knowledge, to tweak their knowledge (e.g., when recommended doses changed) and, when necessary, to disaffirm and cull inaccurate knowledge from their repertoires for practice (e.g., when Vioxx caused harm and hospitalization and was removed from the market). Other changes in practice that spurred learning were the use of adjuvant drugs for pain, and the fact that RNs were giving OAs drugs that they would never have given to them before. Thus, RNs’ learning reflected Wenger’s notion that there are constant potentials for embodying novel elements and for “continuing, rediscovering or reproducing the old in the new” (cited in Stamps, 1997, p. 39).
The goal of reflective practice may not always be to solve practice issues (Merriam et al., 2006). Wellington and Austin (1996) identify many orientations to reflective practice and assert that educators need to endorse all of them. RNs’ diverse motivations for reflective learning mirrored the authors’ orientations. For example, RNs who had learned to coordinate drug therapy for OAs, perhaps wanted to perfect methods to enhance efficient and effective delivery of the assigned goals. When an RN who focused on individual meaning was uncomfortable with the prescribed conditions (e.g., insufficient learning resources), she drew on her knowledge about negotiating for change (e.g., asked for a poster about interactions). An RN who was orientated to systems and liberation advocated for equitable conditions (e.g., by confronting specialists who would not come to see OAs).

RNs’ aim to learn in order to protect OAs seemed, intentionally or not, to result in a web of know-how intended to safeguard all involved stakeholders, including OAs, their families, other RNs, and prescribers whose practices may have harmed OAs and themselves professionally. Integrating Fenwick’s (2000) writings, thus RNs’ learning reflected the inseparable nature of self, situation, and cultural politics. In terms of self, each RN tried to learn in a context of chaos and “whirling change” (p. 298) and to break free of structures that repressed this aim. From a situated view, RNs showed how people and their environments act upon each other and fuel change. From a critical view, RNs tried to protect and support their learning by identifying and resisting instruments of cultural power. As a result, and still drawing from Fenwick, RNs illuminated the complex nature of their learning, including “the deeper philosophical struggles beneath the veneer of business as usual” (p. 307). Fenwick asserts that the concepts of self, situation, and politics may create more life-enriching, compassionate, and
graceful opportunities for education among employees and organizations.

Constraints on RNs’ Learning

Before beginning this section, it is important to mention the following. Just as RNs’ learning for practice with individual OAs on drug therapy sometimes enriched their insight about drug therapy for OAs generally, so did some of the constraints on RNs’ practice with singular OAs (e.g., suboptimal diagnosing and prescribing that limited learning about ADRs, and discontinuous staffing that limited learning about drug-related functional decline) (see chapter 5) hamper RNs’ learning (e.g., by reading drug orders, by collaborating with other HCPs, by watching OAs’ function) about those aspects of drug therapy for all OAs.

Johnson (1993) highlights radicals’ skepticism about the division between education (e.g., schooling) and life off campus (see Reagan (2005), and the distinction between education (or learning) and politics; instead, people learn as they carry out their daily activities. Thus, “knowledge lies everywhere” (Holyoake, 1892, p. 4, cited in Johnson, 1993, p. 22), including in socially constructed conditions (Johnson). The findings from the current study highlight the ageist politics behind RNs’ and other HCPs’ lack of pre-service education about OAs. (Please note the many authors in chapter 1 who highlight HCPs’ lack of readiness to care for OAs.) When compared to RNs involved in drug therapy for younger people, often RNs learned about drug therapy for OAs in a vacuum, and they faced more political constraints on their learning. For example, although RNs and other HCPs had likely been educated about the younger adults in their care, RNs were concerned about their own, and other HCPs’, lack of pre-service education about OAs. (Important here is Ndosi and Newell’s (2010) caution that the information that nurses and doctors give may not be critically appraised or based on evidence.) Also, there was a
documented dearth of research about OAs and drugs (e.g., see Hale et al., 2008; Miller, 2012; Tabloski, 2010) to support learning. As well, at the same time that OAs’ needs were becoming more acute and complex, the use of the medical model alone stifled chances to learn about that complexity (see Clegg et al., 2013; McBride, 2000; McConnell, 1997), such as drug therapy for, or in the presence of, chronic illness.

At times, RNs’ attempts to learn dialectically were thwarted by constraints such as a lack of HCPs to dialogue with and HCPs’ unwillingness to dialogue. For example, the hospital pharmacists were not on site 24/7, and one RN had gotten the message not to bother them during the night unless she was really unsure about something. Ndosi and Newell (2010) note that the availability of human sources (e.g., hospital pharmacists) often is inconstant. Also, and drawing from Leape et al.’s (1995) work, ineffective interservice communication may be a constraint.

Due to constraints, such as a lack of 24-hour access to on-site pharmacists and RNs’ and other HCPs’ lack of knowledge, at times RNs found themselves in indeterminate zones of practice with insufficient support for dialectical learning. One RN said that patients tended to experience challenges in the evening after the pharmacists had left. Also, she described attempts to learn about the management of agitation that resulted in trial-and-error drug care and risky outcomes. Rather than reflecting in action, where “reflection on each trial and its results sets the stage for the next trial” (Schon, 1987, p. 27), this RN was trying to learn when, as Collins (1994) suggests, “there is no truth to be found, only a plurality of…interpretations, and meaningless process” (p. 99-100). Finger (1995) notes that there is no one way out of “the ever accelerating vicious circle” (p. 116). This RN’s wish for more information perhaps reflected her intuitive awareness of Cervero’s (1990) caution that it takes both abstract knowledge and practical
knowledge to enhance wisdom. Also, when an RN wanted to address OAs’ postoperative pain and doctors wanted to address the OAs’ confusion, the resulting tangle of diverse values and opinions did not support collaborative learning about better care. (Similarly, Abraham et al. (1999) highlight obstacles such as different opinions amongst disciplines about usual geriatric challenges. Also, MacDonald and Hilton (2001) claim that OAs have suffered unnecessarily due to ageist beliefs about their pain and its management.) Contributing constraints were RNs’ lack of time due to pressure for efficiency (see Kane et al., 2009), and their lack of gerontological resources and services, all indicative of the organization’s level of commitment to OAs and their care. Authors note similar conditions, such as administrators’ opinion that OAs’ care requires little professional ability (McConnell, 1997), lack of commitment from staff and the institution to OAs’ care (Abraham et al.), and institutional values that do not support staff (Abraham et al.).

All of these constraints on RNs’ learning put OAs and RNs in marginalized and sometimes precarious positions. Often RNs’ default mode for learning was by observing and reflecting about ineffective drug care. RNs had observed drug-induced functional decline in OAs, such as the domino effect, the snowball effect, and patients who became semi-comatose. One RN had learned that OAs often became practice subjects – they received hit-and-miss drug care that made them worse instead of better. The notion of practice subjects resonates with the caution that the use of multiple drugs converts an OA into “a living chemistry set” (Kane et al., 2009, p. 111; Tait, 1998, p. 56). Permpongkosol (2011) asserts that polypharmacy that turns OAs into living “‘chemistry sets’” is likely the most ubiquitous risk for iatrogenic disease (p. 78).

Previously, many authors noted their concerns about prescribing issues and the consequences for OAs (please see chapter 1). The notions of practice subjects, hit-and-miss care,
and functional decline are associated with inappropriate prescribing. RNs had learned about many examples of inappropriate prescribing for individual OAs that were due partly to some of the same conditions that stifled their learning about drug therapy for all OAs. Examples were the lack of guidelines for pain management and HCPs who under-diagnosed and prescribed. There is a need to trouble the politics of age in HCPs’ education, specifically the idea of OAs participating unknowingly in ‘learning experiments’ conducted by HCPs with little, if any, knowledge about drug therapy for them, and the idea of those HCPs practicing in hospitals that provide insufficient learning supports for that care. If we do not critically examine these conditions, we will perpetuate the preventable, yet harmful, effects and consequences of uninformed care. OAs will continue to suffer, legal and other issues will arise for regulated HCPs and hospitals, and there will be more erosion of the credibility and the financial stability of our health care system.

