Constant Observation for Older Adults in Acute Care:
A Mixed Methods Study

By
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University of Toronto

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Abstract

A convergent parallel mixed methods design study, guided by a conceptual framework focusing on factors influencing constant observation practices, was conducted to describe constant observational practices in two hospitals. Quantitative data, collected through questionnaires and chart review, focused on the characteristics of the nurse, observer, unit and patient as well as the nurses’ perceptions of constant observation use and the quality of communication and coordination of care with observers. Qualitative data, collected through non-participant observation of nurse-observer dyads and interviews with these dyads and managers, focused on describing constant observation practices including benefits of this intervention.

Patients receiving constant observation had multiple risk factors, such as the presence of responsive behaviours and risk for falls. On both units, nurses had a positive perception of constant observation use, particularly to prevent falls and the removal of treatment equipment. Nurses also had a positive impression of the quality of communication and coordination of care with the observers; important for good constant observation outcomes to occur. Thematic
analysis of the data collected through non-participant observation and interviews, led to the identification of three main themes related to constant observation practices: 1) the observer had a multi-faceted role that included providing direct care, ensuring patient safety and sharing information; 2) the nurse had a supervisory role that involved providing support to the observer, directing patient care and sharing information; 3) constant observation outcomes included the prevention and management of responsive behaviour, in addition to the prevention of adverse events, resulting in “a good shift”.

Convergence of the different sources of data in this mixed methods study led to a better understanding of the diversity of constant observation practices in different settings, and how these practices are dependent on various contextual, patient and staff factors. This new knowledge will help clinicians and policy makers optimize constant observation practices in their organizations. Clinicians and policy makers are advised to include the delivery of recreational activities to patients as part of the observer role, as these activities may assist in the prevention and de-escalation of patients’ responsive behaviours, further improving the quality of constant observation provided.
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Chapter 1
Introduction and Problem Statement

Background

Older adults (aged 65 and older) make up 14.1% of the Canadian population however they account for 40% of all hospital patients and consume 60% of hospital days (CIHI, 2011). Older adults with cognitive impairment make up a significant proportion of hospitalized older adults (Albert et al., 1999) with approximately 50% of hospitalized older adults admitted to UK hospitals reported to have cognitive impairment (Royal College of Psychiatrists, 2005). Similarly, 50% of older adults in medical units in Canada had baseline dementia (McCusker, Cole, Dendukuri & Blezile, 2001).

Cognitive impairment involves problems “pertaining to the mental processes of comprehension, judgement, memory and reasoning” (Mosby’s, 1998, p.361). The most common forms of cognitive impairment in older adults, presenting with a broad spectrum of severity, are dementia and delirium. Dementia is a disease of old age with a prevalence of 7% in people aged over 60 and rising to 49% of people aged over 90 (Alzheimer’s Society of Canada, 2010). Dementia is defined as a syndrome of progressive and persistent cognitive decline leading to an inability to manage occupational and social performance (RNAO, 2016; American Psychiatric Association, 1994). In contrast, delirium is an acute cognitive disorder with features of inattention and fluctuation (American Psychiatric Association, 2013) that commonly occurs in older adults admitted to acute care hospitals (Inouye, 2006). The prevalence of delirium in hospitals has been reported to range from 17-50% (Inouye, Westendorp & Sacynski, 2014). The
numbers increase with the clinical acuity level of the older adult patient population from a prevalence of 10% in the emergency department (Elie et al, 2000), 15-50% on medical/surgical units (Marcantonio, Flacker, Wright & Resnick, 2001; Rockwood, 1993) and up to 70% in intensive care units (McNicoll, Pisani, Zhang, Ely, Siegel & Inouye, 2003).

Since a history of dementia is a significant risk factor for developing delirium, delirium superimposed on dementia is common in hospitalized older adults. In a systematic review (Fick, Agostini & Inouye, 2002), the prevalence of delirium superimposed on dementia was estimated to range from 22% to 89% depending on the patient population. The prevalence of delirium has also been found to increase with the severity of patients’ baseline cognitive impairment (Voyer, Cole, McCusker & Belzile, 2006).

Hospitalized older adults with cognitive impairment are at increased risk of safety concerns in hospital such as falls, wandering, aggression and removing treatment lines/equipment. While the majority of older adults with cognitive impairment do not have behavioural manifestations or symptoms leading to safety concerns, a significant proportion do. Approximately 30% of patients with dementia may present with moderate to severe behaviours (Brodaty, Draper & Low, 2003) such as agitation (pacing, exit seeking, disrobing), aggression (screaming and hurting self or others), or wandering. Hyperactive or mixed delirium (Fong, Tulebaev & Inouye, 2009) may present with similar manifestations such as restlessness, agitation, aggression, hyper-vigilance and psychosis leading to removal of treatment equipment, exit seeking, wandering and falls (Rapp, 2001).

Recent research and theoretical evidence suggest that persons’ behaviours associated with cognitive impairment are not only related to the disease processes of delirium and/or
dementia, but are a response to the environment, symptoms (unmet needs such as hunger and pain) or interaction with staff or others in the environment (Cohen-Mansfield, 2001; RNAO, 2012, 2016; Dupuis & Luth, 2005). This has led to a renaming of agitated or aggressive behaviours to responsive behaviours “to reflect a response to something negative, frustrating, or confusing in the resident’s environment, or an expression of unmet needs” (Dupuis & Luth, 2005). As a result, interventions need to be focused on the meaning behind the behaviour rather than the behaviour itself. Potential antecedents for cognitively impaired older adults’ responsive behaviors include discomfort, conflicts with other residents, unmet needs or desires, lack of activity or boredom, environmental noises, interactions with staff during personal care, response to touch or invasion of privacy and increased level of activity in the environment (Cohen-Mansfield, 2001; Dupuis & Luh, 2005).

Healthcare providers in acute care hospitals historically used physical restraints to manage and/or control patients’ agitated and aggressive behaviours (i.e. responsive behaviors) associated with cognitive impairment (Minnick, Mion, Johnson, Catrambone & Leipzig, 2007; Whitman, Davidson, Sereika & Ruby, 2001). Physical restraints are implemented to prevent harm to patients and staff, to prevent interference with medical treatment equipment, and to maintain patient safety by preventing patient falls or other adverse events (RNAO, 2012; Minnick et al, 2007). Although used for safety reasons, physical restraints are not without risks and in fact have been linked with a number of poor outcomes, such as functional decline, delirium, pressure ulcers and increased risk of death (Inouye & Charpentier, 1996; Evans, Wood & Lambert, 2003). Furthermore, physical restraints do not necessarily prevent falls or treatment disruptions (Evans and Strumpf, 1989; Evans, Wood & Lambert, 2003; Capezuti, 2004). In addition, legislation in Ontario: The Patient Restraints Minimization Act (Government of
Ontario, 2001) limits the use of restraints to exceptional circumstances and mandates that hospitals adopt least restraint policies, which involve initiating and documenting the use of alternatives to physical restraints. Similarly in many other jurisdictions, quality or accreditation standards have made the use of physical restraints a last resort to be used only when other interventions have failed. In the US, the Joint Commission on Accreditation of Healthcare Organizations and various mental health advocacy groups have worked to decrease the use of restraints and seclusion (Worley, Kunkel, Gitlin et al, 2000; Rausch & Bjorklund, 2010). This policy work has led health care professionals to identify alternative interventions to physical restraints and attempt to formulate best practice guidelines (Canadian Coalition for Senior’s Mental Health, 2006; Registered Nurses Association of Ontario, 2016, 2012; Park & Tang, 2007).

A commonly used restraint-alternative is “constant observation” most often provided by unregulated care providers often called “sitters” or “observers” (Watson, Brand, Watson & Loguidice, 2009; Segatore & Adams, 2001). Constant observation is defined as “an increased level of observation and supervision in which continuous one-to-one monitoring techniques are utilized to assure the safety and well-being of an individual patient or others in the patient care environment.” (Moore, Berman, Knight & Devine, 1995 in Torkelson & Dobal, 1999 p.149). Constant observation is widely used in acute care settings; several surveys of Australian and U.S. acute care hospitals have highlighted that 80-100% of hospitals use constant observation (Worley, Kinkel, Gitlin, Menefee & Conway, 2000; Torkelson & Dobal, 1999; Watson et al, 2009). A Canadian study showed that constant observation is used for 2.7% of patients on medical and surgical units at one hospital; of patients receiving constant observation, 62.8% were aged 65 years or older (Rochefort, Ward, Ritchie, Girard & Tamblyn, 2011).
Anecdotal evidence indicates that the use of constant observation has increased with legislation and policies focusing on decreased usage of physical restraints (Worley et al, 2000; Rausch & Bjorklund, 2010). Since constant observation relies on one-to-one supervision, it requires an increased level of staffing, leading to higher costs for hospitals. These costs range from $500,000 U.S. in the mid- to late 1990s for a whole hospital (Worley, et al, 2000; Blumefield, Milazzo & Orlowski, 2000) up to between $250,000 to 1 million per inpatient unit in the 2000s (Nadler-Moodie, Burnell, Fires & Agan, 2009; Caplan & Harper, 2007; Salamon & Lennon, 2003). The person providing constant observation is often an unregulated care provider such as a nursing assistant or personal support worker working under supervision of the nurse assigned to care for the patient during the shift (Rochefort, Ward, Ritchie et al, 2011; Tzeng, Yin & Grunawalt, 2008; Torkelson & Dobal, 1999). This constant observer may be a hospital staff member hired specifically for that role, or unlicensed care providers hired from an outside agency for the shift (Harding, 2010). Since the constant observer is working under the supervision of the nurse, it can be hypothesized that collaboration and communication between the nurse and observer would be important for more successful constant observation. However there is a paucity of information regarding the working relationships between the nurse and observer.

Although constant observation is often recommended as an alternative to the use of physical restraints through best practices guidelines for the management of delirium and dementia and for restraint minimization (CCSMH, 2006; RNAO, 2012, 2016; Royal College of Physicians, 2006 Park, Tang, Adam & Titler, 2007), these guidelines are based on expert consensus rather than empirical evidence. Though constant observation is widely used (Worley, Kinkel, Gitlin, et al, 2000; Torkelson & Dobal, 1999; Rochefort, Ward, Ritchie et al, 2011), there
is no consistent empirical evidence showing that it reduces adverse events such as falls or use of restraints (Boswell, Ramsey, Smith & Wagers, 2001; Harding, 2010; Donoghue, Graham, Mitten-Lewis, Murphy & Gibbs, 2005; Giles, Bolch, Rouvray, McErlean, Whitehead, Philips & Crotty, 2006; Lang, 2014). In addition, constant observation is only one of numerous suggested restraint alternative interventions listed in these guidelines. (RNAO, 2016, 2012; Canadian Coalition on Seniors Mental Health, 2006; Park, Tang, Adams & Titler, 2007). These best practice guidelines (RNAO, 2012, 2016; CCSMH, 2006; Park et al, 2007) reinforce the importance of identifying the meaning behind responsive behaviours and focusing interventions on preventing these behaviours. In circumstances where responsive behaviours are already occurring, these best-practice guidelines advise targeting the antecedents or triggers rather than just the behaviour itself. Constant observation does not involve targeting antecedents as the focus is to implement continuous monitoring to ensure the safety of the patient or others in the setting. This focus means that constant observation should be implemented as a last resort before restraints are used, or as an adjunct to restraints, or in combination with efforts to identify and address causes of responsive behaviours. Constant observation can be viewed as a reactive response to patients’ agitated behaviours and is criticized as sometimes being the only intervention implemented: “in reality there continues to be an overreliance on ‘special observation’ as the main (or sometimes ‘only’) approach to care” (McCormack, 2011).

The reasons for the widespread use of constant observation is not clearly articulated in the literature, although several explanations have been proposed by researchers. In acute care hospitals, nurses and other staff attempt to provide evidence-based care to older adults with cognitive impairment; however, these attempts are limited by several factors. These factors include the acute care environment not being conducive to optimized care for older adults, lack
of knowledge about geriatrics, time constraints (as older adults with responsive behaviours require closer supervision, constant attention and reorientation to place and time), feelings of fear with concerns not only about patient safety but also their own safety, and lack of organizational support for the management of responsive behaviours (Teodorczuk, Welfare, Corbett et al, 2010; Poole & Mott, 2003; Borbasi, Jones, Lockwood & Emden, 2006; Eriksson & Saveman, 2002). More importantly it is not clear how nurses and observers work together and what factors influence the use of observers in acute care.

**Problem Statement**

Constant observation is a commonly implemented intervention for older adults with responsive behaviours, often related to delirium and/or dementia in acute care settings. Constant observation is a widely used and costly intervention for the health care system (Torkelson & Dobal, 1999; Worley, Kunkel, Gitlin et al, 2000; Harding, 2010) that has not been shown to consistently decrease unsafe behaviours, (Jaworowski, Raveh, Lobel et al, 2008), or adverse events, such as falls or medical equipment removal (Tzeng, Yin & Grunawald, 2008; Harding, 2010). Nonetheless, although alternatives to constant observation exist (RNAO, 2012; Park & Tang, 2007), constant observation remains one of the most popular interventions initiated or implemented by nursing staff (Shever, Titler, Mackin et al, 2011).

While current best practice guidelines suggest that management strategies for responsive behaviours should involve understanding the meaning behind the behaviour and attempting to prevent or modify the cause of the behaviour, hospital staff may not feel empowered or knowledgeable to implement these best practices. As a result, constant observation has become an alternative that is simpler and easier to implement. While there is some research examining the patient population receiving constant observation and the reasons for its use (Worley,
Kunkel, Gitlin et al, 2000; Torkelson & Dobal, 1999; Rochefort, Ward, Ritchie et al, 2011; Blumenfield, Milazzo & Orlowski, 2000; Mergui, Raveh, Golamard et al, 2008) as well as the interventions to decrease costs associated with constant observation (Rausch & Bjorklund, 2010; Sweeney, Bridges, Wild et al, 2008; Caplan & Harper, 2007; Salamon & Lennon, 2003; Harding, 2010; Nadler-Moodie, Burnell, Fries et al, 2009), there is a paucity of research on the constant observation intervention itself including what the observer does and how the nurse and observer communicate and collaborate. In addition, little is known about the drivers for the use of constant observation when alternatives exist, and what takes place during the constant observation that makes it so attractive and commonplace. Consequently, there are many opportunities for research on this topic area.

The widespread use of constant observation in acute care settings is a contentious issue for many hospitals in North America with many organizations seeking to decrease usage due to the high associated costs and minimal evidence to support whether this intervention prevents adverse events. Currently while practice guidelines suggest that constant observation is only one of many restraint-alternatives, and should only be implemented when other alternatives have failed, it often appears to be an intervention that is initiated early and in some cases without a trial of alternatives (McCormack, 2011). Therefore there seems to be discordance between what takes place in clinical practice versus what the current best evidence suggests.

**Purpose**

There is a need to describe what occurs during the constant observation, examine factors that influence the use of observers and develop an understanding of its contribution to the achievement of positive or negative outcomes as these findings may provide insights into why
constant observation continues to be so widely used. The purpose of this study is to describe what takes place during constant observation, as well as understanding from the nurses’ perspective the reasons for using constant observation. Developing an understanding of the current state of constant observation practices and the perceived benefits of constant observation is a foundational step to evaluating the effectiveness of this intervention and determining its utility and sustainability in clinical practice.

**Research Objectives**

The study objectives were to:

1) Describe the practices of the observer and the nurse during constant observation.

2) Explore the perception of communication and coordination between the nurse and observer during constant observation.

3) Describe the characteristics of the nurse, patient, observer and unit involved in constant observation.

4) Explore the perceived benefits and limitations of constant observation from the perspective of the nurse and observer.
Chapter 2
Review of Literature

This chapter summarizes the review of the literature related to constant observation in acute care settings. It is divided into several sections pertaining to definitions, patient populations and conditions requiring constant observation, the history of constant observation, constant observation practices in acute care hospitals, and outcomes of constant observation. Related information on restraint practices and literature regarding nurse and unregulated care provider (UCP) team work are also discussed. Finally the conceptual framework that guided this research study is presented.

Scope of the Literature Review
The literature review includes studies from 1996 until June 2016 related to constant observation practices. The objectives of the literature review were to:

- Determine what is known about the use of constant observation in the acute care hospital and
- Identify some of the gaps that exist in the literature on constant observation

Several electronic data bases were searched for the time period of 1996 until February 2014 to ensure the literature review was extensive. An information management specialist assisted with the search strategy by providing advice on the selection of the data bases and ensuring that the key words searched were comprehensive enough to capture relevant articles. The data bases searched were: MEDLINE, PsycInfo, Embase, CINAHL, and EBM Reviews- Cochrane Data Base.

There were no medical subject headings (MeSH) for constant observation therefore the key words and phrases “Constant Observation”, “Special Observation”, “Continuous Observation”,

“Formal Observation”, “Sitter”, “Specials”, “Specialing”, “One-to-one Observation” and “One-on-one observation” were searched. Articles were limited to the English language only.

Additional articles were identified through searching the reference lists of key studies, searching relevant journals and through referrals by experts in the field of gerontological nursing and patient safety.

**Abstract review process.**

After duplicates were removed a total of 1432 citations were retrieved. The titles and abstracts of all 1432 citations were screened using the following inclusion and exclusion criteria

**Inclusion criteria:**

- Topic related to constant observation as a clinical intervention
- Acute care hospital
- Adults

**Exclusion criteria:**

- Observation as a research methodology
- Constant observation in psychiatric hospitals
- Paediatrics
- Non-human research

While articles focusing on constant observation in psychiatric hospitals only were excluded, those that included patients with psychiatric presentations in acute care hospitals were included. Articles related to constant observation in psychiatric hospitals were not included as observation practices differ from those provided in acute care hospitals. In psychiatric hospitals constant observation is usually provided by nurses, rather than unregulated care providers, to a client population that includes younger adults at risk for suicide or violence to self and others
(Manna, 2009) rather than mostly older adults with responsive behaviours due to delirium and/or dementia in acute care hospitals, which were the population of interest for this research study.

If there was any doubt whether an article did meet the selection criteria, the article was retained for full-text review. At the end of the screening process, 55 articles were retained for full review. An additional six articles were identified through reference list, key journal and expert recommendation and were also included for full review. In June 2016 the literature review was updated for the time period February 2014-June 2016 using the same search methodology and inclusion/exclusion criteria. An additional 12 articles were included for full review.
Figure 1: Scoping Review of Constant Observation Literature


2222 citations identified

790 duplicate citations excluded

1432 abstracts screened using the inclusion and exclusion criteria

1377 abstracts excluded based on inclusion and exclusion criteria

55 Full articles retrieved and reviewed using the inclusion and exclusion criteria

17 Papers excluded based on inclusion and exclusion criteria

38 articles initially selected for inclusion in the scoping review

Repeat of Data base search strategy for time period: February 2014- June 2016

774 citations retrieved

172 duplicate citations excluded

602 abstracts identified and screened using the inclusion and exclusion

590 abstracts excluded based on inclusion and exclusion criteria

12 articles retrieved and reviewed using the inclusion and exclusion

6 additional articles identified through search of reference lists, key journals and referrals from clinical experts

56 articles included in the scoping review
After full review of the 73 articles, seventeen articles were removed based on the inclusion/exclusion criteria above as well as several articles that were commenting on other articles and did not include any additional information.

In total 56 research or review articles (Appendix A) were included in the literature review. Since there is minimal research on constant observation all articles related to constant observation in acute care hospitals were selected regardless of the methodological strength. Some of these articles included quality improvement projects, descriptions of observer roles at single hospital sites, and literature reviews. As a result, this literature review can be considered to be a scoping review whereby all the available published literature was examined to determine the extent, diversity and main sources of the evidence on constant observation (Arskey & O’Malley, 2005; Brien, Lorenzett, Lewis, Kennedy & Ghali, 2010). The types of articles by study methodology are outlined in Table 1 below.

Table 1: Study Design of Articles on Constant Observation in Acute Care

<table>
<thead>
<tr>
<th>Study Design</th>
<th>Number of papers</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature Review</td>
<td>4</td>
<td>Capron, 2010; Lakatos, 2009; Burston &amp; Vento, 2015</td>
</tr>
<tr>
<td>-------------------</td>
<td>----</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Prospective</td>
<td>5</td>
<td>Harding, 2010; Mergui et al, 2008; Rochefort et al, 2011a; Rochefort et al, 2011b; Dasgupta &amp; Brymer, 2015</td>
</tr>
<tr>
<td>Opinion</td>
<td>2</td>
<td>Jaworowski et al, 2008; Capezuti &amp; Brush, 2008</td>
</tr>
</tbody>
</table>

The most frequently used studies were quasi-experimental (pre and post intervention design) with a focus on implementing different interventions to decrease the use of constant observation while looking at different outcomes such as the effect on hospital falls rates, usage of constant observation as well as the associated costs. Most of the cross-sectional, prospective and retrospective studies were descriptive in nature and outlined the following: patient characteristics, reasons for using constant observation, staff characteristics and policies and procedures of constant observation practices. Two of the literature reviews focused on the effect of constant observation on fall rates while the other two focused on the role of the observer. The articles are summarized in Appendix A using the review headings suggested by Arskey & O’Malley (2005). These headings include: author, year of publication, location, study population, objectives of study, design, outcome measures and tools, results and intervention details if relevant. Using the article summaries in Appendix A, Table 2 was created to outline the content areas of all the articles on constant observation. Many articles focused on multiple content areas.
<table>
<thead>
<tr>
<th>Content Areas</th>
<th>Number of articles</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternatives to constant observation</td>
<td>3</td>
<td>Torkelson &amp; Dobal, 1999; Wilkes et al, 2010; Rogers &amp; Gibson, 2002</td>
</tr>
</tbody>
</table>
The largest number of articles focused on implementing strategies to decrease the use of constant observation (N=24) and outcomes associated with the use of constant observation (N=23). The remainder of the studies focused on constant observation practices in hospitals including describing the extent of their use (N=22), patient characteristics and the reasons for using constant observation (N=19) as well as the associated costs (N=17). The content areas identified in Table 2 are discussed in more details throughout the remainder of this chapter and provide a synthesis of what is known about constant observation in non-psychiatric settings. First definitions of constant observation are provided as well as a brief history of the use of constant observation to provide the context for the literature review.
**Definitions**

The most widely used definition for constant observation is “an increased level of observation and supervision in which continuous one-to-one monitoring techniques are utilized to ensure the safety and well-being of an individual patient or others in the patient care environment” (Moore et al in Torkelson & Dobal, 1999 p.149). Another definition by Nadler-Moodie and colleagues in 2009 does not speak about one-to-one monitoring but rather that constant observation involves a patient being continuously watched by a staff member who is usually within close reach, therefore this staff member could be observing multiple patients.