Moreover, if we remain silent about these constraints, we may lose sight of opportunities to better the lives of all Canadians. Cassels (2009) warns that the signs of overuse and unnecessary prescribing are overt and ubiquitous. If we quit paying for drugs for patients when there is no proof of benefit, “we could easily save 10 per cent of our now nearly $30-billion annual drug bill” (p. 52) and purchase affordable and universal drug coverage for all Canadians (see Canadian Institute of Health Information (2009) for drug costs and hospital costs). Over a decade ago, Tamblyn (1997) reported evidence that suggested that OAs were more apt to receive unneeded and, in some instances, potentially unsuitable, medication. “Potentially inappropriate prescribing”, meaning that “the risk of an adverse event…far outweigh[s] the expected benefit” for the patient, is a risk factor for drug-related morbidity, is an unjustified cost to the health care
system (p. 149), and may have a significant impact on preventable morbidity and mortality in the OA population. Authors identify many kinds of problematic prescribing (Hale et al., 2008; MacDonald, 2004; Page, Linnebur, Bryant, & Ruscin, 2010), including prescribing when there is no evident need (Varner, 2006), under-diagnosis prior to prescribing (Elipoulos, 2010; Kane et al., 2009; Miller, 2012; Tabloski, 2010; Varner), prescribing drugs that are duplicated, that interact, or that are contraindicated, and failure to monitor or discontinue drugs appropriately (Varner). By illuminating both the direct constraints and the indirect (practice-related) constraints on their learning, RNs revealed how some of the same constraints contributed to inappropriate prescribing. The use of enlightened strategies to offset the constraints may help to protect OAs, HCPs, their hospitals, and the health care system and to free RNs to maximize their learning and their contributions to drug therapy for all OAs.

Major barriers to RNs’ learning about drug therapy for OAs (followed by the names of authors who reported similar conditions in chapter 2) were the drug industry (see Hale, 2008), the predominant use of the medical model (see McConnell, 1997), a lack of time (managerialism) (see Kane et al., 2009), and HCPs’ lack of knowledge and their attitudes (see Abraham et al., 1999; Foreman et al., 1994). Constraints in the drug industry included the sheer number of drugs available, the number of new drugs, and the lack of research about drugs and OAs. Fay (1989) contends that from 1949 until 1990, the medical profession gained more, and more effective, drugs against more diseases than ever before in its history. The implications include enhanced public expectations about cure, and physicians’ ability to luxuriate in their ability to employ drugs and other therapies to defeat disease (Fay). According to Tamblyn and Perreault (2000), by 1994 there were 24,600 approved drugs in Canada, and by the 1990s an
average of 1,500 new drugs were approved every year. It may be impossible for HCPs, even pharmacists, to keep up with the overwhelming number of drugs available, let alone to grasp their suitability for, and their use with, OAs. RNs told how inappropriate prescribing contributed to unjustifiable harm for OAs, risks for HCPs, and costs to their hospital and the health care system. Many authors (Bushardt et al., 2008; Kane et al.; MacDonald, 2004, Varner, 2006, and other authors in chapter 1) seem to agree. Thus, attention to the conditions that limit RNs’ learning and fuel inappropriate prescribing may result in wiser and more effective prescribing for OAs and RNs’ greater abilities to learn about, and to participate in, drug therapy.

Three conditions -- an “aging population, chronic diseases and advances in pharmaceuticals” -- have contributed to a growing range of drugs in patient care (Ndosi & Newell, 2010, p. 2659). The staggering number of drugs available, the use of the medical model alone, the hospital’s managerial culture, and HCPs’ lack of knowledge created an orchestra of indomitable constraints for RNs who were trying to learn in part to protect OAs from unjustifiable harm and readmission. Years ago, Illich (1976) stated that “many people are already apprehensive about doctors, hospitals, and the drug industry and only need data to substantiate their misgivings” (p. 9). Illich described health care as “a sick-making enterprise” (p. 7) because it produced clinical damage beyond its potential benefits, it both augmented and concealed the political conditions that made society unhealthy, and it obfuscated and seized people’s powers to heal themselves and to shape their environments. Illich’s insights may resonate with OAs who have been harmed by, and/or hospitalized due to, drug care, and with RNs who struggle to deal with constraints on their learning.

The use of the medical model alone, especially when tied to managerial views, created a
daunting ideological squeeze that Steele and perpetuated the agendas in each of those perspectives while reducing the breadth of RNs’ learning about drug therapy for OAs, their time for learning, and thus the potential for that care. The use of the model and managerial views elided not only individual OAs’ total needs as foci for learning, but also the socially created constraints on RNs’ ability to learn in order to respond to those needs and to integrate any relevant new insights into their know-how about drug therapy for OAs generally. While the use of the model alone contributed to fragmented information for, and reflection about, prescribing decisions, managerialism worked against the provision of enough resources and systems for learning. Researchers (in chapter 2) report similar conditions, such as a dearth of learning resources (Allen, 1989) and standards for dosing, as well as staffing issues (Leape et al., 1995).

There is evidence to support the idea that the use of the medical model alone reduces the focus of, and the potential for, learning about comprehensive drug care and also that it fuels managerial conditions. Scientific medicine is entrenched in the notion of the “‘specific etiology’” (Swartz, 1987, p. 261; also see Hewa, 2002, p. 58) and the notion of a befitting therapy – “the ‘magic bullet’” (Hewa, p. 58). Swartz explains that disease is an isolatable entity that physically damages the body. Such views are associated with assembly-plant production and the machine age and thus fuel a “dehumanized approach to treatment” (p. 262; also see Freidson, 1970). From a capitalist perspective, progress means the development of increasingly more powerful technological ways to intervene in the human body (Swartz). Results of the relentless demand for technologically-produced evidence include physicians’ mistrust of their perceptions, and their abilities to see more patients and spend less time examining them (Hewa). So, while progress may be equated with the creation of more new drugs, a dehumanized approach may be evident in
the use of technological methods to spot disease (versus comprehensive methods to identify holistic needs) and in the use of quick-fix drug therapy, all of which feeds managerial ideology.

Rankin and Campbell (2006) explored managerial ideologies and the consequences for nurses and for care. The authors contend that

under new technologies of management and governance, nursing work processes are being brought into line objectively, rationally, and authoritatively with outcomes that have been predetermined elsewhere to be desirable and emblematic of success, including “quality of care” (p. 16).

The managerial culture hindered RNs’ ability to amass information about drug therapy for OAs. For example, it eroded RNs’ time for ongoing learning, their access to resources, and their ability to learn by consulting with on-site pharmacists 24/7. Varcoe and Rodney (2002) claim that “in health care Canada has allowed its commitment to the common good to be replaced by corporatism” (p. 104). Rees (2008) asserts that contemporary society emphasizes material assets and economic prosperity through competitive markets and technological efficiency; thus, most resources go to the producers of goods and services sanctioned by the marketplace, and disciplines and information with less commodity value but perhaps greater survival value struggle. Essentially, even though we know what to do, we probably will not do it (Rees).

Managerial conditions normalized many constraints on RNs’ learning by creating and perpetuating those barriers. The impression was that RNs’ learning and resulting contributions to care were not always valued. That was the case even though RNs strove to learn in order to protect OAs from preventable, and sometimes recurring, cycles of drug-related harm, functional decline, and readmission. By doing this work, RNs may also have helped to curb both hospital and health care system expenditures on drugs and on treating the outcomes of ineffective drug therapy. As was mentioned earlier, RNs may inadvertently have helped other stakeholders to
avert any breaches of formal expectations. Also, RNs’ aim may have safeguarded the public’s trust in the hospital, the HCPs who practiced there, and the health care system. Through their ongoing pursuit of information, and in their attempts to deal with constraints on learning, RNs showed their ability to respond to patients’ needs and health care priorities instead of to monetary or systemic requirements, an endeavor that Wotherspoon (2002) supports.

Facilitators of RNs’ Learning

Some facilitators of practice with individual OAs (e.g., staffing that supported at once collaborative learning about a drug’s effects on an OA’s function and RNs’ ability to communicate with OAs to learn about any risky drug-related practices) (see chapter 5) enriched RNs’ learning about those aspects of drug therapy for all OAs. As well, reversal of the constraints on RNs’ learning (see chapter 7) would promote knowledge acquisition.

Facilitators of learning (some followed by authors who identified similar conditions in chapter 2) were HCPs’ greater commitment, expertise, and effort (see Gorbien et al., 1992), access to informative sources of information (see Allen, 1989), more continuing education, more time (see Gunderman, 1995), administrative support for OAs and their drug care, teamwork (see McConnell, 1997), effective communication systems, and more RN staffing (see Abraham et al., 1999). More facilitators were the growing numbers and power of OAs and of RNs who were providing them with care, more aggressive care for OAs, and greater societal awareness of drug-therapy opportunities for OAs.

Maximizing RNs’ Role as Knowledge Workers

Given the growing number of OAs (see RNAO, 2001), Canada’s expenditures on drugs (see Cassels, 2009), and the preventable nature of much of the DRI that OAs suffer (see authors
in chapter 1), it would be wise to free RNs from constraints on their learning so that they may maximize their contributions to drug therapy for OAs. Goehner and Smith (2008) assert that “we live in the information age, characterized by the need to recognize the ‘knowledge worker’” (p. 419), a concept invented by Drucker to characterize nurses and other professionals (also see Drucker, 1993, 2002). Drucker (2002) claims that the most effectively educated people in the world are American nurses; yet, studies suggest that most of their time is used on activities (e.g., paperwork) that they are not educated for. Hence, the need to find ways to make knowledge workers more suitably productive (Drucker, 2002).

Drucker’s (2002) messages resonate with the findings from this study. Often RNs had to struggle to learn about drug therapy for OAs due to constraints in HCPs, the hospital, and the drug industry. Given the sources of these constraints and their harmful and costly outcomes, should RNs’ quest to raze them in order to protect OAs be theirs alone, or should other hospital stakeholders be involved? Again, an examination of other stakeholders’ formal responsibilities (e.g., regulated, accreditation-related) may reveal their needs to pursue ongoing learning and to provide resources and systems that promote and support it. According to a joint position statement created by the CNA and the Canadian Federation of Nurses Unions, many stakeholders, including “nurses, employers, regulatory bodies, professional associations, educational institutions, unions, health services delivery and accreditation organizations, governments and the public”, share responsibility for creating and maintaining quality practice environments (CNA, 2006). Many characteristics of those environments support learning. Examples are workloads that help nurses to preserve competence, support for knowledge management and critical thinking, funding for professional development, and a culture that
supports the growth of practical knowledge (CNA). Efforts to create such environments may enable RNs to maximize their ongoing learning about, and their contributions to, drug care for OAs, and make them, as Drucker suggests, more suitably productive.

Goehner and Smith (2008) state that knowledge quickly becomes outdated; thus, knowledge workers require both formal and ongoing education. RNs’ need for ongoing learning was fuelled by many conditions, including the heterogeneity of OAs (e.g., their diverse needs and function), and RNs will to respond to OAs’ often complex exigencies and to grapple with the never-ending changes in drugs, in gerontological knowledge, and in health care. Drucker (2002) states that the knowledge-working nurse has many ‘intelligences’ and practices well as a team member (cited in Goehner & Smith, p. 419). Yet, contexts wherein nurses are overmanaged and feel disempowered do not bolster them as knowledge workers; instead, they heighten RNs’ vulnerability (Goehner & Smith). While the lack of support for RNs’ learning was visible in the constraints they faced, RNs’ vulnerability was plain in their sometimes risky learning practices, in some stakeholders’ responses to their attempts to learn (e.g., when one RN asked some doctors about interactions, they called her names), and in RNs’ feelings of being undervalued.

Learning Activities and Levels of Development

In the whitewater of health care, especially in drug therapy for OAs, ongoing learning is crucial to support contextually valid thinking and decision making. Rankin (2009) highlights an ironic condition. Even as nurses’ thinking and decisions “are being systematically subordinated within the strategies of the new public management” -- strategies used to manage health care in a more objective fashion --, nurses’ expert thinking and decision-making is depended upon as the foundation for producing acceptable health care (p. 275). By their will and effort to pursue
information to enrich their thinking and decision-making even in the face of powerful constraints, RNs showed their high levels of emotional, moral, and cognitive development.

**Learning and Emotional Development**

One requirement for effective engagement in discourse and transformative learning is emotional maturity (Mezirow, 2000). According to Goleman (1998), emotional intelligence includes five crucial competencies: self-awareness (e.g., sensitivity to one’s emotions, accurate self-assessment of abilities, self-confidence), self-regulation (e.g., self-control, resiliency, conscientiousness), motivation (e.g., movement towards goals, initiative to improve, staying power), empathy (e.g., sensitivity to other people’s feelings, ability to cultivate relationships and harmony with many diverse persons), and social skills (e.g., adapting to social situations, handling emotions well, interacting easily, and using these abilities to influence and lead, and to negotiate and manage conflict for cooperation and teamwork).

RN’s emotional intelligence supported their learning. Often the co-participants in RN’s learning communities had diverse views. Examples were RNs’ and doctors’ disparate attitudes about OAs and their care and their diverse goals and preferred strategies for pain management. More examples were OAs’ and RNs’ sometimes disparate views about drugs and drug practices, and RNs’ and administrators’ different views about supports for learning. Yet, despite the potential for conflict, RNs created and maintained learning relationships, and they did that in a culture that was dominated by managerialism, fragmented systems, and forces that eroded the health care team. For example, one RN had learned to coordinate drugs at discharge to prevent fragmented prescribing, and she did that while empathizing for the GPs who had ordered incorrectly. When collaborating with administrators about barriers to learning, she used learned
principles (e.g., know their motives as well as yours, dialogue versus debate) to sustain the dialogue. RNs wanted trusting and collegial relationships with other HCPs, and they preferred a team approach to care. RNs who tried to learn collaboratively for advocacy purposes, and who persisted even when other stakeholders called them names, showed their resilience. Also, RNs were driven to learn, at times even using combinations of learning practices about a topic.

**Learning and Moral Development**

The ethical nature of RNs’ learning was evident in their will to learn for the purposes of advocating for OAs and protecting them from unjustifiable harm. That overall intent was visible in many themes and fuelled partly by RNs’ awareness of constraints on learning and their wish to enact an ethic of fairness. Graves (1997) explains that grace transcends the ego, enabling us to view ourselves as people linked to one another and the world. It cuts through the margins of difference (e.g., age) to create its own path, thereby working toward something beneficial “in positive, unexpected ways” (p. 19). Also, grace points toward what is fair and right, while attending to the spirit (versus the literal meaning) of the law (Graves).

RNs had many professional responsibilities associated with ongoing learning and with advocacy. Examples were maintaining and continuously improving their competence, advocating for clients, the nursing profession, and the health care system (College, 2002), and having “a primary responsibility for their client’s safety and well-being” (College, 2003, p. 8). They were expected to advocate for enough resources “to provide safe and competent care”, and for work environments in which they and other HCPs were treated respectfully and supported when they asked questions or dealt with unsafe or incompetent practice (CNA, 2002, p. 17).

Other hospital stakeholders had responsibilities related to supporting RNs’ competence.
According to the College (2003), employers and nurses had “a shared responsibility to create environments with strong organizational attributes that support competent nurses and provide quality outcomes for clients” (p. 22). Again according to the College (2002), nurse administrators must advocate for quality practice settings that support nurses’ ability “to provide safe, effective and ethical care” (p. 5), and they must create environments that encourage ongoing learning, encourage nurses to engage in non-stop learning, and seek opportunities for nurses to take part in continuous learning activities. Meanwhile, physicians are supposed to advocate for patients, communities, and populations, and to maintain their competence (College of Physicians and Surgeons of Ontario, 2007). Learning more about all stakeholders’ responsibilities vis a vis ongoing learning about, and advocacy for, OAs on drug therapy might do the following: empower RNs to address constraints on learning for advocacy purposes, decrease RNs’ frustration and fatigue associated with advocating for learning (and other) purposes, reduce younger RNs’ feelings of vulnerability, thereby enhancing their learning and their advocacy, and mitigate RNs’ vulnerability to scrutiny by the College. Also, stakeholders who become aware of their responsibilities may enact them, thereby benefiting RNs and OAs.