The staff member providing constant observation is called by different terms including constant observer (Nadler-Moodie et al, 2009; Turjanica, Arbadell, Mancini & Attari, 1998), sitter (Segatore & Adams, 2001; Rochefort, Ward, Ritchie et al, 2011), one-to-one patient care companion (Tzeng, Yin & Grunawalt, 2008) and nursing specials (Watson, Brand, Watson et al, 2009). Observers, or sitters, are defined as “the individual providing constant observation” (Torkelson & Dobel, 1999) or “volunteers or paid sitters (also called patient attendants or companions) who are not trained as nurses or certified nursing assistants- to stay with patients who are at high risk” (Tzeng et al, 2008). While “sitter” is the most commonly used term for the person providing constant observation in North America, several authors have advocated using the term “constant observer” or “observer” as “sitter” can be used in a derogatory way to imply someone who just sits and watches whereas “observer” implies a more active role (Nadler-Moodie et al, 2009). For the purposes of this research study, the term “observer” is be used for consistency.
History of Constant Observation Use

Before discussing constant observation practices in acute care hospitals, it is important to understand the history of constant observation and how it has become increasingly used as a restraint-alternative.

Constant observation has historical roots as a widely used intervention in psychiatry, provided by nursing staff to reduce the incidence of adverse patient outcomes such as suicide, elopement, violence and self-harm (Manna, 2009; Cox, Hayter & Ruane, 2009). Therefore the purpose of constant observation is to maintain patient and staff safety. In the mental health literature there are concerns that constant observation is a paternalistic intervention that can be distressing to both the patient and the nurses due to concerns about feelings of confinement and lack of empathy in the intervention (Cox et al, 2009). While constant observation is widely used in psychiatry for patient safety there is little empirical evidence to support the utility of this intervention; however it is difficult to conduct research to determine the effectiveness of this intervention because it has become the standard of care and there would be an ethical dilemma in withholding a potentially life-saving intervention in a subset of the population (Manna, 2009). For example in the USA and Israel some hospitals were found to be negligent for not providing constant observation in instances when adverse events such as suicide or falls resulting in serious injury occurred (Jaworowski, Raveh, Lobel, et al, 2008). Currently there is a focus in the mental health literature on identifying alternatives to constant observation or at least strategies to its use due to the costs and ethical concerns about the custodial nature of the intervention (Cox et al, 2009).

Several explanations for the use of constant observation in medical and surgical units in acute care hospitals over the past two decades have been offered. These include reported harms
of physical restraints and subsequent government legislation and accreditation organizations’
policies to minimize the use of physical restraints. Examples of these initiatives include the
_Patient Restraints Minimization Act_ in Ontario (Government of Ontario, 2001), the Mental
Health Commission of Canada (2009), as well as the standards on restraints as a last resort from
the Centres of Medicare and Medicaid services and The Joint Commission on Accreditation of
Health care Organization (JCAHO) in the USA (Brada, Sandhu & Mion, 2012; Salamon &
Lennon, 2003; Rausch & Bjorklund, 2010). At the same time, there has been an increased focus
on patient safety through health care accreditation organization such as JCAHO in the USA and
Accreditation Canada in Canada. In Canada “required organization practices” related to fall
prevention, as set by the accreditation body for health care organization, includes reporting
metrics to measure the implementation and evaluation of falls prevention programs
(Accreditation Canada, 2016). Another factor that has been proposed leading to an increased use
of observers is changes in the design of patient rooms. With a focus on improved infection
prevention and patient privacy, there has been a movement towards single patient rooms rather
than open wards. With single patient rooms, it is harder for nurses to observe multiple patients
closely resulting in the need to delegate part of the surveillance role to unregulated care
providers (Capezuti & Brushm 2008). With the increased focus on patient safety and restraint
minimization, constant observation, a recognized alternative to the use of restraints (RNAO,
2012; Brada, Sandhu & Mion, 2012; Park & Tang, 2007), has become more widely implemented
in acute care organizations (Worley _et al_, 2000; Rausch & Bjorklund, 2010; Salamon & Lennon,
2003).

With the decreased use of restraints, constant observation has been frequently
implemented as an alternative intervention for maintaining patient safety. Available practice
guidelines on restraint minimization suggest using alternatives to restraints and implementing physical restraints only as a last resort when there is imminent risk of harm to an individual patient or others, or when restraint alternatives have failed (RNAO, 2012; Park & Tang, 2007; Bradas, Sandhu & Mion, 2012). Constant observation is only one of numerous restraint alternatives that can be used (RNAO, 2012; Park & Tang, 2007) and is recommended for use as a last resort when other alternatives have failed, before consideration of restraint use (Bradas, Sandhu & Mion, 2012). Restraint alternatives that are recommended for use prior to constant observation include treating the underlying cause of the concerning behaviour, focusing on identifying and addressing unmet needs such as pain and hunger, distraction and diversion, camouflage of medical devices, explanation and reminders, closer observation, and environmental modifications (RNAO, 2012, Park & Tang, 2007; Brada, Sandhu & Mion, 2010). In most cases these alternatives are based on expert consensus rather than research evidence. Most research studies evaluating restraint alternatives have implemented multi-component interventions making it difficult to delineate whether any individual restraint alternative intervention is effective.

While restraint minimization practice guidelines suggest constant observation as a last resort and as only one of multiple restraint-alternatives, there is evidence to show that it is very widely used (Worley et al, 2000; Torkelson & Dobal, 1999; Rochefort et al, 2011; Wilkes, Jackson, Mohan & Wallis, 2010) and indeed hospitals are trying to decrease usage due to the associated high costs (Rausch & Bjorklund, 2010; Sweeney et al, 2008; Salamon & Lennon, 2003; Harding, 2010; Nadler-Moodie et al, 2009). Some anecdotal evidence suggests that constant observation is implemented too hastily rather than using alternatives first (Rausch & Bjorklund, 2010). In a national survey, managers from 51 hospitals across the U.S.A. reported
that the use of sitters (constant observation) was the third most commonly used intervention (used by 68% of units) after bed alarms (used by 90% of units) and frequent rounds (used by 70% of units) to prevent falls (Shever, Titler, Mackin & Kueny, 2011). However there is no empirical evidence regarding the reason why nurses use constant observation prior to considering other interventions, and what the benefits of constant observation are over other restraint alternative interventions.

The Observer Role

In this section, the credentials and the role of the observer as described in the literature are reviewed and what became clear is observer credentials vary across hospitals and countries. The literature review revealed only one survey that was sent to different hospitals that specifically asked about the credentials of the observer (Worley et al, 2000). In the 102 (out of 353) hospitals that responded to the survey, the majority indicated that they deployed a variety of different care providers as observers. Of the hospitals surveyed 52% used registered nurses, 43% used licensed practical nurses, 75% used nursing assistants/personal support workers, 29% used family members and 16% used non-clinical hospital employees. Other, more recent, single-site studies describe the observer as most often an unregulated care provider (Sweeney et al, 2008; Rochefort et al, 2011; Salamon & Lennon, 2003; Tzeng, Tin & Grunawalt, 2008). In some settings such as emergency departments, security guards (also a type of unregulated care provider) were used to provide constant observation (Rochefort et al, 2011).

In North American hospitals, the observer was either sourced from the hospital’s own internal staff pool or contracted from an outside private agency. In a survey to hospitals (N=84) in one USA state (Torkelson & Dobal, 1999), 52% of hospitals used their own employees, 11% used external agency staff only and 24% used a combination of internal and external staff. Other
single site studies described either the use of unlicensed staff from an outside agency (Rochefort
et al, 2011; Salamon & Lennon, 2003) or a combination of internal and external hospital staff

In other countries and cultures, observers were hired by families, or family members
themselves provided the observation. In a survey to examine family participation in the care of
hospitalized patients in Taiwan (Tzeng & Yin, 2007), the majority of families provided
companionship to the patient and 9.1% hired an aide (unregulated care provider). Similarly in
Israel, older adults with delirium and dementia had privately hired help, rather than observers
hired by hospitals (Jaworowski et al., 2008). In Saudi Arabia, sitters are usually volunteer family
members or friends who are there to provide psychological support rather than constant
observation for safety purposes (Al-Asmary, Al-Shehri, Al-Omari, Farhat & Al-Otaibi, 2010).
In these studies from Taiwan, Israel and Saudi Arabia, observers hired by families were there
primarily to provide companionship and psychological support, rather than constant observation
specifically.

Feil & Wallace (2014) used data submitted by 75 hospitals in a falls reduction and
prevention collaborative as well as the existing empirical evidence to develop best practices for
the use of sitters in falls prevention. Elements of the observer role included: a clear job
description that includes providing a good handover with the RN; documenting patient
behaviours and subsequent observer interventions; using a toileting schedule; staying within
arm’s reach; helping to keep a safe environment; giving hand-off to other staff if leaving the
patient and focusing on observing the patient without distractions.
In terms of the responsibilities of the observer, anecdotal descriptions of the observer role have been provided in reports of practice initiatives. Segatore and Adams (2001) highlighted that “a sitter’s job is to protect the patient, directly care for, observe and document his (sic) behaviour” (p. 69). There was some variability in the observer roles described. Rochefort and colleagues (2011) described the constant observer’s role as closely monitoring high risk patients and informing health care providers (primarily nursing staff) when the patient’s behaviour deteriorates or if there is a risk of an adverse event (Rochefort, et al, 2011). Other researchers similarly discuss the observer role as being a passive role, one that provides surveillance and containment, and if unsafe behaviours are demonstrated then the nursing staff are to be informed to intervene (Sweeney et al, 2008; Jaworowski et al, 2008; Torkelson & Dobal, 1999; Giles et al, 2006).

However some authors describe a more active role of the observer in providing diversional and recreational activities as well as assisting nursing staff in providing help to patients with activities of daily living (Segatore & Adam, 2001; Donoghue et al, 2005; Bailey, Amato & Mouhlas, 2009; Waszynski et al., 2013). In a literature review of special observation for older adults with delirium and/or dementia, Dewing (2012) describes the engagement style of the special (observer) as varying from a “custodial gaze” to active engagement in therapeutic activities which was seen as more beneficial. Another literature review specifically describing the role of the sitter for patients with delirium found that the sitter role varies depending on the practice setting (Carr, 2013).

Indeed some recent studies have evaluated the implementation of a more “active” observer role. In one study the sitter role was changed to a companion active role, which involved assistance with activities of daily living (such as hygiene and mobility), nutritional
assistance, observation and reporting to the RN, initiating and supervising therapeutic activities such as conversation, simple games and puzzles (Bailey, Amato & Mouhlas, 2009). The authors reported an increase in participation in activities, a decrease in the use of restraints and no change in the falls rate, which remained below the benchmark national rate. Another study implemented individualized therapeutic activities for patients receiving constant observation (Waszynski et al., 2013). Information was gathered on the patient’s life-style, hobbies and leisure activities from the patient or family. A targeted intervention was then chosen to match the patient’s preference, cognitive and physical activity levels. There was a decrease in agitation scores during and post intervention as compared to before the intervention. The observers reported that they were having a positive effect on the patient as a result of providing this intervention (Waszynski et al., 2013).

While the primary responsibility for the observer is to “observe” the patient in order to prevent adverse events such as falls, medical equipment removal, exit seeking and psychiatric crisis (including violence and self-harm) (Sweeney et al, 2008; Harding, 2010; Donoghue et al, 2005; Giles et al, 2006; Torkelson & Dobal, 1999), the role can be either passive or active. There is some evidence that an active role may lead to better outcomes (Carr, 2013; Dewing, 2012; Bailey et al, 2009; Wasczynski et al., 2013). It is unclear how the observer role has been implemented in acute care hospitals in Ontario as there is a paucity of studies in this area.

**Constant Observation Practices in Acute Care Hospitals**

**Reasons for using constant observation**

Constant observation is used to protect patients from harming themselves and others by preventing unsafe behaviours and thereby reducing hospital liability (Torkelson & Dobal, 1999). The most commonly cited reasons for using constant observation is to prevent falls and unsafe
ambulation (Tzeng & Yin, 2007; Tzeng, Yin & Grunawalt, 2008; Boswell et al, 2001; Donoghue et al, 2005; Giles et al, 2006; Sweeney, Bridges, Wild & Sayre, 2008).

Other reasons for the use of constant observation included the prevention of: suicide or violence in cognitively impaired older adults or mentally ill patients (Blumefield, Milazzo & Orlowski, 2000; Jaworowski, Raveh, Lobel, et al, 2008; Nadler-Moodie, Burnell, Fries et al, 2009); and tube, line or other medical equipment removal (Sweeney, Bridges, Wild & Sayre, 2008; Salamon & Lennon, 2003; Turjanica, Ardabell, Mancini et al, 1998). Interestingly, the reasons for using constant observation are the same reasons cited for considering the use of restraints in the literature (RNAO, 2012; Park & Tang, 2007) adding support to the argument that constant observation is frequently and increasingly used as a restraint-alternative.

**Characteristics of patients requiring constant observation**

Older adults with cognitive impairment and patients with psychiatric presentations were most likely to receive constant observation to prevent the adverse events described above. Worley and colleagues (2000) found that 96% of acute care hospitals used constant observation for suicidal patients, 72% for confusion or delirium, 48% for homicidal ideation and 48% for elopement risk. Similar results were obtained by Torkelson and Dobal (1999) where 37% of hospitals in one USA state used constant observation to prevent danger to an individual patient or others, 32% for elderly patients with confusion, dementia, or agitation, 8% for patients at high risk for falls, 8% for physically unstable patients and 4% for patients that could not be restrained or sedated. A retrospective chart review of all patients receiving constant observation at one hospital site over a nine month period (Blumenfield et al, 2000) indicated that the most common diagnosis for patients (42%) was organic brain syndrome (delirium and/or dementia) followed by mood disorder (15.8%). Another retrospective chart review of all patients receiving constant
observation at one hospital site found that the most common reason for using constant observation was suicidal ideation (47%) and other reasons included confusion, agitation and disruptive behaviour (Lambdan et al, 1996). An Australian descriptive study of “specialling” (constant observation) of older people with behavioural disturbances at one hospital site, reported that 92% of the “specialling” requests were for patients with agitation/confusion, 44% were for patients at risk of self-harm, 43% for patients who wandered and 16% for patients identified as being at risk for falls, Many of these requests for constant observation included multiple reasons why individual patients required constant observation. (Wilkes, Jackson, Mohan & Wallis, 2010).

A Canadian nested case-control study (Rochefort et al, 2011) found similar results and identified that as compared to controls, units using observers had significantly more patients with old age (≥ 75 years; OR 2.40 95% CI 1.89-3.40), cognitive impairment including delirium or dementia (OR 3.17 CI 2.50-4.02), alcohol abuse (OR 3.68 CI 2.62-5.17), suicidal ideation (OR 21.7 CI 7.13-66.1), psychosis (OR 3.51 CI 1.90-6.48), psychoactive medications such as general anesthetics (OR 3.62 CI 2.82-4.64) and benzodiazepines (OR 2.85 CI 2.02-4.01).

Other studies have also found that use of certain medications is associated with an increased risk of sitter use. In a retrospective case control study, compared to those who did not receive a sitter, patients with a sitter were more likely to have a higher anti-cholinergic load and more drug to drug interactions. Every additional drug with an anti-cholinergic load increased the likelihood of sitter use by 40% with a reported odds ratio of 1.4 (95% CI 1.1-1.7) (Mallet, 2012; Lessard, Charbonneau-Allard, Rochefort, Tamblyn & Mallet, 2013).
Hospital Use and Prevalence

Based on the literature review, constant observation appears to be a widely used intervention in North American and Australian acute care hospitals. There were no studies reporting the extent of use in other jurisdictions.

Cross-sectional surveys of hospitals in the USA reported that the majority of hospitals use constant observation (Worley et al, 2000; Torkelson & Dobal, 1999). The proportion of hospitals reporting the use of constant observation range from 87.3 % (Worley et al, 2000) to 100% (Torkelson & Dobal, 1999). An Australian study reported that 86% of hospitals responding reported using constant observation which is called “one-to-one nursing specials” in that jurisdiction (Watson, Brand, Watson & LoGuidice, 2009).

Only one Canadian study examined the extent of the use of constant observation. However the methodology of this study was different than those reported in the USA and Australia and looked at the proportion of patients receiving constant observation in the hospital rather than the proportion of hospitals using constant observation in a specific geographical location. In an 800+ bed multiple site urban tertiary care centre in Quebec, Canada, an observer was used for 2.7% of patients (n=1179) out of a cohort of 43,212 patients admitted to medical and surgical units (psychiatry units, obstetrics and emergency departments were excluded) between January 2007 and December 2008 (Rochefort, Ward, Ritchie et al, 2011). Other sources of evidence to indicate that constant observation is used in Canadian hospitals was obtained from studies that looked at interventions used for hospitalized patients with delirium and those with responsive behaviours. Canadian nurses caring for orthopaedic patients with delirium identified that constant observation was a strategy used to manage the confused patient especially in patients whose behaviour was “difficult to manage” (Rogers & Gibson, 2002). Similarly,
another Canadian study examining the prevalence of other geriatric syndromes and care issues for patients on a medical unit with delirium, at one acute care hospital site in Ontario, reported that 28% of patients with delirium required sitters at some point during their hospitalization (Dasgupta & Brymer, 2015).

**Costs of constant observation**

In a survey of hospitals across the USA asking about constant observation practices, Worley and colleagues (2000) asked for information on associated costs. Most hospitals (61.8%) at that time did not track constant observation expenditure. The remainder of the hospitals reported expenditure on constant observation ranging from $3978 to $565,370 per annum, however these data were collected in 1996 and the dollar costs today would be higher due to inflation. Costs will also vary based on the frequency of use in different units and organizations.

Most of the cost information on constant observation is obtained from expenditures at single hospital sites. Cost data range widely depending on the organization where the study took place. Annual costs are reported to range from $500,000 in the year 2000 for a 620 bed tertiary facility (Blumefield, Milazzo & Orlowski, 2000), $1.5 million for a hospital in 2004 (Sweeney et al, 2008) and $1.3 million for just one 59 bed inpatient unit annually (Salamon & Lennon, 2003). Two Australian studies used unpaid volunteers to provide constant observation (Donogue et al, 2005; Giles et al, 2006) thereby incurring costs only of having a supervisor for the volunteers.

**Relationship of Constant Observation on Outcomes**

**Constant Observation and Patient Outcomes**

The benefits of constant observation in decreasing adverse events is minimal and mixed. The most commonly examined outcome is patient falls. In a literature review conducted to determine whether sitters prevent falls in hospitalized older adult (Lang, 2014), 12 studies were
retained for the review however, most of these were lower quality correlational descriptive studies, program evaluations and quality improvement projects. Studies focused on reducing sitters showed no increase in falls rates and studies implementing sitters to reduce falls showed conflicting results (Lang, 2014). Another study describing best practices for the use of sitters to prevent falls based on reviews of the evidence and data from 75 hospitals (Feil & Wallace, 2014) reported a correlation between the use of a sitter program and a decrease in falls resulting in harm (p<0.05).

Some researchers implementing interventions to standardize and decrease constant observation use, did attempt to identify whether there was an increase in adverse events with a decrease in the use of constant observation. Tzeng and colleagues (2008) found that a high number of sitter requests was associated with decreased use of restraints but fall rates were higher. The authors attributed these results to a lack of clarity about accountability for falls prevention when multiple care providers are present; however an increased rate of sitter requests may have indicated that there were more patients at high risk for falls. Similarly Harding (2010) was unable to show whether fall rates and elopement/violent incidents decreased with an increase in the number of sitter shifts in one US acute care hospital (Harding, 2010). However, the standard of care at that hospital site was to provide a sitter for high risk patients (those with violent behaviours or at risk for falls), therefore when there were no sitters there may have been fewer patients at risk for falls and psychiatric crises.

Two Australian studies showed conflicting results about constant observation and patient outcomes. In the first study (Donoghue, Graham, Mitten-Lewis et al, 2005), a reduced incidence of falls was found on an inpatient aged-care unit after the introduction of a trained volunteer role to provide constant observation and recreational activities. This role involved grouping four high
risk patients in one room with a volunteer constantly present and a second volunteer in and out of the room. The mean fall rate was 15.6 falls per 1,000 bed days pre-intervention, and dropped to 8.8 per 1,000 bed days post-intervention. This was a significant drop by 44% (p<0.000). No falls occurred when volunteers were present during office hours. Family members liked the volunteer role and were reassured by the presence of the volunteer (Donoghue, Graham, Mitten-Lewis et al, 2005). In the second study, a four bed safety bay was implemented on a medical unit which was staffed with volunteers providing constant observation and recreational activities from 9 am to 5 pm Monday through Friday (Giles, Bolch, Rouvray, et al, 2006). Although no patient fell in the safety bay when the volunteer was present, this had no significant impact on the overall unit fall rate when comparing the pre-intervention and post-intervention time period. It is also difficult to tease out the influence of the use of recreational activities on the observed outcomes.

Only one study was found that looked at the cost-effectiveness of a sitter program in reducing the incidence of falls and increasing patient satisfaction (Boswell et al, 2001). By examining hospital data for a 21 month period in medical and surgical units, Boswell and colleagues estimated that patient falls increased marginally (0.0019 falls) for each eight hour sitter shift resulting in a small incremental cost per sitter shift. At the same time, patient satisfaction with overall care and response time to call bells improved minimally; therefore a small amount of revenue was generated for the hospital per sitter shift based on whether the patient would return for care in the future. This did not cover the sitter costs and so the hospital derived a net expense for each sitter shift. As a result the researchers were unable to demonstrate that the use of sitters was cost-effective.
The impact of the use of sitters (both paid and volunteer) on other adverse events such as exit-seeking, removal of treatment equipment, incidents of injury to staff are not widely reported (Jaworowski, Raveh, Lobel et al, 2008). The focus of the use of sitters has been on falls prevention and the results are inconclusive.

**Reducing Constant Observation due to costs**

Since constant observation is expensive, health care administrators have looked at reducing the usage and whether its use influences patient outcomes. There are many studies and quality improvement projects aimed to decrease the use of constant observation specifically to save costs (Rausch & Bjorklund, 2010; Turjanica et al, 1998; Sweeney et al, 008; Salamon & Lennon, 2003; Harding, 2010; Nadler-Moodie et al, 2009; Tzeng et al, 2008; Weeks, 2011; Spiva, 2012; Adams & Kaplow, 2013; Laws & Crawford, 2013; Gillies, Coker, Montemuro & Pizzacalla, 2015; Wray & Rajab-Ali, 2014; McNicoll, Butterfield, Fedo & Riley, 2014; Andre et al, 2012). All these studies used a pre and post intervention design at a single site to examine the effect of alternative interventions on constant observation use, associated costs and impact on adverse events such as fall rates.

The interventions implemented by acute care hospitals to decrease costs associated with constant observation use were varied. Many interventions included policy and procedure development for delirium prevention or constant observation practices (Sweeney et al, 2008; Salamon & Lennon, 2003; Turjanica et al, 1998; Weeks, 2011; Spiva, 2012; Adams & Kaplow, 2013; Laws & Crawford, 2013; Gillies, Coker, Montemuro & Pizzacalla, 2015; Wray & Rajab-Ali, 2014; McNicoll, Butterfield, Fedo & Riley, 2014; Andre et al, 2012). These policies and procedures included the development of algorithms with alternative strategies to be implemented and deemed unsuccessful prior to the use of constant observation. Some of these alternative
strategies included: more frequent observation; daily staff huddles; moving the patient closer to the nursing station; use of safety equipment such as non-slip socks and regular toileting (Salamon & Lennon, 2003; Andre, 2012; Weeks, 201; Spiva, 2012; Adams & Kaplow, 2013; McNicoll et al, 2014).

Other strategies implemented to decrease the use of constant observation included: staff education on delirium prevention and alternative strategies to prevent and manage responsive behaviour (Turjanica et al, 1998; Dick, LaGrow & Boddy, 2009; McNicoll et al, 2014; Gillies, Coker, Montemuro & Pizzacalla, 2015); mandatory psychiatric nurse consultation (Rausch & Bjorklund, 2010; Lakatos, 2009) or geriatric and/or psychiatry consultation team involvement (Turjanica et al, 1998; Capron, 2010); delirium prevention program implementation (Caplan & Harper, 2007; Kratz, 2008; Sweeney et al, 2008; Laws & Crawford, 2013); use of remote video-monitoring (Jeffers, Searcey, Boyle, Herring, Lester, Goetz-Smith et al, 2013) and sitter request forms or tools (Harding, 2010; Tzeng et al, 2008). Additional interventions included hiring staff members who were then educated to be observers (Harding, 2010; Bailey, Amato & Mouhlas, 2009) and developing special units or areas where patients at risk can be grouped (Nadler-Moodie et al, 2009; Rape, Mann, Schooley & Raney, 2015; Wright, 2006).

All these pre and post intervention design studies reported decreased usage and costs associated with constant observation, without an increase in adverse events such as falls. However these studies had significant limitations including a lack of descriptions of patient populations, which makes it difficult to determine their comparability. In some cases, measurement strategies and interventions were not adequately described and there was no discussion of other factors such as patient, staff, unit and external environment characteristics that may have impacted the results. Although decreased costs and usage were reported in some
articles, this was not accompanied by any supporting evidence such as actual pre and post intervention costs and usage comparisons. (Capron, 2010; Gillies et al, 2015; Laws & Crawford, 2013).

**Staff Factors Influencing Constant Observation**

Nurse and physician factors have all been found to influence the use of constant observation. A Canadian study (Rochefort et al, 2011) sought to examine the relationship between constant observer use and RN experience, overtime and absenteeism. The researchers used a nested case-control study design from a cohort of 43,212 medical and surgical patients admitted to one academic health centre over a two year period. There were 1,179 cases of sitter use, and for each case approximately four controls (n=4167) were randomly selected from those patients that did not receive constant observation. The institutional administrative data were analyzed using multivariate logistic regression within a generalized estimating equation model. The study results indicated that high RN overtime and inexperience was associated with increased sitter or observer use. For every five years of collective RN experience (the number of years of experience added for all nurses present during that shift) the odds of constant observation use were decreased by 23% (OR = 0.77 95% CI 0.66-0.89), and for each additional hour of RN overtime, the likelihood of constant observer use was increased by 108% (OR 2.08 95% CI 1.32-3.29). Higher nursing education (baccalaureate versus diploma) of the nurses working on the unit while the patient was present was also associated with a marginally increased use of constant observation (OR 1.05 95% CI 1.01-1.08); however the authors attributed this increase to the lower number of years of experience for baccalaureate prepared nurses as they are generally younger. This indicates that in circumstances where nurses are fatigued or inexperienced, they are more likely to delegate surveillance to constant observers.
Physician experience and education may also be linked to the ordering of constant observation (Jin, Novik & Saravay, 2000). This study took place at a hospital where psychiatry consultation was mandatory for patients placed on constant observation. A retrospective chart review was conducted for a six month period of patients referred for psychiatry consultation. Consultation notes were reviewed to see how often constant observation was recommended, and whether there was an association with medical resident experience and training in consultation-liaison psychiatry. Psychiatry residents with training in consultation-liaison psychiatry were less likely to prescribe constant observation (prescribed in 15.4% of cases) than less experienced residents without such training (prescribed in 44% of cases). Consultation-liaison-trained residents also ordered constant observation less frequently during the day time (2.8% of the time) when (the authors hypothesized) experienced staff psychiatrists were present to review the cases and provide support, than after hours (22.1% of the time). These differences were statistically significant (Jin, Novik & Saravay, 2000) and imply that increased experience and psychiatric training may make residents less likely to prescribe constant observation. There was no discussion of alternative interventions that were implemented.

Organizational Factors Influencing Constant Observation

Nursing practice in large organizations, such as hospitals, are guided by hospital policies and procedures and unit culture. Policies and procedures are often reflective of both the available evidence and organizational priorities, and therefore appear to vary in different hospitals and countries. This is demonstrated in the results of a USA hospitals survey whereby physician orders were required to initiate constant observation in 55% of hospitals in one survey (Torkelson & Dobal, 1999), and 81% of hospitals in another survey (Worley et al, 2000) had a written policy for constant observation. In Australian hospitals, guidelines surrounding the use
of constant observation were unclear (Watson et al, 2009), whereas there were no policies, procedures and orders required in the Canadian study of one hospital system (Rochefort et al, 2011). In some settings psychiatric consultation is required prior to initiation of constant observation for all medical and surgical patients receiving constant observation (Worley et al, 2000; Jin, Novac & Saravey, 2000), and this also seemed to be the case in Israeli hospitals (Mergui, Raveh, Lobel, et al, 2008).

Once constant observation was initiated there was inconsistency around how it could be discontinued. Some hospitals (47% to 88%) required a physician’s order to discontinue constant observation (Worley et al, 2000; Torkelson & Dobal, 1999), in other cases the discontinuation criteria were lacking and not well understood so that once constant observation was initiated, it often continued up until discharge (Rausch & Bjorklund, 2010). Several hospital sites reported that they implemented policies and requirements for physician orders as part of their cost reduction endeavors (Salamon & Lennon, 2003; Harding, 2010).

An organizational factor that could influence constant observation is a clear policy on constant observation. In a synthesis of the evidence around best practices for the use of observers to prevent falls, Feil and Wallace (2014) outlined recommended elements for a sitter program including: a process for requesting and discontinuing sitters, specific patient eligibility criteria, a pool of sitters, criteria for sitter qualifications, a sitter job description and accountabilities and an education program for sitters. Of these elements, a pool of sitters, a sitter education program and criteria for sitter qualifications were associated with a lower occurrence of falls resulting in harm based on regression analysis of data from 75 hospital sites.
The use of constant observation is considered to be a nursing sensitive indicator for some organizations. 196 hospitals in the Western USA contribute information about nursing sensitive indicators to the Collaborative Alliance for Nursing Outcomes. This information is then used to develop benchmarks for the collaborating hospitals to evaluate their performance. One indicator reported is sitter hours, which is defined as the percent of total hours of care (not included in total care hours). Data from 2007/2008 reports that the mean sitter hours is 3.55% of total care hours with a range of 0% for hospitals with lowest use (10th percentile) and 8.07% for hospitals with the highest use (90th percentile) (Brown, Donaldson, Bolton & Ahydin, 2010). This data indicated that sitters are used in the majority of participating hospitals and that hospitals are being benchmarked to strive to decrease their sitter hours to zero.

Although the nurse is not always able to initiate or discontinue constant observation (Torkelson & Dobal, 1999; Worley et al, 2000), according to most hospitals’ organization policies the observer is directly accountable to the nurse responsible for the patient. The observer is told to inform the nurse if any concerning patient behaviour takes place or help is required, as well as to consult with the nurse at the beginning and end of the shift to receive information about the patient’s status (Segatore & Adams, 2001; Rochefort et al, 2011; Donogue et al, 2005; Giles et al, 2006). Therefore, nurses are accountable for the care provided by the constant observer.

The Nurse and Observer Dyad

While there is no research evidence making the link between the nurse and observer dyad and the influence the dyad has on constant observation in acute care, research has been done on the nurse and unregulated care provider (UCP) dyads which informed this study. The nurse is responsible for evaluating the patients’ health status and the effectiveness of the delegated
interventions provided by the unregulated care providers (College of Nurses of Ontario, 2011; Kleinman & Saccomano, 2006; Standing & Anthony, 2008). Patient surveillance is an important component of the nursing role in promoting patient safety. Surveillance prevents adverse events such as falls through monitoring and acting on signs of changes in a patient’s health status (Kutney-Lee, Lake and Aiken, 2009). Patients who require constant observation are those at risk of such adverse events due to behaviours that may put them at risk of harm to themselves or other such as wandering, agitation, falls or interference with medical equipment (Tzeng et al, 2008; Worley et al, 2000; Rausch & Bjorklund, 2010); therefore, they are in greater need of surveillance by nursing staff. During constant observation, nursing staff delegate the surveillance component of their role to the observer (Rochefort et al, 2011). The observer works under the accountability of the nurse responsible for that patient similar to other UCP roles in acute care hospitals described in the literature (Kleinman & Saccomano, 2006; Chang, Lam & Lam, 1998; Rochon, Heale, Hunt et al, 2015; Standing & Anthony, 2008; Spilsbury & Meyer, 2004; Conway & Kearin, 2007). Regulatory guidelines in the USA and Canada indicate that the nurse who assigns care responsibilities or supervises a UCP must ensure that the UCP understands their duties and knows when to ask for assistance (College of Nurses of Ontario, 2011; Standing & Anthony, 2008; Kleinman & Saccomano, 2006).

In long term care settings personal support workers (PSWs), a type of UCP, provide most of the hands on care to residents under the supervision of the nurse, therefore the nurse works through the PSW in an indirect way by delegating and supervising the care provided by the PSW (McGilton et al., 2012). This is similar to the role of the nurse and observer in the constant observation intervention, where the nurse assigns the specifics of the observer role to the observer. Many of the patients requiring constant observation have responsive behaviours related
to delirium and/or dementia; thus an important role for the nurse is to work with the observer on trying to identify the meaning behind the behaviour, thereby directing effective interventions to address the underlying issues (RNAO, 2004; McGilton et al, 2012). In long term care settings, effective communication and collaboration between the PSW and nurse is essential for coordinating and providing effective patient care (McGilton, McGillis Hall, Wodchis & Petroz, 2007) which has been linked to an increase in patient-centred approaches to care by the PSW (McGilton, 2003). Relationship-oriented management practices by the Registered Nurse (RN) such as good communication between staff and shared decision-making, between the RN and PSW, may promote better patient outcomes (Toles & Anderson, 2011).

Similarly in the research conducted in hospitals, the importance of effective delegation for nurses working with UCPs, (Kleinman & Saccomano, 2006; Standing & Anthony, 2008) is highlighted as well as good team work practices (Potter & Grant, 2004; Conway & Kearin, 2007; Johnson, Magnusson, Allan et al, 2015), however there is variability between units and in some cases between individual RN-UCP dyads as to whether effective team work was in place. Indicators of effective team work based on a study at one hospital site include: good communication, appreciation for each other’s contribution and helping each other (Potter & Grant, 2004). Based on an ethnographic study at three hospital sites examining how newly qualified nurses worked with health care aides, the attributes of good teamwork practices where they occurred included: understanding each other’s roles, information-sharing, both involved in bed-side care, helping each other as well as confident task-allocation by the RN while providing some supervision. The authors described this as “working together” (Johnson et al, 2015). In the same study the authors described lack of team work as “working in parallel”. The attributes of a lack of team-work included: role confusion, less collaboration, inadequate communication as
well as problematic delegation and supervision by the RN. Another study where RNs, physicians and UCPs at one hospital site were interviewed, fragmented care was described where the three care providers worked separately and didn’t interact much other than when necessary (Lancaster, Kolakowsky-Hayner, Kovacich et al, 2015).

While there is scant literature on nurse and observer working relations, there has been increased interest in the importance of effective team work and inter professional collaboration in the health care literature (Young et al., 2011; Canadian Health Services Research Foundation (CHSRF), 2006; Healthforce Ontario, 2010; D’Amour, Ferrada-Videla, San Martin Rodriguez & Beaulieu, 2005). Most of the focus on inter professional collaboration has been on how health care professionals such as nurses, physicians and allied health professionals work together, and does not explicitly include unregulated care providers. Core concepts in this collaboration include sharing, partnership, interdependency and power (D’Amour et al, 2005). Components of effective teamwork include clear goals or purposes, good communication, coordination, role clarity, collaboration, protocols and procedures, as well as mechanisms to resolve conflict if it occurs (CHSRF, 2006; Young et al, 2011; Healthforce Ontario, 2010).

In the nurse and observer role there is a power differential whereby the observer is accountable to the nurse. This team is a hierarchical team with a focus on task oriented work (Cott, 1997; Lancaster, Kolakowsky-Hayner et al, 2015) where the nurse directs the duties of the observer. This hierarchical relationship may preclude or limit the application of collaboration; however, the components of effective team work such as communication, coordination, role clarity and presence of policies and procedures are still important to consider in the description of the constant observation intervention. These components have been found to influence patient outcomes in hospitals (CHSRF, 2006) and may lead to improved outcomes for staff and patients.
in long term care settings where nurses and unregulated care providers work together (Toles & Anderson, 2011). While nurses are accountable for the care provided by the constant observer, in many places nurses do not have the authority to initiate or discontinue constant observation. Since the nurse and observer need to work closely together, it can be hypothesized that team work between the nurse and observer may be an important factor to consider regarding the success of the constant observation intervention. A description of how the nurse and observer dyad communicate and coordinate care would be a helpful addition to the literature on constant observation.

**Summary of Literature Review**

The literature on constant observation in acute care settings indicates that it is a widely used and costly intervention with minimal evidence on whether it does indeed prevent adverse events. The available literature describes the characteristics of patients receiving constant observation, the nurse and physician and organizational characteristics associated with constant observation usage, and characteristics of effective dyads and teams. However, little is known about what the observers are actually doing while providing constant observation - are they only observing patients (a passive role) or are they providing care or specific interventions (an active role)? In addition, there is a paucity of knowledge on how the nurse and observer work together around delegation of the observer role and the amount of support and supervision the nurses are providing. Further, patient outcomes of the use of constant observation are not consistently identified so determining what the benefits are from both the nurse and observer perspective is an important next step.
Conceptual Framework

The framework of external and internal factors that have been identified as important in understanding teamwork developed by Cott in 1995 was used as the framework to guide this study. Cott’s framework was used as it makes explicit the factors influencing how the nurse and observer work together (team work) in providing constant observation, as well as the factors that have been found to influence constant observation practices in the literature.

The framework of external and internal factors important in understanding teamwork consists of intra-team factors, extra-team factors, and team performance (Cott, 1995). In the case of the nurse and observer, there are only two people working together so it is difficult to define the two as a team. As a result the nurse and observer will be referred to as a dyad rather than a team and the language relating to “team” in the conceptual framework have been replaced with dyad. In addition, since this study focused specifically on the dyad providing constant observation, reference to team performance has been renamed as “Constant Observation Performance”. Extra-dyad factors consist of influences outside of the dyad that impact the provision of constant observation. These include patient characteristics and the unit, hospital and external environment. While the patient, unit and hospital characteristics were investigated, the external environmental factors (those beyond the hospital) were not formally examined in this study as all the data collection sites were operating under similar regulatory and economic environments. Intra-dyad factors are those that are specific to the nurse and observer providing constant observation and included characteristics, attitudes and functions of nurses and observers. Dyad performance, as described by Cott (1995), involves the outcomes of the dyad functioning including dyad effectiveness, quality of care, patient and family satisfaction. For the purposes of the study, constant observation performance includes the following outcomes of the
dyad: the practices of the dyad and their perceptions about the benefits of constant observation.

Table 3 outlines the study variables that were selected based on the literature review and conceptual framework as being important for the examination of the constant observation practices.

Table 3: Conceptual Framework: Extra and Intra Dyad Factors and Constant Observation Performance

<table>
<thead>
<tr>
<th>Extra-Dyad Factors</th>
<th>Intra-Dyad Factors</th>
<th>Constant Observation Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit and Hospital Context: Staffing</td>
<td>Nurse Characteristics and Functions: Experience Education Credentials Age and Sex Role description Attitudes about Constant Observation Nurse-Observer Communication and Coordination</td>
<td>Practices of Nurse and Observer Perceived Benefits of Constant Observation</td>
</tr>
<tr>
<td>Constant observation policies and procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit physical environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Observer Characteristics and Functions: Experience Education Credentials Age and Sex Role description</td>
<td></td>
</tr>
<tr>
<td>Patient Characteristics: Age and Sex Cognitive Impairment Mental Health Issues Responsive Behaviours Alcohol or drug misuse Falls history Functional Impairment Assistance with ambulation Medications</td>
<td></td>
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</tr>
</tbody>
</table>

In summary, the focus of this exploratory study was to describe intra and extra dyads factors, and constant observation performance.
Chapter 3
Design and Methods

This chapter describes the research methods and procedures for the study. The research design, sample and sampling approach, selected measures, data collection methods and data analyses procedures are discussed. In addition, ethical considerations and validity considerations are also described.

Design

A convergent parallel mixed methods design was used for this study. Mixed methods studies combine both qualitative and quantitative types of research (Creswell, 2009). In mixed methods research both qualitative and quantitative data are collected and are analyzed separately using traditional techniques for each type of data and then are combined after analysis in the presentation and/or interpretation of the results (Creswell & Plano-Clark, 2011; Tashakkori & Teddlie, 2010).

In a convergent parallel mixed methods design study such as this study, the qualitative and quantitative data are collected at the same time in parallel (concurrently), analyzed separately and then merged in interpretation and discussion of the results (Creswell & Plano Clark, 2011). The benefit of mixed methods studies are that: the most appropriate techniques from both qualitative and quantitative methods can be used to investigate the area of interest (Tashakkori & Teddlie, 2010) which may lead to a more complete understanding of the area of interest (Creswell & Plano Clark, 2011); there is also an opportunity to corroborate information from different sources of data.

Since little is known about the details of the constant observation intervention, the multiple sources of data collected in this mixed methods design (See Figure 2) helped provide
valuable information about constant observation. The purpose of a convergent design is “to obtain different but complementary data on the same topic” (Morse, 1991, p.122), therefore the reasons for choosing this mixed methods design was to ensure both triangulation and completeness (Green, Caracelli & Graham, 1989; Creswell & Plano Clark, 2011). Triangulation (convergence) allowed for corroboration and correspondence or divergence of results from the different qualitative and quantitative methods (Green et al, 1989; Creswell & Plano Clark, 2011) whereas completeness (Bryman, 2006) allowed for the enhancement and clarification of the results of one method with those of the other method. Collecting information on constant observation through both the qualitative and quantitative strands helped provide a more complete picture of what took place during constant observation and the opportunity to corroborate results from different sources of data. Since answering the research questions with whatever methods is most appropriate is central to mixed methods research (Creswell & Plano Clark, 2011), the priority of the qualitative and quantitative research strands will vary with each individual research study. In this study, equal emphasis was given to the qualitative and quantitative research strands. The quantitative strand consisted of a descriptive cross-sectional study and the qualitative strand consisted of a qualitative description study as described by Sandelowski (2000a; 2010).

**Quantitative strand**

The quantitative strand consisted of a descriptive cross-sectional study where data collection took over a short period of time. Cross-sectional design studies are useful for describing phenomena or variables and also for examining associations (Newman, Browner, Cummings & Hulley, 2007). Methods of data collection that were included in the cross-sectional design were questionnaires and chart review. These methods were used to collect information on
the nursing unit environment, the characteristics of the nurse and observer, perceptions of
constant observation use as well as communication and coordination between the nurse and
observer. Comparisons were made between scores on questionnaires at the two sites.

**Qualitative strand**

The qualitative strand consisted of a qualitative description approach as described by
Sandelowski (2000a; 2010). This type of approach is used in exploratory descriptive studies
where the objectives are to provide a comprehensive summary of phenomena or events
(Sandelowski, 2000a) by presenting findings that are closer to the data as given (Sandelowski,
2010) without high levels of abstraction (Sandelowski, 2000).