Although RNs tried to meet their professional responsibilities by learning about drug therapy for OAs and by advocating for them, at times they were marginalized by other hospital stakeholders. According to Hall, Stevens, and Meleis (1994), the properties of marginalization include voice, secrecy, power, reflectiveness, and liminality, while related concepts are vulnerability, risk, and resilience. All of these concepts may resonate with RNs in this study who through their persistence and assertion modeled both their emotional intelligence and their use of voice to learn and to advocate. Goehner and Smith (2008) claim that although nurses provide
care to vulnerable populations daily, they, “as caregivers,...are a vulnerable population” (p. 413). The threat of negative and critical responses is enough to prevent many nurses from voicing their beliefs about what is right for patients, families, and themselves (Goehner & Smith). When one RN tried to engage some GPs in collaboration about more effective drug therapy, she had to be diplomatic to avoid getting her head knocked off. At times, RNs did not speak out about crucial issues (e.g., the need to meet to explore better interventions) because they feared the consequences. One RN said that she remained silent unless her secrecy was assured; thus, constraints reduced the spaces wherein she felt safe dialoging with others to enhance mutual learning about key issues. Oft times, RNs who spoke out were silenced (e.g., administrators denied an RN’s request for a poster about interactions) (see Newton, Storch, Makaroff, & Pauly, 2012). RNs illuminated their reflection and liminality associated with being on the margins (e.g., an RN who did not feel valued, wanted collegial relationships between doctors and RNs).

Still on the notions of learning and advocacy, Crain (1985) explains that postconventional morality has two stages. People in the first stage, “Social Contract and Individual Rights”, believe that individuals may have diverse views; yet, all rational individuals want certain fundamental rights (e.g., to freedom, to life) to be safeguarded and “democratic procedures” for changing unjust laws and bettering society (p. 123, italics in the original). People in the second stage, “Universal Principles”, are committed to justice for all persons (p. 124). At times, RNs’ learning reflected these stages. For instance, to protect OAs’ right to comfort, RNs had tried to learn about, they had learning needs associated with, and they had learned how to advocate for, better management of postoperative pain. Also, RNs had learned to contest unjust practices, such as under-diagnosis, more prescribing, and harm, as well as ageist consulting practices.
Learning and Cognitive Development

Another requirement for effective engagement in discourse and transformative learning is clear thinking (Mezirow, 2000). RNs’ high-level cognition was evident in their learning. Arlin (1993) and Boucouvalas (2005) state that the characteristics of post-formal thinking include the abilities to think relativistically and contextually, to handle uncertainty, to structure problems, to take another person’s perspective, and to harmonize options. According to Cervero (1988), the notion of constructing problems from situations is “the key to professional practice” (p. 31).

RNs’ thinking and learning about drug therapy for OAs were rooted in their local conditions for practice. To set problems, RNs used their own knowledge, along with information that they had learned (e.g., by collaborating with other HCPs and by reading texts). Yet, due to constraints on their learning (e.g., HCPs’ lack of knowledge, the dearth of research about drugs and OAs), much of the knowledge that RNs brought to problem setting came from observing and reflecting, or from those activities tied to other learning activities. For example, from her pre-service education and by watching and thinking, one RN knew to be more vigilant with older (versus younger) adults, due to their greater vulnerability to drug-related harm. Another RN was involved in a sequential-step process of problem setting: Although she had observed drug-related domino effects and how they led to hospitalization and more prescribing, she was still trying to set the reason/s for the long duration of some of those effects. (Thus, learning to be vigilant and about domino effects are two examples of how RNs used their learning from practice with individual OAs to enrich their learning about drug therapy for all OAs.) RNs’ ability to formulate problems was evident in their reflection and liminality (see moral development, above). Their ability to deal with uncertainty was apparent in their collaborative learning about interactions.
Finally, on discovering her and doctors’ disparate postoperative priorities (reduce pain versus confusion), one RN tried to learn how to harmonize and accomplish both goals.

Summary

RNs played a multifaceted and a crucial role in drug therapy for OAs. Their extensive and emergent knowledge highlighted the complex nature of that care. RNs’ learning practices reflected many adult-learning theories, and their motives for learning were multifarious. Varied conditions marginalized their learning; yet, by their will and effort to pursue information, RNs exhibited their high levels of emotional, moral, and cognitive development. Given the growing number of OAs, the amount of money that Canada allocates to drugs, and the preventable nature of much of the DRI that OAs suffer, it would be wise to free hospital RNs from constraints on learning so that they may maximize their contributions to drug therapy for older Canadians.
CHAPTER 10 SIGNIFICANCE, IMPLICATIONS, AND CONCLUSIONS

In this chapter, I describe the study’s significance and the implications of the findings. Then, I offer some conclusions.

Significance of the Study

This study is significant for a few reasons. First, the findings reveal the complex nature of drug therapy for hospitalized OAs, and thus may help to shift negative attitudes about that care in positive ways. Second, Benner (1984) states that “a wealth of untapped knowledge is embedded in the practices and the ‘know-how’ of expert nurse clinicians” (p. 11). On that theme, the findings contribute to the burgeoning knowledge linked to “a more holistic examination” of ongoing professional learning (Gunderman, 1995, p. 4; also see Baskett & Marsick, 1992, p. 13). The findings do this by illuminating the extensive knowledge that these hospital RNs needed for OAs’ drug therapy, as well as their learning practices and the conditions that affected their learning and potentially the outcomes of care. The findings elucidate RNs’ tendency to use more so informal (versus formal) learning strategies that are rooted in practice, along with the circumstances for their learning, including the dilemmas that spurred them to seek information, and how they both set and solved those challenges.

Third, Baskett et al. (1992) identify current tensions in professional learning and ongoing professional education (see chapter 2). The findings from this study help to resolve those tensions. For example (and drawing from the work of the authors), the findings illustrate that professional learning involves all facets of human existence, that a huge segment of that learning happens during practice, and that professional judgements and learning happen within specific contexts and change from one context to another. They lend support for the design of new
models that consider learning that is transformative, relational, intuitive, affective, and situational. They help to mesh “abstract and practical knowledge and reasoning” (in this case, about drug therapy for OAs), and they show how that meshing contributes to “wiser professional actions” (p. 115). They underline that learners need access to the proper resources at the right time. Also, they encourage organizations to maximize opportunities for learning (Baskett et al.).

Fourth, the findings highlight the risks and the harm and thus the tremendous social burden associated with current drug therapy for OAs. Fifth, the findings showcase hospital RNs’ key role in drug therapy for older individuals, including how by their learning they protect OAs from risks and harm. Finally, Beardwood, Walters, Eyles, and French (1999) state that in their future research, they hope to discover what influences nurses’ work and the quality of patients’ care and how these become defined as problematic. The findings shed light on these questions as they relate to hospital RNs’ learning about, and their involvement in, drug therapy for OAs.

Implications of the Findings

This study has implications for nurse educators, for nurse leaders and other hospital administrators, for organizational culture, for community initiatives, for policymakers, and for research. I suggest implications while respecting the notion of fittingness, described in chapter 3.

Nurse Educators

The findings may help pre-professional nurse educators and continuing-education nurse educators to close the gap between education about drug therapy for OAs and the realities of practice. Pre-service educators must teach nursing students about drug therapy for OAs. Also, they may invite hospital RNs involved in drug therapy for OAs to enrich the curriculum with their insights about their knowledge, their learning strategies, and contextual influences on
learning. Educators in hospitals who are not gerontologically prepared may want to become so. Also, they may enlighten themselves about the knowledge that RNs need, broaden their views about RNs’ learning needs and strategies, work closely with RNs to support their ongoing and informal learning about real-time issues, ask RNs about their needs and preferences for formal learning about topics that are less urgent but still important, and advocate for hospital conditions that ease RNs’ learning. Conditions may include the use of novel paradigms (e.g., about ways of knowing and HCPs’ shared accountability for knowing), of care models that support holistic learning activities, and of strategies that elide constraints on learning.