The qualitative strand led to the collection of information on constant observation
practices, as well as the perceived benefits and limitations of constant observation through
interviews and non-participant observation. Through qualitative description the “who, what and
where” (Sandelowski, 2010 p. 339) of constant observation practices at the two sites were
described in this study.

In both strands there was the assumption that the data is a more or less accurate reflection
of reality, in this case, constant observation practices as they occurred at the data collection sites.
An overview of the convergent parallel mixed methods design with the two strands is provided
in Figure 2.
Figure 2: Convergent Parallel Mixed Methods Flowchart

Objectives of the Convergent Parallel Mixed Methods Study were to:

- Describe the practices of the observer and nurse during constant observation
- Explore the perception of communication and coordination of care between the nurse and observer
- Describe the characteristics of the nurse, patient, observer, unit and hospital
- Explore the perceived benefits of constant observation from the perspective of the nurse and observer

Quantitative

**Extra-Dyad Factors:**
- Patient characteristics: chart review
- Unit and hospital context: National General Hospital Constant Observation Practices Survey

**Intra-Dyad Factors:**
- Nurse and Observer characteristics: demographic questionnaire
- Attitudes: Perceptions of Constant Observation Use Questionnaire
- Perceptions of Communication and Coordination: "Nurse to observer relationships" and "General relationships and communications" sub-scales of the Shortell Questionnaire

Qualitative

**Extra-Dyad Factors:**
- Unit characteristics and constant observation policies and procedures: manager interviews

**Intra-Dyad Factors:**
- Observer and Nurse role descriptions/functions: manager interviews
- Constant Observation Performance:
  - Nurse and observer practices: interviews with nurses and observers and non-participant observation
  - Perceived benefits of constant observation: interviews with nurses and observers

Analysis of Quantitative Data

Descriptive and inferential statistics

Analysis of Qualitative Data

Thematic analysis

Merging of the two sets of results

Integrated reporting of qualitative and quantitative results as they relate to extra-dyad factors, intra-dyad factors and constant observation performance

Interpretation of the merged results

Summary and diagrammatic representation of the results and their relationship to the conceptual framework
Discussion of how the results from the qualitative and quantitative data compared and produced a more complete understanding of constant observation practice
The advantage of the convergent parallel design is that both qualitative and quantitative data were collected at the same time making it less time-consuming. The convergence of the qualitative and quantitative results occurred at the interpretation phase of the research when the results were integrated and discussed. The multiple sources of data collected in this design provided more evidence for a richer description of the constant observation intervention.

**Settings**

A purposive sampling framework led to the selection of the two inpatient units where constant observation takes place at two different hospital sites (one unit at each hospital site). Two hospital sites were included to try to identify similarities and differences in constant observation practices between sites operating under the same regulatory and similar fiscal environments. The logic in purposive sampling is different than in statistical sampling as the aim is to understand the phenomenon of interest rather than to generalize the findings to any particular population. Units were chosen where constant observation took place on a regular basis (at least four times per month). Since the objectives of the study were to describe constant observation practices, units with high usage of constant observation were selected to facilitate data collection to meet that research objective. Sampling staff working in hospitals with different constant observation practices were thought to yield both similarities and variations in practices which was important as little was known about constant observation practice.

One unit was selected in each of two hospitals. Site A was a 76 bed medical unit which provided care to 1554 older adult patients (50% of patient population) in fiscal year 2010-2011. This unit had a mixed RN and UCP care delivery model. This medical unit budgeted and staffed for three UCPs designated to work as observers each shift (day, evening and night), so it was anticipated that recruiting a sample size of up to ten RN-observer dyads would be feasible within
a month. In addition to the three observers on each shift, there were UCPs scheduled to work on the unit each shift and were assigned to work with the nurses in assisting with direct care, therefore UCPs rotated between working on the unit generally and providing constant observation.

Site B was a 24-bed medical unit and provided care to 511 older adult patients in fiscal year 2011-2012 and 611 older adult patients (aged 65 years and older) in fiscal year 2013/2014. Older adult patients were approximately 54% of the total patients admitted to the unit. Between August 2011 and July 2012 $38,000 was spent on constant observation with an average of five patients per month requiring constant observation. Site B had an all-RN nursing care delivery model. This site did not directly employ observer staff but rather the observers were provided on an as-needed basis from private agencies with whom the hospital had a contract to provide such services. With an average of 5 patients a month requiring observation for 3 shifts per day, it was anticipated that a sufficient number of nurse-observer dyads could be recruited in a three month period.

Sample

Sample Size

Sample size is a complex consideration in mixed methods research since it involves both qualitative and quantitative data collection with different ways of estimating sample size requirements. Qualitative data collection traditionally requires a smaller sample size since the purpose is to examine the issue or concept (in this case constant observation) in more depth, whereas quantitative data collection requires a larger sample size for the purpose of determining representativeness of the sample and generalizability to the larger population (Crewell & Piano Clark, 2011). If the sample is too large then there is a possibility that the qualitative data will be
superficial, whereas if the sample size is too small, making inferences about the larger population from the results may not be valid. To account for these differing sample size requirements, while all participants were selected from the same population, the sample size for the qualitative and quantitative components differed. A discussion of the sample size for the qualitative and quantitative components of the study is provided below.

**Qualitative sample.**

A target of up to ten nurse and observer dyads from each medicine unit for a total of 20 dyads was the goal of recruitment for the observation and interviews. A sample of 20 dyads was estimated to be adequate for the qualitative component (Sandelowski, 1995) and the vast majority of studies using an interpretive description approach have sample sizes between 5 and 30 (Thorne, 2008). The final number of dyads invited to participate from each site was based on the saturation criterion. Saturation in this research study meant that there was sufficient data collected to support all of the categories identified in the analysis process and the information was adequate enough to describe constant observation practices and to be able to make generalizing statements about constant observation practices at the two sites (Morse, 2007; Miller & Crabtree, 2005).

**Quantitative sample.**

To allow for the opportunity to collect the maximum number of questionnaires from the two sites, all nurses working on the two units were invited to participate in completing the questionnaires. Because the study is exploratory and the “Nurse to nurse relationships” and “General relationships and communications” subscales of the ICU Nurse-Physician Questionnaire (Shortell et al, 1991) have not been used with this population before it was difficult to determine
an adequate sample size required for survey completion. So instead the aim was to sample at least 40% of the staff from both units based on response rates of 35% to 100% using these questionnaires in previous studies (Doran, Sidani, Keatings & Doidge, 2002; Shortell, Rousseau, Gillies, Devers & Simons, 1991; Strumpf & Evans, 1988). Both units employed RNs as the only regulated nursing staff. Site B had 41 full, part-time and casual RN staff whereas Site A had 113 full, part-time and casual RN staff at the time of data collection. It was estimated with a response rate of 40% that 62 nurses would complete the questionnaires. Information on organizational policies and procedures related to constant observation practices was collected through interviews with the unit managers at the two sites.

**Eligibility Criteria**

Constant observers, RNs, patients and the unit managers were recruited for the study. The specific selection criteria for the different groups of participants were:

1. Observers providing constant observation to older adults (65 years and older)

2. Full, part-time, and casual RN staff working on the unit caring for patients that receive constant observation

3. Unit Managers responsible for the unit

4. Older adult patients (aged 65 and older) who are receiving constant observation during their hospitalization.

**Exclusion Criteria**

1. Observers hired privately by patients and families were excluded from this study. Caregivers hired by patients and families are not accountable to the nursing staff and have a different relationship with the patient as they may have known and cared for the patient
in the community (Tzeng & Yin, 2007; Jaworowski, Raveh, Lobel et al, 2008). In addition, privately hired care givers may have different roles and responsibilities than hospital-hired observers. In consideration of these issues, only observers paid by the hospital were eligible to participate.

2. Patient participants or their substitute decision-makers who were unable to speak and understand English to provide informed consent to participate in the study were excluded.

**Recruitment**

**Nurse and Observer Recruitment for Questionnaires and Observation**

After receiving approval from the Research Ethics Boards, the researcher connected with the managers of the medical units at the selected hospital sites. The managers were asked to help arrange a time for information sessions during which the researcher could meet with nursing and observer staff to discuss the study details. Refreshments were provided for the information sessions. Four information sessions occurred at each site. These sessions were scheduled at times convenient to staff and in order to provide information to staff working on all shifts (day, evening and night) including weekends. A poster about the study was posted on the unit bulletin board. RN staff from the two units were recruited to complete the questionnaires and a smaller sub sample were required for direct observations. Observer staff were recruited to participate in the direct observations. Nurse and observer participants received a $5 coffee card for participating in the study.

**Patients**

The researcher connected with the RN in charge/team leader on a daily basis during the data collection period, to determine whether there were any potential patient participants that
were receiving constant observation or were likely to require constant observation during the hospital stay and would be interested in participating in the study. Posters were also displayed, around the unit, to inform patients and substitute-decision makers about the study. The RN was also asked to identify whether or not the patient was able to provide informed consent. The researcher was then provided with the names of potential patient participants and whether or not they were capable of providing informed consent. For participants with significant cognitive impairment that were identified as not being able to provide informed consent, the substitute decision makers were contacted by telephone and asked about their interest in participation. Those expressing interest in participation were provided more detailed information about the study. Those agreeing to participate in the study were enrolled. After consent was obtained from the substitute-decision maker, the researcher scheduled a shift to collect data. Since the staff working with each patient on the specific shift were not assigned in advance, on the day of scheduled data collection the RN assigned to the patient and the constant observer were approached to determine whether they would consent to participate. All three participants (the patient, RN and observer) had to consent for the observation to take place. In addition, the patient was also approached to see if they would assent to being observed. Detailed information on the consent and assent process are included in the ethical considerations section.

**Sources of Data**

The data collected were organized into intra dyad factors, extra dyad factors and constant observation performance. Extra dyad factors included information about unit, organizational and patient characteristics. Intra dyad factors included information on nurse and observer characteristics, nurse and observer communication and coordination as well as the nurse’s attitudes about constant observation. Constant observation performance included the practices of
the dyad as well as their perceptions of the benefits of constant observation. A summary of the data collection instruments is provided in Table 4.

Table 4: Variables and Measures Summary

<table>
<thead>
<tr>
<th>Extra Dyad Factors</th>
<th>Specific Factors</th>
<th>Measures and Data Collection Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit and Hospital Context</td>
<td>Description of unit Staffing Constant observation policies and procedures Unit’s physical environment</td>
<td>National General Hospital Constant Observation (CO) Practices Survey (Worley et al, 2000) Manager Interview</td>
</tr>
<tr>
<td>Patient Characteristics</td>
<td>Age and sex Falls history Cognitive impairment Mental Health Issues Medications Responsive behaviours Alcohol or drug misuse Functional impairment Assistance with ambulation</td>
<td>Chart Review</td>
</tr>
<tr>
<td>Intra Dyad Factors</td>
<td>Specific Factors</td>
<td>Measures and Data Collection Methods</td>
</tr>
<tr>
<td>Nurse Characteristics and Functions</td>
<td>Age and Sex Experience Job category Education Length of Time on Unit Role description Certification in Gerontology</td>
<td>Demographic Questionnaire</td>
</tr>
<tr>
<td>Nurse Attitudes about constant observation</td>
<td>Reasons for the use of Constant Observation and alternatives</td>
<td>Perceptions of Constant Observation Use Questionnaire (Evans &amp; Strumpf, 1986) Interviews</td>
</tr>
<tr>
<td>Nurse-Observer Communication and Coordination</td>
<td>Nurse Perceptions of Communication and Coordination of Care</td>
<td>“Nurse to nurse relationships” and “General relationships and communications” subscales of the ICU Nurse-Physician Questionnaire (Shortell et al, 1991). Interviews</td>
</tr>
</tbody>
</table>
### Observer Characteristics and Functions
<table>
<thead>
<tr>
<th>Age and Sex</th>
<th>Job Category, Education</th>
<th>Experience</th>
<th>Length of Time on Unit</th>
<th>Role description</th>
</tr>
</thead>
</table>

### Constant Observation Performance

<table>
<thead>
<tr>
<th>Specific Factors</th>
<th>Measures and Data Collection Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived benefits of Constant Observation</td>
<td>Interviews and non-participant observation</td>
</tr>
<tr>
<td>Practices of Nurse and Observer</td>
<td>Non-participant observation documented via Observation Data Collection Form</td>
</tr>
<tr>
<td></td>
<td>Post observation interviews</td>
</tr>
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<td></td>
<td>Manager interview</td>
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</table>

### Extra Dyad Factors

**Unit and Hospital Context.**

Information about constant observation practices and policies at the hospital and unit level was obtained from the unit manager through a semi-structured interview using an adaptation of the “National General Hospital Constant Observation (CO) Practices Survey” (Appendix F) developed by Worley and colleagues (2000). This survey was developed to collect information from hospital senior administrators in the USA on constant observation practices within their organizations. The survey was pilot tested and then administered to 102 hospitals (n=353) across the USA. The survey contained eight sections focusing on: a) hospital and unit description; b) constant observation practices; c) staff providing constant observation; d) staff training on constant observation; e) policies and procedures related to constant observation including eligible patient population; f) funding source for constant observation; g) expert consultation and h) cost saving alternatives to constant observation.
The survey was adapted to reflect the Ontario, Canada health care language by changing reference to LPN (Licensed Practical Nurse) and nursing assistant to RPN (Registered Practical Nurse) and PSW (Personal Support Worker) (Appendix F).

**Patient Characteristics.**

Data on the following patient characteristics were obtained from patients who were observed during their hospital stay: age, sex, cognitive impairment, mental health diagnoses, functional impairment, assistance with ambulation, history of falls, alcohol or drug misuse, responsive behaviours, psychoactive medications and medication with anti-cholinergic properties. This information about patient characteristics was obtained via chart review. Whether these characteristics are noted or not noted in the health record was documented on the data collection form. Appendix G presents the data collection form used for the chart reviews. These patient characteristics are defined below.

*Cognitive impairment* was operationalized as a history of dementia listed in the medical diagnoses and/or having delirium present on admission or occurring during hospitalization as documented in the health record.

*Mental health diagnoses* was operationalized as any history of schizophrenia or other psychosis, mood disorder (depression or bipolar), anxiety or personality disorder documented in the health record.

*Functional impairment* was operationalized as any documented preadmission or during hospital stay history of requiring assistance with activities of daily living (ADLs), ambulation or instrumental activities of daily living (IADLs). ADLs included bathing, dressing, toileting, transferring, continence or feeding (Katz, Down, Cash & Grotz, 1970). IADLs included:
laundry, shopping, housekeeping, food preparation, managing medication and finances, using transportation and the telephone (Lawton & Brody, 1969).

**Assistance with ambulation** included whether the patient required supervision or assistance from another person or the use of a gait aid such as a cane, walker, wheelchair or scooter preadmission or during the hospital stay.

**A history of falls** included both in hospital and prior to admission falls in the past three months documented in the health record.

**Responsive behaviours** was operationalized as referring to behaviours historically described as agitated or aggressive behaviours that have been renamed to reflect the fact that these behaviours occur in response to unmet needs or the patients’ environment (Dupuis & Luth, 2005). Responsive behaviours included any documentation of vocal or verbal behaviours, such as screaming, repetition or verbal abuse, aggressive behaviours, such as hitting or throwing objects, and physically non-aggressive behaviours, such as pacing, wandering or removal of medical equipment (Cohen-Mansfield, 2000).

**Psychoactive medication** was operationalized as any medication being administered in hospital that affects the mind or behaviour. The most common types of psychoactive medications are opioids and opiates, stimulants, depressants and hallucinogens.

**Anticholinergic medication** was operationalized as medications being administered in hospital that block the action of acetylcholine in the central and peripheral nervous system. Many medications have anticholinergic properties and include those used to treat depression, sleep disorders, urinary incontinence, asthma, and muscle spasms.
Intra Dyad Factors

Nurse and observer characteristics and functions.

All the RNs on the units were asked to complete a demographic questionnaire which consisted of the following information: age, sex, education, experience, length of time working on the unit and whether or not they hold a Canadian Nurses Association (CNA) Gerontology certification (Appendix D). The same demographic questionnaire was used to collect RN and observer characteristics for the directly observed dyads (see the section on constant observation performance). The only difference in the demographic questionnaire for the observers from the RN questionnaire was that it did not include a question about CNA gerontology certification (See appendix E).

Attitudes about Constant Observation.

Information about the nurses’ attitudes to constant observation was collected through a questionnaire called The Perceptions of Constant Observation Use Questionnaire (Appendix H) which is an adapted version of The Perceptions of Restraint Use Questionnaire (Evans & Strumpf, 1986). The original questionnaire collects information on different reasons for restraining people such as preventing falls and wandering using 11 questions on a five-point Likert scale with options ranging from “not at all important to “most important”. The Perceptions of Restraint Use Questionnaire was judged as content valid by a panel of five gerontological nurse experts. The tool has been used with nurses working in nursing homes, geriatric and geriatric psychiatry units as well as acute care in both the USA and Europe ((Strumpf & Evans, 1987, 1988; Evans & Strumpf, 1998). The scale has internal consistency as evidenced by an alpha coefficient of .80. Since constant observation is viewed as a restraint alternative (RNAO, 2012; Bradas, Sandhu & Mion, 2012) the questionnaire was adapted to collect information on the reasons for constant
observation use and alternatives. “Constant Observation” was substituted for any reference to “Restraints”. All RNs on the two units were asked for their view on reasons for constant observation use, as well as alternative interventions that can be used. Since the questionnaire was adapted to refer to constant observation rather than restraint use, the same psychometric properties as for the Perceptions of Restraint Use Questionnaire cannot be assumed. However the Perceptions of Constant Observation Use Questionnaire was reviewed by four clinical experts in geriatrics and was confirmed for face validity. The four clinical experts included one geriatrician and three Masters prepared advanced practice nurses specializing in gerontology. The four clinical experts were asked to examine the questionnaire and reflect on whether the reasons for using constant observation listed are legitimate and consistent with the evidence as well as whether the alternative interventions (to restraints and constant observation) listed are indeed constant observation alternatives. All four of the clinical experts confirmed that this was the case and that the questionnaire appeared acceptable for use.

**Nurse-observer communication and coordination.**

RNs on the unit were asked to provide information on communication and coordination between the nurse and observer using two subscales of the ICU Nurse-Physician Questionnaire (Shortell et al, 1991): the “nurse to observer relationships/observer to nurse relationships” and “general relationships and communications” subscales (Appendix I). Permission was obtained from Dr. Shortell to use these questionnaire for the purposes of this research study. The two subscales are adapted from the 9-item nurse-to-nurse relationships subscale and the 4-item general relationships and communication subscale. These subscales were initially developed to measure the perceived quality of communication and coordination by nursing staff and physicians. This questionnaire has also been successfully used to examine communication and
coordination between nurses on other acute care units such as general medical, surgical and cardiac units (Doran, Sidani, Keatings & Doidge, 2002). The items in all subscales are rated on a Likert-type scale with scores ranging from 1 to 5 with high scores indicating better communication, coordination and relationships. It is reliable with a Cronbach’s alpha of .80 to .90 (Shortell et al, 1991; McGillis Hall & Irvine Doran, 2002). Appendix I includes the version distributed to the RNs on the unit.

**Constant Observation Performance**

**Practices of the Nurse and Observer.**

To understand the role of the observer in acute care and how the observer and nurse work together observations took place and were recorded using a newly developed Observation Data Collection Form (Appendix B). Observational methods were used in this study to provide insight into the work of the dyads and the interactions between dyads as well as to capture the context, process and environment (Mulhall, 2003).

On each occasion, the researcher recorded observations of the practices of the observer and the observer-nurse interactions on an Observation Data Collection Form (Appendix B) which was divided into two sections: descriptive notes and reflective notes (Creswell, 2007). Descriptive notes were used to record the features of the individuals present, the environment, the sequence of events and activities and key words and phrases from the conversations.

Reflective notes were used to capture reactions and thoughts about the events observed and possible meanings of the events and interactions. For example, in describing the constant observation practices the researcher documented whether the constant observation involves only surveillance or whether it includes other components such as: assistance with ADLs,
companionship or addressing underlying causes of the responsive behaviour such as hunger, thirst and discomfort. See Appendix H for an outline of the data collection sheet used for the observations.

**Perceived Benefits of Constant Observation.**

Information was collected on the perceived benefits and limitations of this intervention from the RNs and observers on the unit through individual interviews. These interviews were conducted towards the end of the observation shifts. Questions that were used to guide the interview are: 1) Can you tell me about a time when constant observation worked well? 2) What made it work well? 3) Can you tell me about a time that constant observation did not work well? 4) What made it not work well? 5) Where did today’s experience fit in terms of working well or not? 6) Is there anything else that you think would be important to discuss about constant observation? (See Appendix C for the Interview Guide used).

**Data Collection Procedure**

After receiving approval from the Research Ethics Boards at the University of Toronto and the two hospital sites:

1) The researcher met with the unit managers on both the units to collect the unit and organizational specific information using an adaptation of the National General Hospital Constant Observation (CO) Practices Survey (Worley et al, 2000) through a semi-structured interview scheduled at a time convenient for each participant.

2) Based on advice from the unit manager and educator, the surveys were distributed to all the RNs on each unit by placing them in their individual mail boxes on the unit. These surveys consisted of the demographic characteristics (Appendix D), the Perceptions of Constant
Observation Use Questionnaire (Evans & Strumpf, 1986), which can be found in Appendix H, and the “nurse to observer relationships” and “general relationships and communications” subscales (Appendix I) of the ICU Nurse-Physician Questionnaire (Shortell et al, 1991). A sealed mail box was placed in a prominent place on each unit for RNs to return the completed surveys, Reminders were provided through information posters on the unit. Two weeks later, a second copy of the survey tool was distributed to the RNs that had not yet completed the survey.