*Nurse Leaders and Other Hospital Administrators*

Pringle (2009) states that nurse leaders should identify gaps in the OA competence of nurses individually and collectively and arrange for them to develop the expertise they need. Nurse administrators (unit or institutional) and other hospital administrators should maximize opportunities for RNs to learn about drug therapy for OAs. Also, they may illuminate any hot-spots where breakdown in learning happens and arrest them by addressing the causes. Nurse leaders may develop mentoring and other initiatives to enrich RNs’ ability to influence other HCPs, as well as hospitals and policymakers, in ways that support learning and the provision of effective drug care to OAs. Predictions about the potential to prevent human and financial costs may entice administrators to invest in razing barriers to learning. Administrators may recognize RNs’ potentially/key leadership role in drug therapy for OAs, as well as their varied modes for learning about that practice, including in-context knowing and learning (Baskett et al., 1992), and they may provide RNs with sufficient support for learning, including resources and texts to quench their real-time thirst for information.
Organizational Culture

RNs, nurse and other administrators, and other hospital stakeholders (e.g., nurse educators, pharmacists, gerontologists, dieticians) may embark on a strategic planning process aimed at creating a cultural milieu that maximizes RNs’ learning about drug therapy for OAs. (Community stakeholders, such as OAs, pharmacists, prescribers, and RNs from other agencies, may participate in that process.) Hospital RNs who share their rich narratives about critical incidents with all stakeholders may stimulate the unease necessary to spark transformative learning and spur dialogue and critical reflection about various topics, including RNs’ extensive need for information, along with the constraints on their learning, the potentially/harmful and costly effects of those barriers, and RNs’ strategic and crucial role in averting them. Stakeholders may examine the issues in RNs’ narratives against the formal expectations of HCPs and of administrators, found in organizational mission statements and other relevant documents. Then, all stakeholders may critically explore how through their practices, and perhaps unintentionally, they hinder RNs’ learning and create risks for RNs, OAs, and themselves.

The new view that emerges from this exercise might reflect all stakeholders’ greater awareness of their shared accountability for creating a culture that supports at once the provision of knowledgeable drug therapy to OAs, a broad range of associated learning activities, and the design and integration of conditions that ease RNs’ learning. Stakeholders’ commitment to enhanced learning may be tied to the hospital’s quality improvement program. Other outcomes may be the creation of critical alliances, of stronger communities for practice, and of ongoing spaces for polyphonic dialogue about conditions that will ease learning now and in the future.
Community Initiatives, Policymakers, and Research

Hospital-based critical alliances comprised of RNs, OAs, and other interested stakeholders may inform stakeholders in the community (e.g., through media campaigns and information pamphlets) about strategies that ease hospital RNs’ learning about individual OAs and thus enhance the quality of their drug care. Each OA in the community may be encouraged to go to only one pharmacy, to keep a current list of their drugs, to ask HCPs for information about their drugs, and to avoid self-prescribing. Community HCPs may be urged to teach OAs effectively about their drugs and to help them to maintain current lists.

Members of the hospital alliance may inform provincial policymakers about the social burden associated with constraints on RNs’ learning about drug therapy for OAs, including greater suffering for OAs and costs for drugs and hospital services. After hearing RNs’ powerful and educational narratives, policymakers may critically examine corporatism in health care, along with the underlying and taken-for-granted assumption that there is insufficient money, and they may replace those views with novel initiatives that support RNs’ learning, OAs’ health, and better use of health dollars.

Nurse researchers may ask RNs in other hospitals if these findings resonate with them. If they do, researchers and RNs may collaboratively design and evaluate innovations that support RNs’ learning about drug therapy for OAs. Benner (1984) states that sufficient description of practical knowledge is necessary to create and extend nursing theory. Thus, researchers who want theories about professional learning to reflect RNs’ varied learning practices and contextual influences on their learning, may consider these findings and those from the other studies mentioned in this thesis. Also, they may broaden this study to include RNs in other hospitals who
are involved in drug therapy for OAs.

Conclusions

I have shared hospital RNs’ views about their knowledge, learning needs, and learning practices associated with drug therapy for OAs, and their views about conditions that affected their learning. (Please note that it was neither my right nor my intent, nor was it within my ability, to evaluate RNs’ views about these topics.) The conceptual framework for the study elucidates the research questions and contains my assumptions and philosophical stance. The findings suggest that drug therapy for hospitalized OAs was a complex activity. The complexity was fuelled by intricacies in OAs and by socially constructed conditions both within the hospital and beyond it that affected RNs’ learning and ultimately the quality of care received. Thus, RNs needed extensive knowledge to meet OAs’ needs, and that knowledge went beyond the nexus for care to include the politics associated with that care.

RNs’ learning reflected many adult learning theories. RNs learned so that they may infuse drug-therapy practices with information, thereby enhancing the effects, while protecting OAs from unjustifiable harm. At times, RNs’ learning about individual OAs on drug therapy enriched their learning about drug therapy for OAs generally. RNs’ learning was holistic. Their learning strategies were mostly informal and contextually rooted in their everyday practice. Like many other HCPs, these RNs lacked pre-service education about drug therapy for OAs; in fact, the level of gerontological preparation (pre-service and ongoing) in each of the HCPs that RNs consulted for information was unknown. Yet, RNs played a pivotal role in drug therapy. Their learning was ongoing and responsive to the quickly changing landscapes of health care, of gerontological know-how, and of drugs and drug practices. By learning, RNs protected OAs,
themselves and other health care stakeholders. Without learning, there is a huge social burden associated with drug therapy for OAs.

DiBartolo (2008) questions our readiness for “the demographic tidal wave” that dominates the horizon (p. 3). The findings from this study suggest that many hospitalized OAs received suboptimal drug care that contributed to adverse risks and outcomes; however, much of that care was preventable. Also, at times, problematic prescribing in the community resulted in hospitalization for OAs, or it posed challenges for OAs who came to hospital (e.g., for surgery). RNs knew about the sociopolitical nature of their context for learning and that many conditions in and beyond the hospital were not stacked in their favour. Still, they had an altruistic will to protect OAs from drug-related harm and to enhance care outcomes. Their will was visible in their ongoing quest for information and in one RN’s attempt to address a constraint on learning.

Also, each day, RNs tried to detect and to address constraints on practice to protect not only their individual older patients, but also their ability to use any relevant insights from those activities to inform their practice with OAs generally. Because they took on that role, RNs became, at least informally, the overseers -- the checkers -- of drug therapy for OAs. Ironically, sometimes RNs protected other stakeholders (e.g., prescribers, administrators) from aspects of their practice that not only impeded RNs’ learning and thus OAs’ care, but also put themselves at risk due to not meeting their regulatory and/or other responsibilities. Due to RNs’ overseer activities, many of the constraints on their practice and the potential ramifications may even now be invisible and thus ‘untroubled’, and they may remain that way until these RNs retire. Only then may RNs’ ability and effort to learn in order to create and maintain the essential context for care be realized and missed, and sorely so.
The context in this hospital did not always support either RNs’ attempts or their ability to learn about drug therapy for OAs. Thus, it is time to construct a milieu that eases their learning. RNs identified many facilitators. Tagliareni (2008) views change as an opportunity, and as a dynamic and dialogical process that involves assimilating new knowledge and responding to emerging practice realities. She cautions that often events that appear to be forthcoming have already occurred. For example, as we consider integrating content about OAs into pre-service nursing education, “nearly 50 percent of the patients our students already care for are older adults” (p. 62). (RNs in the current study spent anywhere from 50 to 80% of their time with OAs. Felver & Van Son (2007) estimate that 60% of hospital patients are 65 years and older). Thus, our only choice is to be receptive to what is happening today. Her messages are gripping. How else may we prevent the public’s trust in drug care for OAs from becoming a mere chimera?

The expert RNs in this study kindly shared their reflective and extensive insights about the knowledge that they needed to participate in drug therapy for hospitalized OAs, about their learning practices, and about the conditions that influenced their learning. If their insights resonate with your experiences as an RN, then I urge you to act swiftly to stimulate learning about, and adoption of, changes that will help you to maximize your learning and thus your contributions to drug therapy for all older persons. I say this because, like Alice, we are late, horribly late. And the longer we remain silent about such issues, the longer we normalize, condone, and perpetuate conditions that harm not only innocent older Canadians, including our own older kin, but also RNs, other HCPs, our hospitals, our health care system, and ourselves.
References


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APPENDIX A: ALPHABETIZED LIST OF ABBREVIATIONS USED IN THE THESIS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
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<tbody>
<tr>
<td>ADR</td>
<td>adverse drug reaction</td>
</tr>
<tr>
<td>CNA</td>
<td>Canadian Nurses Association</td>
</tr>
<tr>
<td>DRI</td>
<td>drug-related illness</td>
</tr>
<tr>
<td>GP</td>
<td>general practitioner</td>
</tr>
<tr>
<td>HCP</td>
<td>health care provider</td>
</tr>
<tr>
<td>OAs</td>
<td>older adults</td>
</tr>
<tr>
<td>RN</td>
<td>registered nurse</td>
</tr>
<tr>
<td>RPN</td>
<td>registered practical nurse</td>
</tr>
</tbody>
</table>
GREETINGS TO REGISTERED NURSES (RNs) WHO PROVIDE DRUG THERAPY TO OLDER ADULTS IN HOSPITAL AND ARE WILLING TO SHARE THEIR EXPERTISE IN AN INNOVATIVE STUDY!

I am an RN who lives in Thunder Bay and am a student in a doctoral program at the University of Toronto. I am conducting a study to understand the expert views of RNs who provide drug therapy to older adults who are in hospital. The research is designed to answer the following questions:

- What do hospital RNs who lack preservice education about the needs and care of older adults think they already know about drug therapy with older adults?
- What do they think they need to know about that process?
- What conditions, if any, do they think enhance their abilities to obtain and/or use knowledge about drug therapy with older adults?
- What conditions, if any, do they think constrain their abilities to obtain and/or use knowledge about drug therapy with older adults?

This is not a test. Neither will I compare you to anyone else. I simply want to understand what RNs, experts in their own practice, think in relation to these topics.

This study may be significant for many reasons:

- There is growing concern in the literature and media about inappropriate drug use with older adults. Adverse drug reactions frequently put older adults into hospital and are common occurrences in older adults while they are in hospital. The consequences of adverse drug reactions include serious injury, decreased function, prolonged hospitalization, premature institutionalization, increased costs of care, and death.
- There is growing recognition that drug therapy with older patients is complex, due to intricacies in older patients themselves and conditions in hospitals and society that may affect their needs and care.
• Although most of us (RNs), when we were nursing students, took courses about the care of babies, children, and adults generally, few of us took a course that focused solely on the care of older adults (persons 65+ years of age). (Many other health-care professionals also lack educational preparation about the care of older adults.).

• RNs already have many crucial responsibilities in relation to drug therapy for hospitalized older adults. Yet there is little research available about RNs’ views about the knowledge that they need to provide drug therapy to older adults and any conditions in their hospitals or society that constrain or enhance their abilities to obtain and/or use that knowledge.

• RNs who can obtain and use the knowledge that they think they need may have enormous opportunities to intervene so that older patients experience the most benefit and the least harm from drug therapy while they are in hospital.

About the Study:

I am looking for five or six RNs who meet the inclusion criteria below and would like to participate in this study. If you choose to participate I will have one (perhaps two) face-to-face interview/s with you. If during the first interview you are unable, due to a lack of time, to respond to all of the items in the interview guide I will ask you if we can book another interview together. However we will have a second interview only if you agree to it. (I will interview each of the other RNs in the study as well.). Once I have interviewed you and each of the other RNs individually I will analyze the information that has been collected to identify the themes that are emerging from the data. Then there will be a group interview, attended by you, me, and all of the other RNs who are in the study. The purpose of the group interview is so that you and the other RNs can tell me whether or not the themes that are emerging in the data are important in your own practice with older adults. Each interview will be audiotaped, last about two hours, and be conducted when and where it is convenient for you.

During the interviews, I will use a pseudonym for you to protect your confidentiality, and a pseudonym for the organization. In the transcripts and my written notes, names and other identifying information about you and your organization or unit will be systematically changed. Only the pseudonyms will appear in the final research project and any future reports, publications, or presentations, including class presentations. All focus-group members will be asked to respect the confidentiality of the other members. However I cannot guarantee that all members of the group will respect this request. The person who transcribes the tapes will sign a confidentiality agreement that includes erasing any copies of the tapes on his/her computer, not linking the data to any other computers, and giving me all of the tapes and the disc and hard copies of the transcripts. Only I and the person who transcribes the tapes will have access to the original or raw data from the interviews. Once the audiotapes have been transcribed I will store the original or raw data in a locked location (my home) for seven years. During that time only I will have access to this raw data. Identifying codes that could connect you or your organization with the changed names will also be kept under lock and key by me. The timing for the destruction (by shredding) of the tapes and/or raw data from the interviews is seven years. Please
know that the transcripts from the interviews in this research study and in all similar research studies can be requested in accordance with current and applicable laws and regulations. The possibility of that happening, however, is extremely remote.

If you meet the following criteria I cordially invite you to participate in this study:

- You are an RN who is diploma and/or degree prepared
- When you were a nursing student you did not take a course that focused specifically on the care of older adults (persons 65+ years of age)
- You are a direct-care provider
- You have worked for at least one year on a full- or regular-part-time basis, on days and/or evenings, and in acute medicine and/or surgery
- During that one-year period you have worked ‘extensively’ (as defined by you) with older adults who have required drug therapy
- You speak English
- You live within [name of the city] or within a half-hour drive from the city

How might you benefit from participating in this study?

- During your individual interview/s there is the opportunity to think about your practice with older adults and share your experiences with someone (me) who is nonjudgemental and interested in hearing about them
- During the group interview you may discover interesting similarities and/or differences in RNs’ views about the knowledge that they need to provide drug therapy to older adults in hospital, any learning needs that they have on that topic, and any conditions that affect their abilities to obtain and/or use the knowledge that they need. You may feel empowered if there are similarities between the other RNs’ perspectives and your own.
- During the group interview you may learn from the expertise and experiences that the other RNs share and they may learn from your expertise and experiences.
- After the study has finished you and the other RN-participants may continue to meet periodically for support and to discuss drug therapy with older adults, a topic that is of mutual interest to all of you.

If you want to participate in this study please contact me so that we can discuss any questions that you have and review the consent. Please contact me, as well, if you want more information before you decide whether or not you want to participate.

Thank you!

Researcher:  Ti King, RN, MScN  
Phone:  [number at home] and 343-8340 (W)  
email:  ti.king@lakeheadu.ca

This research study is my thesis. I am a student in the Education Administration Doctoral Program at the Ontario Institute for Studies in Education at the University of Toronto. The study
will be conducted under the supervision of Dr. Jim Ryan, Co-Director of the Centre for Leadership and Diversity, Department of Theory and Policy Studies at the Ontario Institute for Studies in Education at the University of Toronto, 252 Bloor Street West, Toronto, Ontario M5S 1V6. Dr. Ryan can be reached by email at jryan@oise.utoronto.ca or by phone at (416) 923-6641 #2438
I am an RN who lives in Thunder Bay and am a student in a doctoral program at the University of Toronto. I am not an employee of [name of the hospital].

I am conducting a study to understand the expert views of RNs who provide drug therapy to older adults who are in hospital. The title of the study is “The Knowledge and Learning Needs of Hospital RNs who are Involved in Drug Therapy with Older Adults”.

The research is designed to answer the following questions:

- What do hospital RNs who lack preservice education about the needs and care of older adults think they already know about drug therapy with older adults?
- What do they think they need to know about that process?
- What conditions, if any, do they think enhance their abilities to obtain and/or use knowledge about drug therapy with older adults?
- What conditions, if any, do they think constrain their abilities to obtain and/or use knowledge about drug therapy with older adults?

The results of this study may inform other healthcare stakeholders about the knowledge that these RNs need to provide drug therapy to older adults in hospital and conditions that affect their knowledge.

I cordially invite you to participate in this study. You have been chosen because you meet the inclusion criteria for participants:

- You are an RN who is diploma and/or degree prepared
- When you were a nursing student you did not take a course that focused specifically on the care of older adults (persons 65+ years of age)
- You are a direct-care provider
- You have worked for at least one year on a full- or regular-part-time basis, on days and/or evenings, and in acute medicine and/or surgery
During that one-year period you have worked ‘extensively’ (as defined by you) with older adults who have required drug therapy
- You speak English, and
- You live within [name of the city] or within a half-hour drive from the city

Your part in the study:

If you choose to participate in this study, sometime during the next four months I will interview you once, face-to-face, alone, and for approximately two hours, on a date, at a time, and in a location that are convenient for you. (I will also interview each of the other RNs who are in the study. The sample size for this study is five or six RNs.). With your permission I will audiotape my interview with you. During the interview I will record brief notes (my observations, thoughts, reactions, other questions I want to ask you, etc.). If during the first interview you are unable, due to a lack of time, to respond to all of the items in the interview guide I will ask you if we can book another interview together. However we will have a second interview only if you agree to it.