3) After obtaining consent from the substitute decision maker, RN and observer, and assent from the patient, the researcher observed the dyads for entire shifts and recorded the activities of the observer and the nurse using the Observation Data Collection Form (Appendix B). The researcher took coffee, lunch and dinner breaks at the same time as the observer so as not to miss any opportunities for data collection. Observations were scheduled to capture the day, evening, night and weekend shifts when different staff and resources were available on the unit. For each shift, a unique dyad or the same dyad caring for a different patient was observed. For a dyad to be considered unique, one member of the dyad had to be different.

The researcher observed the dyads and patients, in most cases, for an entire 8-hour shift (day, evening or night). In the two circumstances where observation took place for a shorter period of time this was because the staff who had consented to participate had completed their shift or because the patient was only scheduled to receive constant observation for a certain number of hours. To minimize the effect of the researcher’s presence, the following methods were implemented: a) the researcher spent time on the unit prior to the data collection, b) the researcher collected data in an unobtrusive manner where she was positioned to observe the constant observation intervention without attracting attention, c) The researcher left the room when asked to do so by care providers or when the observer went for breaks.
4) Following the observations, and near the end of the shift, the RNs and observers were interviewed (Appendix C) to determine their perceptions of the perceived benefits and limitations of constant observation. They were also asked to verify activities observed during the shift. Due to time constraints faced by the RNs and observer, they were only interviewed briefly outside the patient room. At that time, they were also asked to provide demographic information (Appendices D and E). Since the interviews were conducted in patient care areas, they were not audiotaped. Notes were taken summarizing the responses to the questions right after the interview.

5) At the end of the interviews, the patient’s chart was accessed to gather information about their characteristics.

6) An additional interview was conducted with the manager at one site to gather more information about constant observation practices and policies. This interview took place due to difficulty recruiting observers to participate since they were contracted by an external agency and were not often present on that unit. See Appendix O for the interview guide. An overview of the data collection procedures are outlined in Figure 3.
Figure 3: Data Collection Procedures at the Sites

Step 1: Nurse Manager Interviews using: National General Hospital Constant Observation Practices Survey

Step 2: Study information posted on unit; Information sessions for nurses and observers on unit

Step 3: Surveys left on the unit for nurses to complete.

Step 4: Study Information posters placed in public areas of the unit so patient and their families were aware of the study

Step 5: Unit contact identified patients receiving or likely to require constant observation

Step 6: Researcher obtained consent from the substitute-decision maker of the patient

Step 7: Researcher obtained consent from nurse and observer; One member of the dyad or the patient had to be different for each shift observed

Step 8: Researcher introduced self and obtained assent from the patient

Step 9: Observation Day shifts; Observation evening shifts; Observation night shift; Observation weekend shifts

Step 10: Post-observation interviews with nurse and observer to collect: perceived benefits of constant observation; and verification of observation

Step 11: Chart review to collect patient characteristics

Step 12: Preliminary analysis of data to identify major themes; Recruitment issues at Site B for Observations as they reduced constant observation use

Step 13: Additional interview with the manager at Site B to collect information on constant observation practices to fill some gaps due to lack of observation data

Step 14: Data Collection Complete
The following strategies were used to ensure the validity of the observational data: a) only the researcher collected the data at the two sites to ensure consistency, b) a continuous schedule of observations was used whereby the RN, patient and observer were observed for a whole shift to eliminate the possibility of an activity occurrence being missed; c) after each observation shift, the researcher connected with the nurse and observer to summarize what was noted for member-checking purposes. During the member checking, the researcher also solicited the participants’ view of the findings and interpretations (Creswell, 2007). During this process the researcher provided the RNs and observers with a summary of what was observed to have occurred during the shift and asked these participants for their feedback. This allowed for an opportunity to discuss and reconcile observation and interpretation with the account and interpretation of the events by the participants. After the member checking, the RN and observer were interviewed to determine what their perceptions were of the constant observation intervention to enhance construct validity through convergence (or lack of convergence) of observation and interview findings.

**Data analysis**

For the survey results, information from each site was analysed separately and then compared between the units. For the results from the observations and interviews, the findings for both sites were pooled together since they provide a description of constant observation practice. The data analysis procedures for the qualitative and quantitative data are described separately.
**Data Entry**

Since paper survey tools were distributed and completed by the RN staff, data entry of the completed surveys was required before analysis. A research assistant entered all the data from the completed surveys into an Excel spreadsheet. The researcher then checked each one of these entries against the original paper survey tool to ensure accuracy of the data entered.

The researcher transcribed all the data from the paper data collections forms used during the observation and post-observation interviews with the RNs and observers into a Word document to facilitate data analysis. The audio-recording of the interview with the manager was transcribed into a Word document and then the audio-recording was destroyed.

**Qualitative Data Analysis**

The process for thematic analysis described by Braun and Clarke in 2006 was used as a framework to analyze the data from the observations and interviews. First, the transcripts were read and re-read multiple times and ideas were noted in the margins. This led to the researcher generating an initial set of codes. The transcripts were then coded using highlighter colors and notations in the margins for different codes. Once the transcripts were coded, all the text segments associated with each code were sorted into an Excel spreadsheet. The codes were reviewed and were grouped together into different categories. A description of each category with data excerpts was then written and shared with committee members with qualitative research expertise. An example of the thematic analysis process is provided in Table 5.
Table 5: Thematic Analysis

<table>
<thead>
<tr>
<th>Examples of Codes</th>
<th>Grouping of Codes (categories)</th>
<th>Sub-theme</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assisting with toileting</td>
<td>Assisting with basic activities of daily living</td>
<td>Providing Direct Care</td>
<td>Multi-faceted Observer role</td>
</tr>
<tr>
<td>Assisting with ambulation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assisting with telephone use</td>
<td>Assisting with instrumental activities of daily living</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Making a bed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clearing supplies</td>
<td>Providing Environmental care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Removing a meal tray</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

After reviewing all the codes, descriptions of the categories and data excerpts sorted under each category, the data was reviewed again to identify themes. The codes (with the data excerpts) and categories were then collated into the potential themes. After additional review of all the codes and text segments associated with each theme, the themes were refined and all the codes (and data excerpts) associated with each theme were sorted together. A report was then written on each of the themes with the supporting evidence from the data. Once the themes were developed, the data was interpreted to develop an understanding and description of what occurred during constant observation.

Steps taken to establish the quality of the analysis process included keeping records of all different stages of the data analysis process, and having committee members with qualitative research expertise review segments of the whole data sets, the coding framework and descriptions of preliminary and final categories and themes. These processes allowed for the
consideration of alternative interpretations of the data (Barbour, 2001) and enhanced interpretive consistency and support for interpretive agreement (O’Cathain, 2010).

**Quantitative Data Analysis**

The quantitative data obtained from The Perceptions of Constant Observation Use Questionnaire (Evans & Strumpf, 1986) and the Shortell (1991) questionnaire subscales were analysed using descriptive statistics including percentages, measures of central tendency and measures of variability. The Excel spread sheets with the data from the questionnaires were entered into IBM SPSS Statistics Version 22. Data for RNs from each patient care unit was analysed separately and then any differences between mean scores for the units was tested using an independent t-test. A statistician was consulted during the data analysis process to ensure the rigor of the data analysis procedures applied.

**Data convergence**

Once the qualitative and quantitative data analysis procedures were completed, the multiples sources of data were converged in the reporting and the interpretation of the results. The results in the next chapter include integrated reporting of the qualitative and quantitative results as they related to the Extra-dyad factors, Intra-dyad factors and Constant Observation Outcomes discussed in the conceptual framework. This way, the qualitative results were used to inform and enrich the interpretation of the quantitative results and vice versa. For example, if the quantitative results from the survey indicated that the nurses on the unit had a positive, neutral or negative perception of the quality of communication and coordination of care with the observer, the qualitative results from the interviews and observations provided examples of how the nurse and observer actually communicated and coordinated together. Convergence also provided an opportunity for triangulation of the results. Triangulation refers to the use of multiple sources of
data to clarify the trustworthiness of the results (Stake, 2005). The multiple sources of data in this study on constant observation including interviews, questionnaires and observation allowed for triangulation and increased the credibility of the results (Stake, 2005; Yin, 2009). Triangulation allowed for corroboration, but also for the opportunity to explain discrepancies by looking at more complex explanations that consider the context and the individual participants (Miles & Huberman, 1994).

To facilitate the convergence of the multiple sources of data, the qualitative and quantitative results related to the components of the conceptual framework were presented together (Creswell & Plano-Clark, 2011) in the next chapter and there is discussion on how the findings linked back to the conceptual framework. In addition, discussion of how the qualitative and quantitative results produced a more complete picture of constant observation practices at the two sites is provided in Chapter 5.

**Quality of the mixed methods study**

To ensure the quality of this mixed methods design study, the quality framework for mixed methods research described by O’Cathain (2010) was used to guide the execution of the study for the planning, undertaking, interpreting and disseminating stages of the study as described throughout this dissertation.

With a qualitative description study, the objectives are descriptive validity where an accurate portrayal of events are provided (Sandelowski, 2000). This was assisted by the use of criterion based sampling, whereby sites where constant observation took place and the individuals (nurses, observers, patients and managers) that were involved in constant observation were invited to participate in the study. In addition, participants were asked to comment on the
summary of the field notes of the observation provided by the researcher and to highlight whether anything was missing or would be described differently to enhance descriptive validity.

Procedures for both the qualitative and quantitative data collection, entry and analysis were followed as described and in keeping with the traditions of both the qualitative and quantitative methods to ensure data quality and interpretive rigor. Extracts from the data were used to illustrate all the themes identified through the thematic analysis to increase interpretive validity. Auditability was facilitated by providing clear descriptions of study procedures in this chapter, keeping field notes, documentation from all stages of the analysis process, early summaries of all the categories and themes and sharing these with committee members for validation of steps taken to ensure rigor.

**Ethical Considerations**

Ethics approval for this study was obtained from the Research Ethics Review Board at the University of Toronto (Appendix P) and the Research Ethics Boards of the participating hospitals in which data collection took place. Risks and benefits, rights of participants and confidentiality will be discussed in this section.

**Risks and Benefits**

This study was minimal risk as the data collected was descriptive, and there was no intervention or a change in usual care practices on the inpatient units. There were no anticipated adverse effects for the participants in the study other than the discomfort of being observed. The only inconvenience was the time to participate in the interviews and complete questionnaires.
Rights of Nurse and Observer Participants

Potential participants were made aware that their participation was voluntary and that they could refuse to participate, withdraw from the study at any time or decline to answer specific questions with no negative consequences. Participants were also be made aware that all information collected was confidential and that the study results would be reported, in an aggregate manner with no personal identifiers. Participants were provided with both verbal and written information on the study. They were provided with the contact information for the investigator and research ethics review board so they could access additional information if required (see Appendices J, K, L and N for the consent forms and information sheets).

Participants were notified that the researcher has a legal obligation to report any observed sexual abuse by a regulated heath professional to the appropriate regulatory body (College of Nurses of Ontario, 2012) and in those circumstances confidentiality could not be maintained. In addition both observer and RN participants were informed that the researcher would intervene in any cases of abuse and report these circumstances to the unit manager.

Rights of Patient Participants

The majority of older adults receiving constant observation have significant cognitive impairment (Rochefort et al, 2011; Blumenfield et al, 2000). Therefore, it was anticipated and was indeed the case that consent to participate in the study would be required from the patients’ substitute decision maker (see Appendix M for the patient consent form). As per the Tri-council Policy Statement Ethical Conduct for Research involving Humans (CIHR, NSERC & SSHRC, 2010), all individuals should be allowed to enroll in minimal risk research even though there may be no potential immediate benefit to the individual. This study was identified as a minimal risk study as it involved no change in care practices delivered to the patient and did not involve any
active participation by the individual patient. Personal health information on the patient was collected from the health record. Since the observation involved the researcher’s presence in the patient room or looking into the patient room, this was anticipated to be perceived as intrusive to the participant. As a result, informed consent was not only obtained from the patient or substitute decision-maker at the beginning of the study, but the consent was a process throughout the study and was renegotiated by obtaining assent from the patient participant at the beginning of each observation data collection episode and re-evaluated on an ongoing basis throughout the data collection episode. Whereas informed consent is obtained from those with the capacity to understand the relevant information about a particular research project as the consequences of participation or non-participation (CIHR, NSERC & SSHRC, 2010) assent refers to the initial and ongoing agreement to participate in a research study when the capacity to consent is not present (Slaughter, Cole, Jennings & Reimer, 2007).

Older adults with cognitive impairment may have fluctuating capacity, especially when they have delirium. Participants who were not capable of consent at the beginning of data collection may regain capacity, as a result an ongoing consent and assent process is essential when conducting research in this population (Slaughter et al, 2007). In some circumstances older adults with cognitive impairment may not be able to clearly express verbally whether they assent or dissent to the observation (Pesonen, Remes & Isola, 2011). The researcher collecting the observation data had to look for both verbal and non-verbal signs of assent and dissent which may include signs of irritation, facial grimacing, shrieking or other signs of agitation (Slaughter et al, 2007). The researcher has considerable expertise as a gerontological advanced practice nurse and was educated to recognize signs of assent or dissent related to the observation. In cases where the participant appears to dissent due to signs of frustration, discomfort or
unhappiness, the plan was to end the observation episode even though consent to participate had been obtained from the substitute decision-maker. This was not required in any of the shifts observed. The researcher documented the process of obtaining assent for each observation data collection period.

**Confidentiality**

No personal identifiers such as names or initials were collected on the questionnaires or other data collection forms. Participants were identified with a numeric code so the researcher could keep track of who is included. The master code list of participants was stored safely in a locked filing cabinet and separately from where data were stored. Consent forms were also stored separately from the data and data collection forms to maintain confidentiality.

All data was analysed and presented primarily in summary form so no individual participants can be identified. Any participant quotes used in results presentation are de-identified.

**Data Security**

Hard copies of the de-identified data collection forms were stored in a locked filing cabinet within a restricted access location. Only the investigator had access to the raw data. The participant consent forms and the master code list of participants were stored separately from the data forms in another locked filing cabinet. Electronic data such as audiotapes of the interview with the unit manager were destroyed after being transcribed. Transcriptions of the interviews and observation notes were stored on a password protected encrypted external hard-drive computer in a secure limited access location. Back-up copies of the data were stored on another restricted-access encrypted drive.
Chapter 4
Summary of Study Results

In this chapter, both the quantitative (questionnaires) and qualitative (interviews and observation) results are presented together in the following sections: 1) Extra-Dyad Factors; 2) Intra-Dyad Factors and 3) Constant Observation Performance.

The sources of data for the results being presented include: interviews with unit managers at both sites to collect information about unit characteristics and constant observation policies, questionnaires completed by RNs, non-participant observation of the RN-Observer dyads, interviews with the dyads and chart review to collect information on patients receiving constant observation.

Extra-Dyad Factors
Unit and Hospital Context
Information about unit characteristics was collected through interviews with the unit managers at both sites using the adaptation of the “National General Hospital Constant Observation Practices Survey” (Worley et al, 2000) and through the non-participant observation of the dyads.

Description of site A.
Site A was a 70-bed general medicine unit. Most of the rooms on the unit were designed for two patients, however there were two areas with rooms that could accommodate three patients that were often used for patients requiring constant observation. There was also a four-bed room which was designated as a higher acuity unit (step-up) for patients that required constant nursing care. The unit also had a section that was locked and required card access to
enter and exit. Only one of the two areas with rooms that could accommodate three patients was in the locked section of the unit. The nursing staff made efforts to place patients that demonstrated exit-seeking behaviour into rooms in the locked area of the unit however, patients requiring constant observation for other reasons were also placed in the unlocked section of the unit.

**Staffing.**

Staffing on the unit, for direct patient care, consisted of a skill-mix of RNs and PSWs. The RNs worked twelve hour shifts (day and night shifts) beginning at 7.30 AM and ending at 7.30 PM and vice versa. Twenty RNs were scheduled for the day shift and sixteen RNs for the night shift. PSWs worked an eight hour shift from 7.30AM to 15.30 PM (day shift), 15.30 PM-23.30 PM (evening shift) or 23.30 PM- 07.30 AM (night shift). RNs were assigned specific patients and the PSWs were assigned specific areas of the unit to assist RNs with providing personal care to patients (such as toileting, feeding and bathing) as well as assisting with other tasks such as making beds, bringing supplies, helping with patient transfer onto wheelchairs or stretchers.

In addition to the RN and PSW skill-mix described above, there were three additional PSWs assigned for each shift (day, evening and night) for the purpose of providing constant observation. These PSWs are henceforth referred to as Observers. PSWs received no additional educational preparation to provide constant observation however, case-based information was provided on the patient’s behaviours and interventions by the RN. Both the PSWs and Observers were regularly scheduled full-time, part-time and casual hospital staff and were staffed from the same pool of employees so a PSW could work one day as a PSW and another day as an
Observer. If there were not enough PSWs and Observers available for a shift (for example due to vacation or sick-calls), then Site A would seek additional PSW staff from an external agency.

**Description of site B.**

Site B was a 24-bed medical unit with either single or double rooms (designed for two patients). Site B also had one four-bed room designated as a higher acuity unit (step-up) for patients that required constant nursing care. The entire unit was a locked unit and required card access or access by a staff member in order to enter or exit. As a result, patients who wandered were able to walk around the whole unit without a requirement for constant observation.

**Staffing.**

Site B had an all-RN staffing model for direct patient care. The RNs worked twelve hour shifts (day and night shifts) beginning at 7.30 AM and ending at 7.30 PM and vice versa. Seven RNs were scheduled for the day shift and four RNs for the night shift. RNs were assigned specific patients to provide all aspects of nursing care.

If constant observation was required for a patient, then a PSW was contracted from an external staffing agency to provide constant observation. These PSWs were only contracted for the time required to provide constant observation. So if a patient only required constant observation for 4 hours in the evening, then the PSW was only scheduled to work for that time period. Since these PSWs were from an external agency, they were not members of hospital staff and required an orientation to the unit each shift worked. The patient’s RN and Charge RN had the discretion to stop constant observation whenever it was no longer required for the patient. As a result, Observers’ shifts were sometimes ended earlier than originally scheduled.
**Comparison between sites.**

There were some differences between the sites in terms of size, staffing models and constant observation practices. Table 6 below highlights the characteristics of both sites to illustrate the similarities and differences.

Table 6. Unit Characteristics and Constant Observation (CO) Practices N=2

<table>
<thead>
<tr>
<th>Medical Unit</th>
<th>Site A</th>
<th>Site B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of beds</strong></td>
<td>70</td>
<td>24</td>
</tr>
<tr>
<td><strong>RN staffing on day shift</strong></td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td><strong>RN staffing on night shift</strong></td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td><strong>Patient: RN Ratio</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Day Shift</strong></td>
<td>3.5:1</td>
<td>3.4:1</td>
</tr>
<tr>
<td><strong>Night Shift</strong></td>
<td>4.4:1</td>
<td>6:1</td>
</tr>
<tr>
<td><strong>Nursing Staff Skill Mix</strong></td>
<td>RN and PSWs</td>
<td>All RN</td>
</tr>
<tr>
<td><strong>Observer credentials</strong></td>
<td>PSW</td>
<td>PSW</td>
</tr>
<tr>
<td><strong>Observer Employer</strong></td>
<td>Hospital Staff</td>
<td>External Agency</td>
</tr>
<tr>
<td><strong>Observer Staffing</strong></td>
<td>Three scheduled per shift</td>
<td>Contracted as needed</td>
</tr>
<tr>
<td><strong>Specific CO training</strong></td>
<td>None- report on patients only</td>
<td>Instruction on role expectations and a patient-specific care plan</td>
</tr>
<tr>
<td><strong>Funding</strong></td>
<td>Unit operational budget</td>
<td>Unit operational budget</td>
</tr>
</tbody>
</table>

Site A was a larger medical unit than Site B and had a skill-mix of RN and PSW staff, whereas Site B had an all RN skill mix for providing nursing care. Both units had a higher acuity area and a locked area where patients were able to walk around without concern about elopement however, Site A had a locked area of the unit whereas all of Site B was a locked unit.

During the data collection period there were times when no patients were receiving constant observation at Site B. Even accounting for differences in unit size (70 beds versus 24 beds), Site A had a higher usage of constant observation.
Constant Observation Policies and Procedures

Site A

Generally the RN in charge, in consultation with the inter-professional team, would ensure that patients requiring constant observation were placed in rooms together so that the Observers could provide constant observation to multiple patients. As a result, the Observers constantly observed two or three patients at a time rather than providing one-to-one observation. In addition to providing constant observation, the Observer was also accountable for providing all the regular PSW role components to the assigned patients. This included assisting the patients with bathing, toileting, getting dressed, meal set-up and feeding, walking in the room as well as transferring from the bed to a chair or to walk, making beds and stocking supplies. The Observer had to remain in the room and observe all the patients, so if the patient or the Observer had to leave the room, then another member of the unit staff (usually the RN or another PSW) would need to stay in the room and observe.

The Observer was also expected to document every hour in a behaviour log for each patient receiving constant observation. The behaviour log required documentation of the time, patient behaviour (from a list of codes), cause of behaviour (from a list of codes), action taken (from a list of options/codes), whether restraints were in place and whether the bed-rails were up or down as well as any comments. The behaviour log was used to provide information to the patient’s RN as well as to the RN in charge of the unit for the purposes of clinical assessment and follow-up, information-sharing with the inter-professional team and for administrative decision-making regarding whether the patient continued to require constant observation. The behaviour log was not included in the patient’s health record but was used to inform the RNs documentation in the health record.
Site A had implemented some strategies to try to decrease the use of constant observation prior to the investigator starting data collection on the unit. These strategies included the Observers being accountable for multiple patients in the room, the completion of the behavioural log, the requirement that the Charge RN assess constant observation needs for patients each shift (through discussions with the Patient’s RN and Observer) and communicate with the Charge RN on the next shift. Site A had developed a working group to examine constant observation practices and was planning to develop and implement additional interventions to decrease usage over the next year.