Within 10 days after the tapes from your individual interview/s have been transcribed I will provide you with a copy of your transcripts for review. I will either send the copy to you via registered mail to your home address or hand deliver the copy to you. Within ten days after receiving the copy you agree to return it to me. You will either return it via registered mail to my home address or phone me so we can arrange to meet so I can pick the copy up from you personally.

Once I have identified, recorded and summarized all of the themes that are surfacing in the information that you and each of the other RNs has given to me during the individual interviews there will be a focus-group interview, attended by you, me, and all of the other RNs who are in the study. The purpose of the group interview is so that you and the other RNs can tell me whether or not you think that the themes are relevant to your own practice. With your permission the group interview will be audiotaped and last approximately two hours. It will be conducted on a date, at a time, and in a location that are convenient for you and the other RNs. During the group interview I will again record brief notes (see above).

All of your answers will be accepted. Your participation is completely voluntary; thus, you can choose not to answer any question, choose not to participate and withdraw your participation at any time without giving a reason and without any negative consequences. If you choose to leave the study any data that you have already contributed will be destroyed. You will be notified in a timely manner if information becomes available that may be relevant to your willingness to continue participating in the study. You will not be compensated for your time. When the study is completed you can obtain a summary of the major themes (please see below).

Confidentiality:
During the interviews, I will use a pseudonym for each RN to protect his/her confidentiality, and a pseudonym for the organization. In the transcripts and my written notes, names and other identifying information about you and your organization or unit will be systematically changed. Only the pseudonyms will appear in the final research project and any future reports, publications, or presentations, including class presentations. All focus-group members will be asked to respect the confidentiality of the other members. However I cannot guarantee that all members of the group will respect this request. The person who transcribes the tapes will be informed by me about the terms of this research-ethics agreement. S/he will sign a confidentiality agreement that includes erasing any copies of the tapes on her/his computer, not linking the data to any other computers, and giving me all of the tapes and the disc and hard copies of the transcripts. Only I and the person who transcribes the tapes will have access to the original or raw data from the interviews. Once the audiotapes have been transcribed I will store the original or raw data in a locked location (my home) for seven years. During that time only I will have access to this raw data. Identifying codes that could connect you or your organization with the changed names will also be kept under lock and key by me. The timing for the destruction (by shredding) of the tapes and/or raw data from the interviews is seven years. Please know that the transcripts from the interviews in this research study and in all similar research studies can be requested in accordance with current and applicable laws and regulations. The possibility of this happening, however, is extremely remote.

Potential risks and benefits for you from participation in this study:

One risk is that confidentiality cannot be guaranteed from the perspective of the participants of the focus group. In terms of benefits, during the individual interview/s there is the opportunity to reflect about your practice and articulate your experiences to another individual (me). During the group interview you may discover interesting similarities and/or differences in RNs’ views about the knowledge that they need to provide drug therapy to older adults in hospital, any learning needs that they have on that topic, and any conditions that affect their abilities to obtain and/or use that knowledge. You may feel empowered if there are similarities between the other RNs’ perspectives and your own. You and the other RNs may learn from each other, for example, about strategies and resources that may be useful in meeting any learning needs or addressing any conditions that affect (positively or negatively) your drug-therapy practice with older adults. After the study has finished you and the other RNs may continue to meet together for support and to discuss topics about drug therapy with older adults that are of mutual interest to all of you.

Please know that the researcher receives no compensation for conducting this study.

As was noted in the recruitment letter, I am a student in the Education Administration Doctoral Program at the Ontario Institute for Studies in Education at the University of Toronto. I am doing this research as my thesis. This study will be conducted under the supervision of Dr. Jim Ryan, who may wish to access raw data from the individual and group interviews for supervision purposes.

If you choose to participate in this research study please read these forms carefully and then sign
them. Give one signed copy to me and keep the other signed copy for yourself. Please contact me at any time if you have further questions.

Thank you, and sincerely,

Signature of the researcher____________________    Date___________________
Printed names of researcher: Mary Tiara (Ti) King, RN, MScN
[Home address and phone number], and at work (807) 343-8340
Email address    ti.king@lakeheadu.ca
Thesis Supervisor: Dr. Jim Ryan, Co-Director of the Centre for Leadership and Diversity, Department of Theory and Policy Studies, Ontario Institute for Studies in Education at the University of Toronto, 252 Bloor Street West, Toronto, Ontario M5S 1V6. Dr. Ryan can be reached by email at jryan@oise.utoronto.ca or by phone (416) 923-6641 #2438

To be completed by each RN-Participant:
I have read this document, including the risks and benefits. Everything in it has been explained to me by the researcher. My questions have been answered to my satisfaction. I understand what is being asked and the accompanying conditions and promises. I understand the nature and limitations of the study. I understand that I can obtain information, in response to any questions/concerns I have about my rights as a research participant, from [name of person, secretary of the hospital’s research ethics team, by phone (number) or email (email address)]. That office has no affiliation with the researcher in this study. I have received a copy of the signed consent.

   I consent to being audiotaped Yes or No
   I consent to review my transcripts Yes or No
   I agree to participate in this study in the ways described Yes or No
   If I am making any exceptions or stipulations these are:

Once the study is completed I would like to receive a copy of the major themes Yes or No

Signature of the RN-Participant____________________    Date___________________
Printed names of participant (first and last)_________________________
Contact phone number:_________________________________________ Email address (if available):  
APPENDIX D: INTERVIEW GUIDE

Demographic Data

Participation in This Study
Will you please tell me why you chose to participate in this study?

Challenging Situation
If there is a situation that tested your knowledge about drug therapy with older adults (OAs) will you please tell me about? What was most challenging about that situation? What knowledge did you use? How effective was that knowledge? What, if anything, and including other knowledge, might have helped you?

Learning Needs
If you have any pressing learning needs about drug therapy with OAs, what are they? Why do you need that knowledge? How would it help you? How do you feel without it? Where, if at all, can you get it?

Communicating with OAs
When you communicate with OAs are your approaches the same as or different than your approaches with younger adults? If they are different how are they different? Why? What knowledge guides your communication with OAs? Why do you need that knowledge? How does it help you? If there are any topics (about communicating), suggested by other experts, that you need to know even more about than they suggest, what are those topics? What added knowledge about those topics do you (already have and use)/(need to get)? Why do you need that added knowledge? How (does)/(would) it help you? If you need any knowledge (about communicating) that is beyond all of the topics that we have already discussed, what is it? Why do you need it? How (does)/(would) it help you? Do you have that knowledge now or not? If not, where can you get it? How satisfied are you with your knowledge about communicating with OAs?

Use of the Nursing Process with OAs
When you use the nursing process with OAs are your approaches the same as or different than your approaches with younger adults? If your approaches are different how are they different? Why? What knowledge informs you about your need to adapt your approaches with OAs? Why do you need that knowledge? How does it help you? If there are any topics (about using the nursing process) suggested by other experts that you need to know even more about than they suggest, what are those topics? What added knowledge about them do you (already have and use)/(need to get)? Why do you need that added knowledge? How (does)/(would) it help you? If you need any knowledge (about using the nursing process) that is beyond all of the topics that we have already discussed, what is it? Why do you need it? How (does)/(would) it help you? Do you have that knowledge now, or not? If not, where can you get it? How satisfied are you with your knowledge about using the nursing process with OAs?

The first two steps of the nursing process -- assessing OAs to diagnose their drug-related and
other needs:

Do you assess OAs in order to diagnose their drug-related and other needs, or not? If you
do, what do you consider/look for? Why?/What do you want to know? What strategies do you
use? When do you assess and diagnose? Examples? What knowledge do you use as you assess
and diagnose? Why do you need it?/How does it help you? Where did you get it? If you have
ever had a situation that really tested your knowledge, will you please tell me about it? What
made it challenging? What, if anything, including other knowledge would have helped you? If
there are any topics (about assessing and diagnosing), suggested by other experts, that you need
to know even more about than they suggest what are those topics? What additional knowledge
about them do you (already have and use)/(need to get)? Why do you need that added
knowledge?/How (does)/(would) it help you? If you need any knowledge (about assessing and
diagnosing) that is above and beyond all of the knowledge that we have already discussed, what
is it? Why do you need that knowledge?/How (does)/(would) it help you? Do you have that
knowledge now or not? If not, where can you get it? How satisfied are you with your knowledge
about assessing OAs and diagnosing their drug-related and other needs?