Site A had an organizational policy on constant observation and there was no requirement for an order from a physician to initiate or discontinue constant observation. Rather the decision could be made by any member of the regulated health care professionals on the unit and was often a team-based decision during daily team rounds. RNs were expected to document in the health record if a patient required and was receiving constant observation and at times a physician order was documented.

Site B.

Site B had recently undergone a review of constant observation practices and had implemented education for all the RN staff on alternatives strategies to constant observation, the use of constant observation as a last resort, as well as introducing new unit-specific policies and procedures for initiating, monitoring and discontinuing constant observation. The Site had implemented daily “huddles” consisting of the Manager, Charge RN and all the RNs on the day shift. During these huddles, review of patients requiring constant observation took place including changes in their responsive behaviours. The decision to use constant observation was made between the Charge RN and patient’s RN. A standardized approach was developed to
consider other alternatives before initiating constant observation and the use of constant observation had to be justified to the manager.

When Observers were required and contracted from an external agency, they were provided with instructions on expectations while providing constant observation as well as a patient-specific care plan describing the patient’s biographical history, interests, presence of responsive behaviours, strategies to prevent and manage responsive behaviours. General expectations were that the Observer would provide constant observation and would only be able to leave the patient unattended if the RN was with the patient. The Observer was expected to provide companionship and social interaction for the patient and was not expected to assist with any personal care activities. If the patient required assistance with personal care (such as bathing or changing an incontinence brief), then the RN was called to provide the care with the assistance of the Observer if needed. Observers were also expected to document in a behavioural log which was not included in the health record. The information in the behavioural log was used to inform the RN’s documentation in the health record as well as the decision on whether, and during what time-periods, constant observation was required.

Comparison between the sites.

There were similarities and differences in constant observation policies and practices and these are outlined in Table 7:
Both sites had policies for constant observation however there were differences in the Observer roles between the two sites as reported by the unit managers. At Site A, the Observer was responsible for patient surveillance, assistance with activities of daily living, providing environmental care (making beds and keeping the room tidy), providing social interaction to the patient and providing information about the patient’s behaviour to the nursing staff. At Site B the Observer was responsible for providing surveillance, companionship, social interaction and information about the patient’s behaviour to the nursing staff. Both sites required the Observer to document the patient’s behaviours and observer’s intervention in a behavioural log that was shared with the nursing staff and manager to inform decisions about the ongoing need for constant observation. Since the observers were also providing other care activities (assistance with ADLs) this may also account for some of the differences in constant observation usage.

Patient/RN ratios were the same at both sites during the day shift (Site A 3.5:1, Site B 3.4:1) whereas Site A had a lower Patient/RN ratio on the night shift (Site A 4.4:1 and Site B 6:1).

**Characteristics of Patient Participants**

At Site A, six patients (through their substitute decision makers) consented to participate in the study however, only five patients were observed as one patient was discharged from the
hospital before observation could take place. Two of the patients that participated were observed for two shifts each, the remaining three patients were observed for one shift. Although two patients (through their substitute decision maker) consented to participate at Site B, only one patient was observed for a single shift. The second patient recruited was not observed as the Observer providing the constant observation declined to participate. Since there were a low number of participants, the results of the data analyses describing the characteristics of patient populations are reported for both sites combined together, in order to protect participant privacy.

Four of the patient participants were male and two were female. The majority of participants (N=5) were aged between 80 and 89 years old whereas one participant was aged between 60 and 69 years old. There was a wide range in the length of time receiving constant observation from 3 to 120 days. While three patients had been on constant observation for less than ten days, two between ten and thirty days, one patient had been receiving constant observation for three months (120 days) while waiting for placement in a long term care home facility.

Table 8: Risk Factors for the Use of Constant Observation in Patient Participants (n=6)

<table>
<thead>
<tr>
<th>Participant</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of Cognitive Impairment</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Presence of Delirium</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>History of Mental Health Issues</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of Functional Impairment</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of Falls</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
All of the patient participants had the presence of responsive behaviours (such as agitation or confusion) documented in the health record. In addition, all patient participants were prescribed a medication with psychoactive properties. None of the patient participants had a history of documented substance use. All patient participants had multiple risk factors for the use of constant observation documented in their health record, including: risk of falls, functional impairment, presence of delirium, history of mental health issues and a history of cognitive impairment (dementia). One patient had seven of the risk factors listed in Table 8, two patients had 6 risk factors, one patient had 5 risk factors, one had four risk factors and one had three risk factors. Five of the six patients had an order for constant observation documented in their health record and three of the six had documentation of the consent process for constant observation.

**Intra-Dyad Factors**

**Nurse Characteristics and Functions**

Demographic characteristics were collected from the RNs who participated in the study. While the unit managers from both sites participated in interviews to collect information on
constant observation polices, practices and unit characteristics, no demographic characteristics from the managers were collected.

All the RNs at both Site A and Site B were invited to complete the PCOUQ and Shortell subscales as well as demographic questions. The response rate of RNs completing the questionnaires included 46 out of 113 (40.7%) at Site A, and 18 out of 41 (43.9%) at Site B.

**Characteristics of RNs completing questionnaires.**

The characteristics of the RN participants that completed the questionnaires from the two sites are highlighted in Table 9.

**Table 9: RN Questionnaire Participant Characteristics (N = 64)**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Site A (N=46)</th>
<th>Site B (N=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Age (years)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>35.3</td>
<td>8.2</td>
</tr>
<tr>
<td>Nursing Experience (years)</td>
<td>9.8</td>
<td>6.6</td>
</tr>
<tr>
<td>Experience on Unit (years)</td>
<td>6.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Sex&lt;sup&gt;b&lt;/sup&gt;</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>Female</td>
<td>40 87</td>
<td>14 77.8</td>
</tr>
<tr>
<td>Male</td>
<td>5 10.9</td>
<td>4 22.2</td>
</tr>
<tr>
<td>Gerontology Certificate&lt;sup&gt;c&lt;/sup&gt;</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>Yes</td>
<td>4 8.7</td>
<td>1 5.6</td>
</tr>
<tr>
<td>No</td>
<td>41 89.1</td>
<td>17 94.4</td>
</tr>
<tr>
<td>Nursing Education&lt;sup&gt;d&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>12 26.1</td>
<td>4 22.2</td>
</tr>
<tr>
<td>Undergraduate degree</td>
<td>24 52.2</td>
<td>14 77.8</td>
</tr>
<tr>
<td>Graduate Degree</td>
<td>7 15.2</td>
<td>0 0</td>
</tr>
</tbody>
</table>

<sup>a</sup> Due to missing data for this variable N= 57  
<sup>b</sup> Due to missing data for this variable N= 63  
<sup>c</sup> Due to missing data for this variable N= 63  
<sup>d</sup> Due to missing data for this variable N= 61
Although a total of 64 RNs at both sites completed the questionnaires there were some missing data to certain demographic questions. At Site A, six of the RNs did not provide their age, three RNs did not complete the question on their highest level of nursing education, one RN did not provide a response to the question on sex, and one RN did not complete the question on whether he/she held a Canadian Nursing Association (CNA) certification in Gerontology. Age was not provided by one RN at Site B but otherwise all the other questions were completed.

The RN participants from the two sites were similar in age, nursing experience and experience on the unit. Site B had a greater proportion of male participants and RNs with an undergraduate degree. Site A had a greater proportion of RNs holding graduate degrees. Overall five staff had a gerontology certificate, four from Site A.

**Attitudes about Constant Observation**

Attitudes regarding constant observation were obtained from the RNs using the Perceptions of Constant Observation Use Questionnaire (PCOUQ). RNs were asked to rate their perceptions of the importance of different reasons for using constant observation and then to list possible alternatives to constant observation.

*Importance of different reasons for using constant observation.*

One RN at each hospital site did not complete the questions on PCOUQ at all and so these two questionnaires were removed from the analysis.

*Results from Site A.*

The mean overall score on the PCOUQ for the RNs at Site A was 4.1 (SD +/- 0.6) out of a possible 5.0 indicating an overall positive perception of constant observation use for older adults. A score lower than 3 would indicate an overall negative impression and scores equal to or
higher than 3 would indicate an overall positive impression. The scores for the different reasons for using constant observation are presented in Table 10.

Table 10: Site A - Importance of Different Reasons for Using CO (n=45)

<table>
<thead>
<tr>
<th>Reason for CO use</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevent bed fall</td>
<td>4.68</td>
<td>0.561</td>
</tr>
<tr>
<td>Prevent chair fall</td>
<td>4.43</td>
<td>0.789</td>
</tr>
<tr>
<td>Prevent unsafe ambulation</td>
<td>4.36</td>
<td>0.830</td>
</tr>
<tr>
<td>Prevent wandering</td>
<td>4.16</td>
<td>0.796</td>
</tr>
<tr>
<td>Prevent taking from others</td>
<td>3.33</td>
<td>1.066</td>
</tr>
<tr>
<td>Prevent from dangerous supplies/places</td>
<td>4.16</td>
<td>1.065</td>
</tr>
<tr>
<td>Prevent from bothering others</td>
<td>3.27</td>
<td>1.156</td>
</tr>
<tr>
<td>Prevent pulling catheter</td>
<td>4.58</td>
<td>0.621</td>
</tr>
<tr>
<td>Prevent pulling feeding tube</td>
<td>4.67</td>
<td>0.564</td>
</tr>
<tr>
<td>Prevent pulling IV</td>
<td>4.53</td>
<td>0.661</td>
</tr>
<tr>
<td>Prevent breaking sutures</td>
<td>4.58</td>
<td>0.723</td>
</tr>
<tr>
<td>Prevent removing dressing</td>
<td>4.27</td>
<td>0.863</td>
</tr>
<tr>
<td>Provide quiet/rest</td>
<td>3.29</td>
<td>1.290</td>
</tr>
<tr>
<td>Provide safety with poor judgement</td>
<td>4.56</td>
<td>0.785</td>
</tr>
<tr>
<td>Substitute for staff observation</td>
<td>3.49</td>
<td>1.334</td>
</tr>
<tr>
<td>Protect others from aggression</td>
<td>4.04</td>
<td>1.186</td>
</tr>
<tr>
<td>Manage agitation</td>
<td>3.69</td>
<td>1.276</td>
</tr>
</tbody>
</table>

A breakdown of the score for the different reasons for the use of constant observation indicated that the use of constant observation to prevent falls and treatment interference were ranked more highly than other factors although all reasons were rated positively (a score of greater than or equal to 3). Responses were missing from two RNs to one of the questions and from one RN to two questions but otherwise all the items on the questionnaire were completed by the RN respondents at Site A.
Results from site B.

The mean overall score for the RNs at Site B was 3.7 (SD +/- 0.6) out of a possible 5.0 indicating an overall positive perception of constant observation for older adults. A breakdown of the score for the different reasons for the use of constant observation indicated that the use of constant observation to prevent falls, prevent an older person from getting into dangerous supplies and from bothering others were ranked more highly than other factors.

Table 11: Site B-Importance of Different Reasons for Using CO (n=17)

<table>
<thead>
<tr>
<th>Reason for CO use</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevent bed fall</td>
<td>4.24</td>
<td>0.970</td>
</tr>
<tr>
<td>Prevent chair fall</td>
<td>3.88</td>
<td>0.993</td>
</tr>
<tr>
<td>Prevent unsafe ambulation</td>
<td>4.41</td>
<td>0.870</td>
</tr>
<tr>
<td>Prevent wandering</td>
<td>3.41</td>
<td>1.326</td>
</tr>
<tr>
<td>Prevent taking from others</td>
<td>4.12</td>
<td>0.857</td>
</tr>
<tr>
<td>Prevent from dangerous supplies/places</td>
<td>4.71</td>
<td>0.588</td>
</tr>
<tr>
<td>Prevent from bothering others</td>
<td>3.65</td>
<td>1.115</td>
</tr>
<tr>
<td>Prevent pulling catheter</td>
<td>3.76</td>
<td>1.251</td>
</tr>
<tr>
<td>Prevent pulling feeding tube</td>
<td>3.82</td>
<td>1.237</td>
</tr>
<tr>
<td>Prevent pulling IV</td>
<td>3.59</td>
<td>1.372</td>
</tr>
<tr>
<td>Prevent breaking sutures</td>
<td>4.00</td>
<td>1.275</td>
</tr>
<tr>
<td>Prevent removing dressing</td>
<td>3.35</td>
<td>1.272</td>
</tr>
<tr>
<td>Provide quiet/rest</td>
<td>2.76</td>
<td>1.147</td>
</tr>
<tr>
<td>Provide safety with poor judgement</td>
<td>3.88</td>
<td>1.219</td>
</tr>
<tr>
<td>Substitute for staff observation</td>
<td>2.76</td>
<td>1.200</td>
</tr>
<tr>
<td>Protect others from aggression</td>
<td>3.00</td>
<td>1.458</td>
</tr>
<tr>
<td>Manage agitation</td>
<td>2.71</td>
<td>1.213</td>
</tr>
</tbody>
</table>

Whereas most of the reasons for using constant observation were rated as important there were a few items that were not identified as being important. The use of constant observation to
provide rest or quiet for the patient, as a substitute for staff observation and to manage agitation were not rated as important uses of constant observation.

Comparisons between sites.

An independent two-tailed t-test comparing the overall impression (mean scores at each site) of the use of CO for older adults indicated that there was a significant difference between the mean scores (p<0.008 95% CI 0.12-0.81) of the two sites. The Levene’s Test for Equality of Variances indicated that equal variance between the site scores could be assumed. While RNs at both sites had an overall positive perception of the uses of constant observation, the RNs at Site A had an overall more positive impression than the RNs at Site B.

There were some similarities between the two sites in the rating of the reasons for using constant observation. Both sites rated the prevention of falls as the most important reason for using constant observation. RNs at Site A rated the prevention of treatment interference more highly than RNs at Site B, whereas RNs at Site B rated preventing the patient from bothering others more highly than RNs at Site A.

Alternatives to Constant Observation

The last question of the PCOUQ asked the RNs to list alternatives to CO that could be used for the behaviours and situations listed in the questionnaire. Of the 62 RNs that completed the PCOUQ at both sites, 46 listed alternative measures. The alternative measures listed were grouped into physiologic, psychosocial, activities and environmental interventions as per direction from the authors of the original questionnaire. Examples of the different interventions listed by the RNs are provided next.
**Physiologic alternatives.**

These included the assessment and management of the underlying cause, medications, toileting and symptom management. The most commonly mentioned physiologic alternative was the use of chemical restraints (N=11), followed by toileting/incontinence care (N=9) and assessment and treatment of the underlying cause (N=9). Removal of unnecessary lines, psychiatry involvement and providing food/snack were listed by two RNs.

**Psychosocial alternatives.**

These included frequent monitoring, volunteers, family involvement, pets, redirection, orientation, education and a gentle approach. The most commonly mentioned psychosocial alternative was the use of frequent monitoring of the patient (N=12), followed by the use of family (N=10) and the use of volunteers for activation/companionship (N=6). Other psychosocial interventions mentioned included the use of patient orientation/education (N=4), redirection (N=3), pets (N=2) and the use of security for surveillance (N=1). In listing these strategies a few nurses mentioned the importance of engaging the patient and family to learn to know the patient and the use of a gentle approach.

**Activity alternatives.**

These included the use of music, radio, television, magazine, games, other stimulating activities, ambulation/sitting up in a chair, distraction, snacks and drinks. Activities were mentioned only by a small number of participants. The most commonly mentioned activity alternatives was the use of music (N=3) and engagement in activities (N=3), followed by the use of distraction (N=2), television (N=2), mobilization (N=2). The use of radio, books/magazines, games and a snack were each mentioned by one RN participant.
Environmental alternatives.

These included the use of physical restraints, bed or chair alarms, moving the patient closer to the nursing station, locked unit, wandering bracelet, low bed or mattress on the floor, low lighting and noise, clutter-free environment, providing a bed side commode and the removal of dangerous objects. The most commonly cited environmental alternative was the use of restraints (N=14), followed by bed or chair alarms (N=11), the use of a locked unit or area (N=6) and bringing the patient closer to the nursing station for increased surveillance (N=5). Other environmental alternatives included putting mattresses on the floor (N=4), beds that are lower to the ground (N=3) and geriatric chairs (N=3). Reducing noise in the environment, increased staffing, wandering bracelets were each cited by two RN participants. Decreased lighting, use of side rails and a bed side commode were each mentioned by one RN participant.

Results from site A.

Of the 45 RNs from Site A that completed the PCOUQ, 34 RNs listed measures that could be used instead of constant observation for the behaviours or situations listed in the questionnaire. The mean number of strategies listed was 3.18 (SD +/- 1.9). The median number of strategies listed was 3 and the mode was 2. The most commonly reported alternative strategies listed were environmental strategies.

Table 12: Types of Alternative Strategies to CO Listed at Site A (n=34)

<table>
<thead>
<tr>
<th>Type of CO alternatives</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Physiologic alternatives</td>
<td>0.82</td>
<td>1.058</td>
</tr>
<tr>
<td>Number of Psychosocial alternatives</td>
<td>0.91</td>
<td>0.965</td>
</tr>
<tr>
<td>Number of Activities alternatives</td>
<td>0.35</td>
<td>0.950</td>
</tr>
<tr>
<td>Number of Environmental alternatives</td>
<td>1.09</td>
<td>1.215</td>
</tr>
</tbody>
</table>
Results from site B.

Of the 17 RNs from Site B that completed the PCOUQ, 12 RNs listed measures that could be used instead of constant observation for the behaviours or situations listed in the questionnaire. The mean number of strategies listed was 4.83 (SD +/- 2.48). The median and mode number of strategies listed were both 4. The most commonly reported alternative strategies listed were environmental strategies.

Table 13: Types of Alternative Strategies to CO Listed at Site B (n=12)

<table>
<thead>
<tr>
<th>Type of CO alternatives</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Physiologic alternatives</td>
<td>1.33</td>
<td>1.303</td>
</tr>
<tr>
<td>Number of Psychosocial alternatives</td>
<td>1.00</td>
<td>1.128</td>
</tr>
<tr>
<td>Number of Activities alternatives</td>
<td>.42</td>
<td>.996</td>
</tr>
<tr>
<td>Number of Environmental alternatives</td>
<td>2.08</td>
<td>2.193</td>
</tr>
</tbody>
</table>

On average, the RNs at Site B listed a higher number of alternative strategies than the RNs at Site A. The mean number of strategies listed at Site B was 4.83 as compared to 3.18 at Site A. At both sites the most commonly reported alternative strategies were environmental.

Nurse Perceptions of the Nurse-Observer Communication and Coordination

Communication and coordination of care are attributes of team work. RNs at the two sites completed Shortell subscale questionnaires which provided an indicator of the quality of the communication and coordination of care with the Observer. Two Shortell subscales questionnaires from each site were excluded from the analysis as they were incomplete. This decision is in line with the instrument author’s instructions for computing the subscales of the
instrument, in that any subscale with less than 66% of the items completed are to be excluded from the analysis.

**Results from site A.**

There were 44 completed Shortell subscales by the RNs at Site A. Four of the RNs missed one item on the Shortell subscales and two RNs missed two items of the thirteen items of the Shortell subscales. The scale score was obtained by calculating the mean of the non-missing items as per the instrument author’s instructions. The overall mean score at Site A was 3.39 (SD+/-.0.4) indicating a neutral to mildly positive impression of the quality of communication and coordination of care between the PSW observers and the RNs on the unit.

**Results from site B.**

There were fifteen completed Shortell subscales by the RNs at Site B. One RN missed one item on the Shortell subscales but otherwise the questionnaires were complete. The scale score was calculated as described for Site A. The overall mean score at Site B was 3.31 (SD+/-.0.4) indicating a neutral to mildly positive impression of the quality of communication and coordination of care between the PSW observers and RNs on the unit at Site B.

**Comparison between sites.**

An independent two-tailed t-test comparing the overall impression (mean scores at each site) of the quality of communication and coordination of care between the PSW observers and RNs indicated that there was no significant difference between the mean scores (p=0.6, 95% CI -0.17-0.34) of the two sites. The Levene’s Test for Equality of Variances indicated that equal variance between the site scores could be assumed. Since there were different staffing models for Observers at the two sites, it was anticipated that there would have been differences between the
two sites in the overall impression of the quality of communication and coordination of care between the RN and Observer.

**Constant Observation Performance**

Data was collected through observation for eight shifts, involving a total of 47.5 hours, at the two hospital sites. Seven shifts of observation took place at Site A. These included a night, two weekday, two evening, one weekend evening and one weekend day shifts. One shift of observation took place at Site B and involved a weeknight evening shift. See the table below for a breakdown of the number of hours of observation based on time of day and week day or weekend.

**Table 14: Amount of time (in hours) of Observation during different shifts**

<table>
<thead>
<tr>
<th>Type of Shift</th>
<th>Weekend</th>
<th>Work Week</th>
<th>Total hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day</td>
<td>8</td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>Evening</td>
<td>5.5</td>
<td>16.5</td>
<td>22</td>
</tr>
<tr>
<td>Night</td>
<td>7</td>
<td>0.5</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>Total (hours)</strong></td>
<td><strong>20.5</strong></td>
<td><strong>27</strong></td>
<td><strong>47.5</strong></td>
</tr>
</tbody>
</table>

The RNs and Observers working during the eight shifts also consented to participate in the study and as a result the observations were able to proceed. A total of eight Observers participated in the study (a different Observer for each shift) and a total of seven RNs participated as one RN was observed twice.

While the characteristics of RNs completing the questionnaires were presented by site, the characteristics of the RNs and observers that participated in being observed and interviewed are reported with both sites combined. Since there were a low number of participants during this phase of the study, the results of the data analyses describing the characteristics of the RN and
Observer populations are reported for both sites combined together, in order to protect participant privacy.

**Characteristics of Participants Observed**

Demographic information was collected from the eight Observers and seven RNs that participated in this component of the study. Demographic and other information related to factors contributing to constant observation use that were collected from the six patients that participated in the study were presented in Table 8 on pages 81-82. The demographic information, and characteristics of the participants, are summarized in the tables 15 and 16.