Planning, implementing, and evaluating.

Please note: In order to explore the last three steps of the nursing process -- planning,
implementing and evaluating drug therapy for OAs -- with the RNs I will use questions that are
similar to those that I used previously to explore assessing and diagnosing. I will, however, adapt
the questions to focus on planning, then on implementing, and then on evaluating.

Professional Expectations of RNs

What, if any, knowledge about the professional expectations of RNs who provide drug
therapy to OAs do you need? When/how do you use that knowledge? Examples? Why do you
need that knowledge?/How does it help you? Where did you get it? If there are any topics (about
professional expectations), suggested by other experts, that you need to know even more about
than they suggest what are those topics? What additional knowledge about them do you (already
have and use)/(need to get)? Why?/How (does)/(would) that knowledge help you? If there is any
knowledge that you need that professional expectations) that is beyond the knowledge that we
have already discussed, what is it? Why do you need it?/How (does)/(would) it help you? Do you
already have that knowledge or not? If you lack it, where can you get it? How satisfied are you
with your knowledge about the professional expectations of RNs who provide OAs with drug
therapy?

Sources for Knowledge about Drug Therapy with OAs

Where do you get the knowledge that you need to provide drug therapy to OAs? How
adequate are those sources in meeting your needs? How satisfied are you with them? If there are
ever occasions when you don’t know where to get the knowledge that you need, can you tell me
about them? What are the (best) (worst) sources for the knowledge that you need?
Conditions in the Hospital and/or Society That May Affect Knowledge about Drug Therapy with OAs

If there are any conditions that affect your abilities to obtain and/or use knowledge about drug therapy with OAs what are those conditions? How do they affect your abilities? Examples? What, if any, feelings do you have about these conditions? If you have ever felt support for your abilities to get and/or use the knowledge that you need, where did it come from? If you have ever felt powerless in that regard, can you tell me about that situation? Can you tell me why you felt that way, or not? If someone asked you to identify conditions that enable/would enable you to get and/or use the knowledge that you need (about drug therapy with OAs) what conditions would you identify? If someone asked you to identify conditions that constrain/would constrain your abilities to get and/use the knowledge that you need what conditions would you identify? What if any knowledge about conditions that affect your drug-therapy practice with OAs do you need? Why do you need it?/How does it help you? Example? Where did you get that knowledge? If you have ever tried to address conditions that affect your knowledge what condition/s did you target? Why? What did you do? (Example?) What knowledge did you need? Where did you get it? Results? What, if any, feelings do/did you have about the results? If there are any conditions that you would like to address but haven’t what are those conditions? Why would you like to address them? Can you tell me your reason/s for not addressing them? If there are any topics (about conditions), suggested by other experts, that you need to know even more about than they suggest what are they? What more about them do you need to know? How (does)/(would) that knowledge help you? Do you have it now, or not? If not, where can you get it? If there is any knowledge that you need (about conditions) that is beyond the knowledge that we have already discussed what is that knowledge? Why do you need it?/How (does)/(would) it help you? If you don’t have that knowledge where can you get it? How satisfied are you with your knowledge about conditions that affect your abilities to get and/or use the knowledge that you need as you practice with OAs on drug therapy?

Close of Interview

Before we end this interview is there anything else you want to say about the knowledge that you need to provide drug therapy to OAs who are in hospital? Is there anything more you want to say about conditions that affect your abilities to get and/or use the knowledge that you need? Thank you.
APPENDIX E: OUTLINE OF RNs’ KNOWLEDGE REQUIREMENTS USING THE STEPS OF THE NURSING PROCESS

Assessing and Diagnosing OAs on Drug Therapy

Modifying assessment

Knowing diagnoses made by other HCPs
The heterogeneity of OAs, and assessing the unique individual
Speaking face to face and slowly, employing a systematic approach, asking more questions, considering education and culture
More time
Normal aging changes, including norms, biochemical changes, and age-adjusted laboratory norms
How aging affects pharmacokinetics, pharmacodynamics, and homeostatic mechanisms
Linking laboratory results, histories, holistic functional status, and drugs
How aging affects OAs’ signs and symptoms of disease and their reactions to illness and treatments (e.g., drugs, anaesthetics)
Factors that complicate the assessment of normal aging changes, of common diseases, and of ADRs in OAs
Each OA’s ongoing holistic functional status, and uses of that knowledge
Assessing proactively, frequently, and in an ongoing fashion
Recognizing and responding to OAs’ greater vulnerability
Assessing pain, including when OAs are confused

Drug use with OAs and related issues

Decision making about prescribing
Factors that make it difficult to develop specific guidelines for prescribing
General guidelines for prescribing
Important pharmacological considerations when prescribing (e.g., drugs and their various characteristics, current drug practices, considerations and cautions about specific categories of drugs, categories of drugs commonly prescribed for OAs, common drug regimens, valid sources of drug information, drug-related laboratory information, titration, potential effects of drugs (e.g., ADRs, side effects, interactions, and toxicity), DRI (kinds, causes, consequences, prevention strategies (e.g., monitoring to prevent or to detect DRI), and treatment strategies)
New drugs and drug practices
Alternatives to drugs
Types and interactive effects
Conducting and evaluating drug histories on admission
Goals, components, guidelines, challenges
Setting Goals and Planning and Implementing Drug Therapy for OAs

Suggested goals
Knowing OAs’ holistic baseline function, and uses of that knowledge
Planning carefully and collaboratively with HCPs from other disciplines
Individualizing the plan of care
Working with OAs
  Supporting function and preventing and managing harm
  More time
Communicating with OAs and families
  More time
  Building rapport and trust
  Including family members
  Respecting OAs
  Offsetting communication challenges
Educating OAs
  Objectives, strategies, aids, topics
Promoting OAs’ adherence and family members’ involvement
Collaborating with other HCPs
  Using a team approach, and coordinating at admission, during hospitalization, and at discharge
Advocating for OAs
  Knowing each OA
  Working through OAs’ challenges
  Goals and strategies
  Power inequities
Mentoring Other HCPs
  Knowing about professional and regulatory expectations

Evaluating drug therapy for OAs
  Foci and strategies

Conditions that influenced practice
  Constraints of practice
  Poor disclosure by OAs (due to functional challenges, perspectives, lack of knowledge)
  HCPs’ characteristics (attitudes, views about power, and inadequate management of OAs’ conditions)
  Professional context (insufficient time, predominant use of the medical model, insufficient services and systems, physical and socially constructed environmental conditions)
Facilitators of practice
  Communicating with OAs (knowledgeable about their drugs, bring to hospital updated lists of their drugs, as well as interpreters)
Communicating with families (know OAs’ drugs, bring updated lists of drugs, tell RNs about changes in OAs’ function, participate in team meetings)
HCPs’ characteristics (ability to resolve issues, will to contest conditions, the drug-related practices of some doctors)
Professional context (availability of human resources, supports, and systems for care)
Community support (ability to contact community HCPs, comprehensive education for community living OAs and their families)
FOOTNOTES

1. Please see Bushardt, Massey, Simpson, Ariail, & Simpson (2008) for similar data about American OAs.

2. In their papers and texts, the above-mentioned authors, due to their various purposes, speak about different types of DRI, for example, ADRs, adverse drug effects, adverse drug events, or iatrogenic illness from drugs. Thus, whenever in this thesis I cluster many authors’ works together as I just did, I collectively refer to all of these types as DRIs for ease of reading. However, I encourage interested readers to consult the separate references if they want to understand the actual type of DRI that each author targets, their reasons for doing that, and their definitions of relevant terms. For a critical review of the data available about ADRs, please see Karch and Lasagna’s (1975) paper.

3. All references to professional documents, regulatory documents, and accreditation documents are to the versions that were current at the time of data collection for this study.

4. See Abraham et al. (1999) about the notion of institutional empowerment, specifically the acceptability of staff disagreeing with supervisors about care-related issues.

5. RNs’ thoughts about this synthesized approach were stimulated by my mention of Gorbien et al’s (1992) writing about the use of a ‘geriatric approach’.

6. Also see Fenwick (2000) regarding situative learning and embodied knowledge.