**Table 15: Characteristics of Observer Participants (n=8)**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (yr)</strong></td>
<td></td>
</tr>
<tr>
<td>25-34</td>
<td>1</td>
</tr>
<tr>
<td>35-44</td>
<td>0</td>
</tr>
<tr>
<td>45-54</td>
<td>4</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
</tr>
<tr>
<td><strong>Educational Level</strong></td>
<td></td>
</tr>
<tr>
<td>Certificate</td>
<td>4</td>
</tr>
<tr>
<td>Diploma</td>
<td>4</td>
</tr>
<tr>
<td><strong>Credential</strong></td>
<td></td>
</tr>
<tr>
<td>PSW</td>
<td>6</td>
</tr>
<tr>
<td>RN or RPN in another Country</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
<tr>
<td><strong>Experience as an observer</strong></td>
<td></td>
</tr>
<tr>
<td>&lt;5 years</td>
<td>1</td>
</tr>
<tr>
<td>5-10 years</td>
<td>1</td>
</tr>
<tr>
<td>11-15 years</td>
<td>1</td>
</tr>
<tr>
<td>&gt;15 years</td>
<td>4</td>
</tr>
<tr>
<td><strong>Experience on the unit</strong></td>
<td></td>
</tr>
<tr>
<td>&lt;5 years</td>
<td>2</td>
</tr>
<tr>
<td>5-10 years</td>
<td>1</td>
</tr>
<tr>
<td>11-15 years</td>
<td>2</td>
</tr>
<tr>
<td>&gt;15 years</td>
<td>1</td>
</tr>
</tbody>
</table>

\(^{a}\) due to missing data n=5 \(^{b}\) due to missing data n=7 \(^{c}\) due to missing data n=6
Three observer participants declined to provide their age, two participants did not provide a time working on the unit as they were new to the unit (agency staff), and one did not provide years of experience as the participant had just arrived in Canada and this was the first shift as an observer. There was a wide range in the age (28-52 years), years of experience as an observer (0.5 -20 years) and years of experience on the unit (0.5-14 years). The majority of the observers were female, had a diploma-level of education and a PSW credential.

Table 16: Characteristics of RN participants (n=7)

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yr)</td>
<td></td>
</tr>
<tr>
<td>25-34</td>
<td>2</td>
</tr>
<tr>
<td>35-44</td>
<td>3</td>
</tr>
<tr>
<td>45-54</td>
<td>2</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>6</td>
</tr>
<tr>
<td>Highest Nursing Education</td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>1</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>5</td>
</tr>
<tr>
<td>Graduate</td>
<td>1</td>
</tr>
<tr>
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*a due to missing data n=6*
The majority of RN participants were female and had an undergraduate degree. None of the RN participants had a Canadian Nurses Association certification in gerontology. Four of the RN participants had also completed the questionnaires whereas three of the RNs only participated in the observation and post-observation interviews.

**Thematic Analysis Findings**

Through analysis of the multiple sources of data collected through interviews and non-participant observation, the key findings identified are outlined in the thematic tree (Figure 4). The key findings from the observations and interviews are outlined in Figure 4 and are discussed in detail in the subsequent sections of this chapter.

**Figure 4: Thematic Tree**
**Theme 1: Multi-faceted Observer Role**

One of the key findings of the study was that the Observer role was multi-faceted and included the following three role components: providing direct care, ensuring patient safety and sharing information. These are highlighted in Table 15 below. Definitions and details of these different role components including how they were enacted will be described in the following sections and illustrated with examples from the field notes and interviews.

**Table 17: Theme 1- The Multi-faceted Observer Role**

<table>
<thead>
<tr>
<th>Grouping of Codes (categories)</th>
<th>Sub-theme</th>
<th>Theme</th>
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<tbody>
<tr>
<td>Assisting with activities of daily living</td>
<td>Providing Direct Care</td>
<td>Multi-faceted Observer role</td>
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<tr>
<td>Implementing Comfort Strategies</td>
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<td>Providing Environmental care</td>
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<td>Observing</td>
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<td>Intervening to prevent an adverse event</td>
<td>Ensuring Patient Safety</td>
<td>Multi-faceted Observer role</td>
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<tr>
<td>Work load</td>
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<td>Documentation</td>
<td>Sharing Information</td>
<td>Multi-faceted Observer role</td>
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<td>Information sharing with patients and families</td>
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<tr>
<td>Information sharing with other health care team members</td>
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</table>

**Providing direct care.**

The providing direct care component of the Observer role included the assistance and supervision of patients with activities of daily living, implementing comfort strategies and providing environmental care.
Assisting with activities of daily living.

Assisting with activities of daily living (ADLs) included the Observer providing either cueing, supervision or hands-on assistance with different ADLs such as bathing, dressing, transfers, ambulation, toileting, eating and using a telephone.

The Observers at Site A were a member of the nursing care team that included RNs, a charge RN and other PSWs. As part of the nursing care team, the Observers in the individual patient rooms were responsible for providing all the components of the basic nursing care. These care activities included helping the patient with self-care activities such as getting in and out of bed, transferring in and out of chairs, bathing, walking/mobilizing, toileting, feeding and other activities of daily living. These activities were documented in field notes from all eight shifts of observation. The types of care activities that the observer helped the patients with varied depending on the time of day. For the most part, bathing assistance was observed during the day shift, assistance with meals was observed during the day and evening shifts (breakfast, lunch and supper time), assistance with transfers and ambulation were observed during the day and evening shift whereas toileting assistance (and incontinence care) was observed on all shifts.

The observer helped the patient walk to the washroom with the rollator walker and then helped him walk back to bed after he’d finished in the washroom. The observer helped the patient transfer back into bed. (Field Notes Shift 5: Weekend Day 09.45 AM)

While the RN provided direction to the Observer as well as providing coverage by remaining in the room if the observer had to leave the room, the Observer was generally responsible for providing assistance with self-care activities. The RN also helped the Observer in activities that required assistance to the patient from more than one care-provider.
The observer and the RN assisted the patient to transfer out of bed into a chair at the bedside using a two-wheeled walker so that the patient could sit in the chair for dinner. The RN then left the room. (Field Notes Shift 6: Evening 5.05 PM)

Although the Observers did not have access to the health record and did not appear to conduct a formal assessment of each individual’s abilities and requirements for assistance at the beginning of the shift, the observers appeared to know what the patient’s abilities and care requirements were. This may have been through experience with the patient on a previous shift. One example of the Observer being aware of the care requirements was observed during several shifts involved the Observer requesting assistance from an RN or another PSW to help transfer a patient that required the assistance of two staff members to transfer from the bed into a chair at the bedside rather than attempting to transfer the patient alone first (as per the example provided above).

Another example involved the observer sitting next to a patient at meal times and encouraging the patient to eat rather than providing physical assistance with eating. For example:

“The observer is checking on the patient and telling him what is in front of him on his meal tray. The observer helped with opening a dessert container for the patient.” (Field Notes Shift 6: Evening 5.37 PM). Some of the information about the patient’s abilities and requirements for assistance was provided through the transfer of accountability report provided by Observers on the previous shift and through the RN report at the beginning of the shift, although the change of shift reports observed were cursory discussions of the patient’s behaviours during the previous shift and the care provided. The Observers also had access to, and reviewed, the behavioural logs completed by Observers on previous shifts and as staff members from the unit may have had previous experience with the individual patient.
Observers were seen to encourage and allow the patients to perform self-care activities rather than providing assistance with activities if assistance was not required. Examples included the Observers encouraging and assisting patients to ambulate during the day and evening shifts including walking to the bathroom and taking walks in the hallway. Patients were also assisted to sit up in a chair for meals rather than eat in bed. In one case where a patient preferred not to sit up in the chair, they were assisted to sit at the edge of the bed with their legs on the floor to eat their meal.

While requests to go for a walk or go to the bathroom were often initiated by the patient, in some cases it was based on the Observer asking the patient if that is what they wanted to do.

Assisting patients with self-care activities was not part of the role description of Observers at Site B according to the information gathered during the interview with the unit Manager. It was the RN caring for the patient for the shift that was responsible for assisting with self-care tasks such as bathing, incontinence care and setting the patient up for meals. However, the Observer at Site B was seen to provide some supervision and cueing with the patient performing ADLs. This example occurred when the Observer was walking with a patient in the hallway:

The patient told the Observer that they needed to go to the bathroom, so the Observer and patient walked around the unit to the patient’s room. The patient closed the door to the room. Half an hour later, the Observer knocked on the bathroom door and then went in with a wash cloth asking the patient if they needed any help. The patient came out of the bathroom and the Observer reminded the patient to wash their hands. So the patient went back to the bathroom and did. (Field notes- Shift 8: Evening 4.25-5.01 PM)
Although assistance with ADLs was not part of the Observer role description at Site B, there was variability in practice based on the direction provided by the RN to the Observer at the beginning of the shift:

It would be dependent on the nurse, and the nurse asking the observer…, to do these tasks. It would also depend on the individual, if they’re a PSW and they work as a PSW they’re used to doing these duties….and then there’s probably…some discussion between the nurse and the observer …about feeding and other activities that may be required.

(Manager Interview)

There was an expectation from the unit manager and organizational policy that the RN would discuss with the Observer (sourced from an external agency) the care required by the patient:

A lot of it is based on ensuring that the patient is safe and….that communication on what and how they contact the nurse. So if you need the nurse and it is not an emergency you ring the call bell like the patient would. If it is an emergency you press the button that indicates you need help….. (Manager Interview)

So the discussion between the RN and the Observer focused on what the Observer was expected to do, what they should not do and what would require the RN to be asked to intervene.

*Providing environmental care.*

In addition to assisting with ADLs, the Observers were seen to participate in some environmental care activities such as the removal of meal trays when the patients finished eating breakfast, lunch and/or dinner, making beds, moving a patient’s bed to another location, clearing and cleaning the patient’s bed side table.
Observer responsibilities included stocking up on supplies, tidying the environment and some light cleaning. Frequent activities that occurred included making beds, clearing supplies from side-tables and stocking linen in the room. The observer also helped other PSWs that were responsible for cleaning the rooms after patients are discharged and distributing meal trays on a few occasions. For example: “The observer is helping the cleaning staff with removal of the curtains from the empty bed and putting up clean ones” (Field Notes Day Shift 4: 11.45 AM) and in another example: “The patient finished eating so the Observer cleared away the food tray…..the Observer then brought the meal tray out of the patient’s room” (Field Notes Evening Shift 8: 6.20PM). These activities were performed to support assisting the patient with their ADLs for example after meals or bathing.

**Ensuring patient safety.**

The ensuring safety component of the Observer role involved providing the constant observation and intervening or calling for assistance from the RN to help prevent any adverse events.

**Observing.**

At both sites, the Observer was expected to only leave the room if another care provider such as an RN or another PSW was in the room. At Site A, during the Observers’ break time another PSW would be assigned to stay in the room and provide the constant observation until the Observer returned from their break. At Site B, the RN would provide coverage during the Observer’s break time.

Since the Observer at Site A was also responsible for providing assistance with ADLs (as described by the unit manager), they often observed the patients in the room while assisting with
other care activities: “The observer is helping one patient in the bathroom but is coming out every minute to check on the other two patients in the room.” (Field Notes Night Shift 1 5.55AM). If none of the patients in the room required assistance with care activities then the observer would sit and observe. In these circumstances the Observer often documented on the patient behaviours in the behavioural log they were expected to complete on an hourly basis: “The observer is sitting in the chair and watching the three patients in the room while documenting observations” (Field Notes Night Shift 1 12.30 AM) and in another example: “The observer checked on the other patients and then sat down to document” (Field Notes Weekend Evening Shift 7 8.15 PM).

Sitting and observing was seen more frequently during the night shift as the Observer had less care activities (such as bathing and assistance with meals) to assist with. In addition, during the night shift the lights were turned off in the room and there was minimal light coming in from the hallway. The Observer let the patients sleep and only intervened if necessary. For example when a patient was incontinent of urine, the observer changed the incontinence brief of the patient with the assistance of the RN. The Observer assisted other more ambulatory patients to get up and use the bathroom as well as providing additional covers to the patient and repositioning patients in bed. But generally, during the night shift, the observer was able to sit and observe and document. Although both the Observers and RNs did relay that at times night shift are very busy when the patients with delirium do not sleep and require hands on care throughout the night.

The Observers at Site A used different strategies to observe the two or three the patients in a single room that they were accountable for. These included monitoring other patients in the room while providing care to an individual patient and coordinating surveillance requirements
with the RN. Examples included situations where the Observer was busy bathing one patient either in the bathroom or in bed and during that time they were frequently looking out from the bathroom or behind the curtain (around the patient’s bed) to make sure that the other two patients in the room were safe (Field Notes Weekend Day Shift 5, Night Shift 1). In one case, the Observer along with the RN were accountable for providing constant observation in one two-bed room as well as frequent checks every fifteen minutes to a patient in an adjacent room. The Observer was constantly going back and forth between the two rooms in coordination with the RN so that the patients in the room where constant observation was required were not left unattended (Field Notes Weekend Day Shift 5). At night time when the lights were low or off completely, the Observer would walk close to each patient’s bedside on a regular basis to see whether the patients required any assistance (Field Notes Night Shift 1).

There was variability in whether the Observer was within arm’s reach of a patient or if they observed from a greater distance. There were two cases where the patient wandered and was at risk of leaving the unit however these patients ambulated independently and were not at risk for falls. The observers would watch from a distance and allow the patient to walk around within the locked unit or locked area of the unit (Field Notes Evening Shift 2, Day Shift 3 and Evening Shift 8). Their surveillance role as articulated in the handover report, was to make sure that the patients stayed in the locked part of the unit or on the unit, didn’t disturb other patients and didn’t leave when someone was entering or exiting that part of the unit. Patients that were at risk of falls or removal of treatment lines such as a hemodialysis line were observed more closely and the Observer was within close reach (Field Notes Night Shift 1, Weekend Day Shift 5, Evening Shift 6).
Workload.

At Site A, since the Observer was responsible for providing constant observation for up to three patients in one room, there were some circumstances where more than one patient needed help at the same time and the Observer had to decide who to help first and whether to call for assistance. One example (Field Notes Evening Shift 2) that occurred when one patient, at risk of elopement from the unit, left the room at the same time as a patient was requesting assistance to go to the bathroom and a third patient, with delirium, was trying to get up from the bed. The second two patients were both at risk for falls and required both supervision and one person assistance with transfers and ambulation. In these circumstances the observer had to prioritize and determine which patient they were going to help first. In order to do that they had to know the patients and have a good understanding of their care needs and their cognitive status so they could identify whether they could tell one of the patients to wait for assistance or call for help from the RN or another PSW. In the situation described, the observer determined that the patients asking to go to the bathroom and the patient trying to get out of bed required assistance first. So the observer used the call bell to seek assistance from either the RN or another PSW. The RN was just outside the room where the medication cart and computer on wheels was located and so the RN was able to provide assistance. In these circumstances, where more than one care provider was required to provide assistance to the patients in the one room the Observer appeared to be able to access the required assistance quickly from the RN or another PSW and there were no adverse events noted during the non-participant observation.

There were implications for having to observe more than one patient at a time. Workload was identified as a limitation at Site A where the Observer was often accountable for providing constant observation for up to three patients in one room and on several occasions to
patients in adjacent rooms. Participants described difficulties with having to manage multiple patients with responsive behaviours at the same time. For example, one Observer stated: “in general, no matter what type of observation, if the patient is very agitated I can’t focus on anything else like multiple patients or multiple rooms. Need to staff based on patient need”. In another example an RN said:

When the patients want to go home. When they are climbing out of bed. When she {the Observer PSW} has to do constant prioritization between the multiple patients in the room if they have unsafe behaviours at the same time.

Participants also described that when work load was manageable they were able to help the patients with all their needs and not just focus on the unsafe behaviour. They were also able to complete the shift without being exhausted at the end and having some down time to sit and observer and document: “As everyone was calm, I was able to help the patients with their activities and comfort. It was not too tiring too.” (Observer participant). Participants also talked about the importance of experience in being able to handle both the work load and the client needs including responsive behaviours: “….a novice may not be able to handle multiple patients who are agitated” (Observer participant).

Both the RNs and the Observers highlighted the importance of staffing according to patient need and developing assignments where there is a balance between patients requiring a lot of assistance and those who require less assistance.

**Intervening to Prevent Adverse Events**

By being in the room and easily accessible to patients the Observers were able to respond quickly if a patient made a request or required assistance. Examples during the non-participant
observation included a patient exhibiting discomfort and being assisted to turn and reposition (Field Notes Shift 1: Night), requesting and being assisted to walk to the bathroom (Field Notes Shift 8: Evening), asking for a drink or additional food and being provided with these by the observer (Field Notes Shift 5: Evening), needing assistance to use the telephone to call a family member and the observer providing that assistance (Field Notes Shift 7: Evening). During the shifts observed, because the Observer was readily accessible there was no waiting on the part of the patient for their requests or needs to be met.

Through constant observation, there were instances where the observer prevented adverse events that were un-related to the responsive behaviour or possible risk of adverse events requiring constant observation. Two circumstances where this was demonstrated will be provided. In the first example:

While watching one patient eating his dinner on an evening shift, the Observer identified the patient was pocketing food in his cheek rather than swallowing the food. The Observer started encouraging the patient verbally to swallow the food each time the patient took a mouthful of food and chewed. The Observer also informed the patient’s RN. (Field Notes Shift 6: Evening 5.20PM)

In the second example:

Family members were feeding one of the patient’s in the room and the patient stated coughing while being fed. The Observer went to the patient’s bed and elevated the head of the bed. The Observer also provided information to the family on how to help the patient eat without risking aspiration of the food. She told the family that at a previous meal, the Observer had given the patient a spoon and the patient was able to eat with
supervision. She encouraged the family to try that and the family went on to sit next to the patient while the patient ate with a spoon. In both these situations the Observer recognized that the patient was at risk of aspiration while eating as signs exhibited were pocketing food and coughing. The Observer then implemented interventions to prevent aspiration including elevating the head of the bed, encouraging the patient to eat independently as well as encouraging the patient to swallow after each mouthful. In addition the Observer provided education to the family so they could participate in helping the patient to eat safely. (Field Notes Shift 4: Day 11AM)

At Site B in addition to providing constant surveillance, the Observer was expected to engage with the patient and provide activities to the patient based on the patient’s history and preferences while providing the surveillance. Information about the patient’s preferences were obtained from patients and family members through an assessment of the patient’s work history, life history and previous leisure activities by the RN. From this information a care plan was developed by the inter-professional team and used to outline individualized patient activities. These preferences and activities were communicated to the Observer by the RN at the beginning of the constant observation shift. One patient was identified as enjoying music and as playing the piano. Therefore the Observer engaged the patient in playing music on a keyboard obtained from the hospital volunteer services for this purpose and listening to the music together. While the keyboard played the songs, the patient moved her hands over the keyboard as if playing the music and hummed. The Observer commented to the patient “You play beautifully, you must have been a musician” and the patient responded positively to the Observer “You have a nice smile, you can visit anytime”. During this shift, the patient was engaged by the Observer in listening to music, walking around, building using Lego™ blocks as well as conversing during
meal times. When it was time for the Observer to leave at the end of the evening, the patient had been settled into the bed to sleep for the night and was not exhibiting any responsive behaviours. (Field Notes Shift 8 Evening: 4.20-8PM).

Engaging patients in conversation and leisure activities was not an explicit part of the Observer role at Site A based on the role description provided by the unit manager. However the Observers were seen to converse with the patients while providing assistance with other care activities such as during meal times and bathing. When the Observer provided the patients with activities at Site A, these were often solo activities for the patient to engage in while the Observer was assisting other patients in the room. Examples of activities that were offered to patients included reading newspapers or magazines, watching television and speaking to family members on the telephone.

In summary, although observation was the main activity carried out by the Observer, other strategies were used by the Observer to prevent responsive behaviours and adverse events. These strategies included keeping the patient engaged in leisure activities, promoting as much independence as possible in performing ADLs as well as quickly responding to patient needs and requests. All these strategies were observed while the Observer was providing the constant observation.

**Sharing information.**

The sharing information component of the Observer role involved exchanges of information with the RN about patient care needs, transfer of accountability during shift change and break times. There were also information exchanges between other members of the health care team as well as the family members of patients.
By being present in the room, observing and documenting behaviours, the Observers were expected to be able to provide information about the patient’s behaviour and responses to different interventions/actions to inform the treatment plan developed by the regulated members of the health care team. The Observer was accountable for providing information about the patient’s behaviour, care needs and response to interventions to the RN as well as the Charge RN for the shift. Most of the time the RN and charge RN solicited that information when they came into the room to assess the patient however if the Observer identified important information such as a patient safety concern they would contact the RN. The Observers documented the patient’s behaviour in a behaviour log and they also provided verbal information when asked. The RNs were in the patient rooms several times during each shift asking for verbal updates about the patient’s behaviour and any issues occurring. Information shared between the RN and Observer included how they would share accountability for the patient’s care needs as well as changes in the patient’s health condition and behaviour. In one situation the RN came into the room and asked the Observer if everything was OK. The Observer let the RN know that she thought the patient had had a bowel movement as the patient had flushed something in the toilet. The RN responded that that was a good thing as the patient had a tendency to get angry when constipated. So in this case, the Observer recognized that this was an important piece of information to share with the RN as it would indicate that the patient may not be constipated. The RN then shared another important piece of information that when the patient is constipated the discomfort may increase the responsive behaviour so the RNs were tracking the patient’s bowel movements.

There were also some examples of other members of the health care team approaching the Observer to obtain information about the patient’s behaviour. In one case the physician came into the room and asked the observer for a summary of the patient’s behaviour over the course of
the shift which the Observer provided. This indicated that other health professionals recognized the value of the information about the patient’s behaviour that the Observer PSW could provide.

The Observers were also a source of information for patients’ family members. When family members came to visit they would ask the Observer for an update about the patient’s behaviours and health status. At Site A, the Observer would provide this information and converse with the family. For example, in one situation, a charge RN came into the room and asked the observer about what the patient’s behaviour had been like over the course of the shift as she was reassessing the need for the constant observation while the family members where visiting. The Observer let the Charge RN know that the patients in the room had been quiet however the patient being discussed/observed does not call for assistance when he needs to get up and is at risk for falls. The patient’s family member was present in the room and they did not speak to the Charge RN. It was only when the Charge RN had left the room that the family member voiced their concerns to the Observer about constant observation being discontinued because the patient had previously required a 24-hour care provider at home. Therefore the family felt that constant observation was essential for the safety and well-being of the patient. The Observer then reassured the family that the patient did require the constant observation (Field Notes Shift 6: Evening). At Site B, the unit manager stated that Observers were not permitted to share personal health information and were expected to contact the RN if this was requested “…don’t give out personal health information to anyone so if a doctor comes in they would call the nurse rather than giving the doctor report” (Manager).

At change of shift or during the break times for the Observer a transfer of accountability was required between the Observer and the staff member that would take over providing the constant observation. Transfer of accountability took place through a verbal exchange about the
patient’s current behaviour, interventions provided for the behaviour and care provided, as well as what had transpired during the shift.

**Theme 2: Supervisory RN role**

Since the non-participant observation was focused on the patient’s room and the Observer, the RN role was only observed when the RN was present or just outside the patient’s room. RNs were often accountable to patients in multiple different rooms and also spent time at the patient care station communicating with other team members. Therefore the RN role is only described in the context of the interactions with the Observer. The RN was accountable for supervising the care provided to the patient by the Observer. Role components identified through the analysis of field notes included: providing support, directing patient care and sharing information. Details of these attributes and how they were enacted are highlighted in the table below and will be described in the following sections.

**Table 18: Theme 2- Supervisory RN Role**

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<th>Grouping of Codes (categories)</th>
<th>Sub-theme</th>
<th>Theme</th>
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<tbody>
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<td>Proactive assistance</td>
<td>Providing Support</td>
<td>Supervisory RN role</td>
</tr>
<tr>
<td>Reactive assistance</td>
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<td>Listening</td>
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<tr>
<td>Tasks</td>
<td>Directing Patient Care</td>
<td>Supervisory RN role</td>
</tr>
<tr>
<td>Coverage</td>
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<tr>
<td>Required communication</td>
<td>Sharing Information</td>
<td>Supervisory RN role</td>
</tr>
<tr>
<td>Change of shift report</td>
<td></td>
<td></td>
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<tr>
<td>During shift updates</td>
<td></td>
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<tr>
<td>Seeking information on the patient</td>
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While the Observer was present in the room at all times (unless coverage was being provided by the RN or another PSW), the RNs were in and out of the patient’s room on a regular basis. The RNs came into the room several times during the shift to get updates about the
patient’s condition, to assess their health status as well as to, conduct activities such as taking vital signs and giving medications.

**Providing support.**

There was variation in how often the RNs came into the patient’s room. Most RNs seemed to come in often (more frequently than hourly) to see if the Observer needed help and providing any assistance required whereas other RNs came in infrequently. One example was the night shift, when the RN came to the room very briefly five times during the eight hours. In this situation, it was up to the Observer to provide the care and call from the RN for help when it was required.

However in most situations the RNs were in the room frequently directing the Observer on the care needs of the patients, providing assistance with ADLs and monitoring the work of the Observer. The RNs were responsive to requests from the Observer for assistance and came into the room to assist when asked in situations where a patient required the assistance of two care providers (such as transferring from the bed into a chair) or where more than one patient in the room required assistance at the same time. For example: “The RN came into the room to check in on the patients and helped the observer change patients’ incontinence briefs and reposition patients in bed.” (Field Notes Shift 1 Night 6.45 AM). In another example:

Two other patients in the room required assistance (one wanting to use the bathroom and another wanting to leave). The RN and observer each assisted one of these patients. The RN then took one patient for a walk while the Observer remained in the room with the two remaining patients. (Field Notes Shift 7 Weekend Evening 5.55 PM)
The RN also provided coverage for the Observer PSW by providing constant observation when the observer had to leave the room or when the Observer was occupied with other tasks. Observer participants identified the importance of the RN being supportive of their work:

“Today was a good shift. The nurse was very supportive and the family was supportive. Also the patients were very co-operative.” (Observer participant). In contrast were shifts where the RNs came into the room infrequently rather than on a regular basis to support the observer.

**Directing patient care.**

Direction was provided by the RN to the Observer at the beginning of the shift and when required during the shift. At the beginning of a shift the RN connected with the Observer to assign tasks and accountabilities for the shift:

RN provided the Observer with report about the patient needs. The Observer is to provide close observation to the two patients in the room. In addition the observer is to provide “frequent checks” to two patients in the adjacent room. (Field Notes Shift 5 Weekend Day 8 AM)

RN came into the room and provided the observer with a report on the patient and the need for observation. The observation is to prevent exit seeking as the patient is being held in the hospital under the Health Care Consent Act. The patient’s substitute decision maker had agreed that the patient should stay in hospital for additional assessment. (Field notes Shift 2 Evening 3.46 PM)

Direction was also provided during the shift when the RN assigned the Observer for specific tasks:
The RN came into the room and told the Observer that she is going on break. She told the Observer that since the patient is sleeping/drowsy that the observer should not try to feed the patient… RN is back in the room to speak with the Observer. RN assigned the Observer to go to the adjacent room to provide incontinence care to a patient. The RN will stay in the current patient’s room and speak to the medical team about a patient.
(Field Notes Shift 5 Weekend Day 10.17 AM)

At Site B, since the Observers were contracted from an external agency, there was a formal review of a document outlining RN and Observer expectations that was signed by the RN and Observer at the beginning of the shift:

The bulk of the communication is at the beginning of the shift. Where you’re reviewing the waiver form, where you’re reviewing what the expectations are, discussing breaks. …..And then throughout the shift if there’s anything that’s changing obviously there’s going to be communication between the nurse and the constant care provider (Manager)

**Sharing information.**

In most of the shifts observed, the RN and Observer dyad connected together throughout the shift to update each other on patient care needs and divide up the care activities. For example the RN came into the room at meal times to assist the Observer with setting up patients to eat their meals. Both members of the dyad asked for and received help from each other when requested and to provide care for certain client’s when more than one care provider was needed. For example during turning and repositioning of the patient in the bed or when the patient required two-person assistance to transfer from the bed to a chair and vice-versa. The RNs shared assessment information with the Observer at times:
The RN came in and tried to rouse the patient by asking him if he wants lunch. The Patient was very drowsy, said “No” and went back to sleep. The RN went to check the medication administration record to see if the patient had recently received a sedating medication and verified that the patient had received an anti-psychotic medication injection on the previous shift. She gave this information to the Observer and explained that “this may be why he is so drowsy. (Field Notes Shift 4 Day 12.37 PM)

Some participants highlighted the importance of information sharing between the RN and Observer:

Communication between the RN and sitter is very important as otherwise the observer may not know the safety concerns and patient needs so a mishap may happen. Also the PSWs don’t have a clearly defined role and accountabilities, so sometimes it is not clear what to expect from them and errors can happen. (RN Participant)

The majority of the information sharing that occurred during the shifts however was the RN requesting information from the Observer about the patient’s conditions several times during the shift. This usually involved the RN asking the Observer about how the patient is doing and whether the Observer required any assistance.

**Theme 3: Constant Observation Outcomes: A Good Shift**

Outcomes of Constant observation were described by the RNs, Observers and Managers in the interviews and were also identified through the non-participant observation. Outcomes that were identified from the analysis of the data included the prevention of adverse events, and the prevention and management of responsive patient behaviour. When these were
present then this was described as a good shift. Details of these outcomes of constant observation are highlighted in table 19 and will be described in the following sections.

**Table 19: Theme 3- Constant Observation Outcomes**

<table>
<thead>
<tr>
<th>Grouping of Codes (categories)</th>
<th>Sub-theme</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of adverse events</td>
<td>Prevention of adverse events</td>
<td>Constant Observation Outcomes</td>
</tr>
<tr>
<td>Quiet shift</td>
<td></td>
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<tr>
<td>Patient and family satisfaction</td>
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<tr>
<td>Negotiation</td>
<td>Management of responsive behaviors</td>
<td>Constant Observation Outcomes</td>
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<tr>
<td>Reassurance</td>
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<td>Humour</td>
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<td>Comfort</td>
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<td>Distraction</td>
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<tr>
<td>Relational approach to care</td>
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<tr>
<td>Orientation</td>
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**Lack of adverse events.**

No adverse events were observed in the eight non-participant observation shifts. There was consistency in the interview responses by the RNs, Observers, and Managers about the need for constant observation for different patient characteristics and behaviours, to prevent adverse events. These participants were convinced of the benefits of constant observation in preventing adverse events in patients with delirium, suicidal ideation and those exhibiting risk of falls, elopement, wandering into other patients’ rooms, and removal of treatment-related equipment (such as intravenous lines, urinary catheters and naso-gastric tubes). Falls prevention was the most commonly reported reason for the use of constant observation in preventing adverse events:

Patient is unsteady on his feet. He has hyponatremia and gets confused such as wanting to and trying to leave and to go home. He has a history of agitation and trying to leave while he’s been here. He has an unsteady gait and fluctuating cognition. (RN participant)
RN participants sometimes provided details from the patient’s medical history to give an explanation of why the patient was at risk of an adverse event. In the example above the RN cites the underlying pathology that led to a delirium resulting in the risk for falls. Constant observation was used when there were concerns that the patient may ambulate or transfer unsafely both due to impaired physical ability such as an unsteady gait and due to concerns about impaired judgement related to delirium and or the dementia.

Although both sites had a locked area, constant observation was still provided for patients at risk for elopement to ensure they did not exit the unit when other individuals were entering or leaving. Another reason provided for constant observation for patients who wandered was to prevent or distract a patient from entering the personal space and belongings of other patients by redirecting the patient or by engaging the patient in other activities: “The patient was wandering into the rooms of other patients and then refusing to leave. She has made other patients uncomfortable and we were receiving complaints” (RN participant).

Since both units had locked areas, patients were not discouraged from walking around the unit and were able to ambulate freely. The role of the observer in these cases was to ensure they did not leave the unit and to prevent disruption to other patients. Patients who had a history of removal of treatment lines such as urinary catheters, and intravenous lines or were at risk of removing their treatment lines were also cited as requiring constant observation by the RNs and Observers: “To stop from removing the dialysis line and climbing out of bed and on and off confusion” (Observer participant). In another example an RN participant stated: “The patient is sleeping today but before that it was because of delirium. The patient was impulsive and pulled out the saline lock. The reason is to prevent harm. The benefits are to prevent harm.”
Since, in most circumstances, the whole purpose of providing constant observation was to prevent the occurrence of adverse events it was not surprising that participants described a good shift as one that was uneventful and no adverse events took place. Some highlights included that all the patients were “safe and calm” and that “no incidents happened like falls or pulling out lines”.

A lack of presence of responsive behaviours or behaviours that may lead to adverse events were identified as important for a constant observation shift to go well (i.e. it was a good shift). Behaviours that were difficult to manage identified by RNs and Observers included “wanting to leave”, “being agitated and needing a lot of attention”, “when they want to go home. When they are climbing out of bed” as well as “When they are out of control, aggressive, agitated, exit-seeking, fighting with staff and resisting care”. Participants identified that days when all the patients were calm and feeling well as those where constant observation went well:

“This is working well. She (the patient) was quieter than usual today. Usually the patient is up and walking in the hallway but today she has spent more time in her room than usual”. (RN participant).

Since the reason why patients require constant observation is the presence of behaviours that may result in adverse events, it is interesting that both RNs and Observers interviews identified that a shift without responsive behaviours was a good shift. In one circumstance observed, a patient receiving constant observation was in a hypoactive delirium and was somnolent and difficult to rouse. However, the observer indicated that on previous shifts that the patient required close monitoring as they had significant confusion and had tried to get out of bed multiple times and tried to leave the unit. The Observer described the current shift as one where constant observation went well: “Today is a good day, and is a better day than recent days, as
previously the patients (two) were trying to climb out of bed”. (Observer participant). Although the RN also described this as a good shift, the RN did recognize that all may not be well with the patient’s condition and was conducting additional assessments and notifying other members of the health care team including the physician: “So far it has been good. But I am concerned about what may be happening now, I’m concerned about the patients’ drowsiness”. (RN participant).

Therefore in some circumstances what may be described as a good shift, due to the lack of responsive behaviours and adverse events, may not actually indicate time periods when the patient was improving but rather those where the patient’s condition may have deteriorated resulting in a lack of responsive behaviour and movement. Therefore what may be a good shift for staff may not actually be a good shift for the patient. It is unclear from this example whether clients were receiving constant observation when it was no longer required, or since there are fluctuations in the course of delirium- the shifts observed were those where the clients were in a hypoactive state.

Other times which were described as those where constant observation went well, due to the lack of responsive behaviours, were those shifts when there was a lower noise level and activity on the unit (for example on the weekends) and those where the patients were engaged with the Observer and family members visiting: “Today we had a volunteer talking to a patient and other staff dropping in to say hello. The patients are feeling well and being socially engaged and family members are also coming in to visit” (RN and Observer participants).

Management of responsive behaviour.

Another benefit of constant observation was the presence of the observer to implement strategies to manage and prevent responsive behaviour. During the shifts observed, there were
three shifts were there was absolutely no responsive behaviour at all and five shifts were there was some responsive behaviour. Strategies by the Observer to manage patient behaviours included orientation, distraction, comforting strategies, negotiating and providing commands. While most of the strategies were effective in preventing escalation of responsive behaviours there were examples of ineffective strategies too. Ineffective strategies where those that did not result in the prevention, or escalation, of responsive behaviours. In addition, the Observers sometimes used multiple strategies at the same time or in sequence. The different types of strategies used will be described in further detail below with examples from the non-participant observation and interviews.

**Orientation, comfort and negotiation.**

One strategy that the Observers used was to provide orientation to the patients. One example, involved a patient that had a hemodialysis line (Field Notes Shift 1 Night). The patient had been trying to pull out the hemodialysis line so the healthcare team had applied mittens, a form of restraints, on the patient’s hands to stop the patient from pulling the hemodialysis line. This patient also had constant observation to make sure that the mittens stayed on and that the hemodialysis line was not pulled on or removed. While being observed during the night shift, this patient tried to remove the mittens multiple times, leading the Observer to approach the patient and remind the patient that the mittens were needed so that the hemodialysis line would stay in place. Since the Observer noted that the patient was trying to remove the mittens, the Observer decided to allow the patient to have the mittens off for some time and so removed the mittens and informed the patient that the mittens could stay off as long as the patient did not pull on the hemodialysis line.
This same patient was moving around in his bed and slept only minimally during the night. The Observer was seen to go to the patient’s bedside on a regular basis to ask the patient about any symptoms of discomfort. The observer was seen to ask the patient whether they were cold or needed to turn over in the bed. At one point, the observer applied lotion to the patient’s feet due to concerns that the patient may have dry skin. In addition the Observer applied covers for the patient, provided additional covers and assisted the patient to reposition.

**Reassurance and negotiation.**

Another patient was ambulatory and highly functional and independent in terms of basic activities of daily living (Field Notes Shift 2: Evening and Shift 3: Day). However, due to judgement issues (as documented in the patient’s health record), this patient was being kept in the hospital while a discharge plan was being arranged. This patient was observed on several occasions to tell the Observer about wanting to leave, and that there was no reason to remain in the hospital. This patient asked several times to speak to the doctor to ask about the rationale for being required to stay in the hospital as there are other patients who are in more need of a hospital bed. The observer and the RN reminded the patient about the reason for being in hospital, provided reassurance as well as provided validation of patient responses. The RN was observed on several occasions to say that yes she understood that the situation was frustrating and to acknowledge that the patient does not want to be at the hospital. The RN went on to talk about how the staff would try and answer all the patient’s questions, and relay the patient’s concerns to the doctor.

Another strategy that the RN and Observer used to make sure that this patient did not try to leave the unit was by negotiating and bargaining. For example after being seen by the doctor
this patient was told that they could go out for a smoke as long as a staff member was also present. However the Unit A was not staffed well-enough to allow staff members to leave for extended periods of time (as the Observer was commonly accountable for multiple patients), so it is very hard for an Observer to take a patient outside. Both the RN and the Observer tried multiple times to persuade this patient to go and have a shower however the patient always declined. The staff were concerned that the patient hadn’t bathed for a long time, so they saw the request to go outside for a smoke with assistance as a negotiating point. The Observer told the patient that if she had a shower, the staff would take her outside so she could smoke a cigarette. Since the staff were offering the patient something she really wanted: to go outside for a smoke, the patient agreed and went without protest to have a shower accompanied by the Observer so that she could go outside and smoke a cigarette afterwards. Although having a staff member leave the unit to accompany a patient going outside is an infrequent occurrence due to staffing issues, in this case it was offered up as an option by the staff and they saw no other means to persuade the patient to voluntarily have a shower.

_Polite conversation._

Polite conversation was also a useful strategy. In this example a patient with dementia received a meal tray with a whole apple. This patient had impeccable social skills and, being polite, immediately offered the apple to the observer. The observer could have said “No…I can’t eat your food, it’s against the policy”. But instead of saying that, the observer said to the patient “Thank you very much. I’m not in the mood for an apple. Why don’t you save it for later” (Field Notes Shift 6: Evening)
Humour.

One example involved a client who was confused about the time of day, it was actually during the evening however the patient said “Good morning” to the observer. Instead of correcting the patient, the observer jokingly and in a singing voice said “Good evening, it’s evening!” (Field Notes Shift 6: Evening). This was sung in a very supportive and joking way. It provided orientation to the patient but also added some humour to the situation allowing the patient’s dignity to be preserved and for the patient to laugh along with the observer.

Sequencing of strategies.

The remaining two shifts where the patients observed exhibited responsive behaviours involved an elderly man who was at high risk for falls and was in a delirium (Field Notes Shifts 6 and 7: Evening). One evening, he indicated that he was very worried and he wanted to go to the bank. In this situation the observer used multiple strategies to manage this patient’s concerns and was successful in preventing this situation from escalating.

The observer noted that this patient wanted to get out of bed and heard that the patient said he wanted to go to the bank. The first thing that the Observer did was to call the RN for help immediately because she recognized that this situation might be escalating at that point in time and that she might require assistance from other staff member to manage the situation. Then the Observer used a sequence of strategies to manage the responsive behaviour. The first involved explaining to the patient that he couldn’t go outside at this time and the reason that the Observer provided to the patient was that it was night-time and it was raining so it wasn’t a good time to go outside to the bank.
The next strategy that the observer used was validating the patient’s behaviour by recognizing that the patient wanted to get out of bed and therefore assisted the patient with getting out of bed. At this point the patient indicated that he was concerned about where his clothing was. So the observer helped the patient get up and walk to the bed-side closet so he could see where his clothing was and that it was all indeed there. After first providing orientation to the time and environment, then reassurance, the observer went on to use distraction techniques. This was demonstrated by the Observer asking the patient if he would like to speak to his daughter on the telephone. When the patient indicated that he would like to do that, the observer helped the patient dial the phone number to his daughter. The patient then spoke his daughter on the phone. Following that the patient was no longer expressing the desire to leave and go to the bank. After the patient had completed the phone call, the Observer then asked if he wanted to read the newspaper, after the patient said “yes”, she gave him the newspaper and he then spent the next few hours reading the newspaper with no more expressions of the need to leave.

Distraction.

There were two shifts where distraction strategies were used successfully to the point that no responsive behaviours were exhibited by the patients as they were socially engaged throughout the shift. In one shift, an observer was assigned to a single patient to observe and provide social interaction as this patient required constant observation to prevent the patient from wandering into other patient’s rooms (Field Notes Shift 8: Evening). Throughout the shift, the patient and observer listened to music together and played music on a keyboard, walked around the unit as well as played with building blocks. The final shift involved a patient whose spouse was visiting for most of the shift (Field Notes Shift 5: Weekend Day). This patient was assigned
constant observation as was considered to be at high risk of falls associated with impaired judgement and mobility. While the spouse was providing companionship by conversing with the patient, the Observer also joined in and conversed for part of the shift with both the patient and the spouse.

*Relational approach to care.*

The nature of the relationship that the Observer was able to establish with the patient was identified as an important benefit of constant observation as it reflected whether the Observer was able to provide effective care to the patient:

Well today was an example (of a good shift) as there is a bond between the client and the observer. The observer knows what the client needs, is able to redirect her and what works and doesn’t with this patient. If the care provider changes, there may be a whole new situation. (RN participant)

A unit manager described attributes that were important in working well with patients including being good communicators and understanding and delivering what is required for a specific patient:

And I think that there’s certain individuals that, some of the PSWs that come, they work extremely well with the patients. They work really well with us, they’re really good communicators…we have some PSWs who are just incredibly astute and they can pick up on changes in the patient, and they’re letting us know early that something’s going on with the patient. (Manager)

There was also some discussion about trying to match the Observer to specific patient needs:
I think if there’s male patients, there’s certain male PSWs that we’ll call in to work with that population. You can almost kind of, after getting to know the PSWs you can know who’s going to work well with a certain type of patient. (Manager)

While the RNs talked directly about the effectiveness of the individual Observer, the Observers themselves were more likely to describe strategies they used in their practice that were effective with the individual patients: “A lot of caring and showing affection is important. If you don’t show that attitude then patients don’t want you around.” (Observer participant) and “Sometimes I will distract them and tell stories to help them forget what they want to do” (Observer participant).

Sometimes the participants also highlighted the effectiveness of the observer in terms of patient well-being and family satisfaction with the care being provided:“…..the sitter was very attentive and so the patient and family commented on the good care being provided” (RN participant) and “I rendered service and the patient and their family are happy” (Observer participant).

The Observer’s approach to the patient, may also impact whether an agency PSW is called back to do additional work at the site. RNs talked about monitoring the observers including how they connect with patients. Those who do not connect well were described by the RNs as those that were authoritarian rather than using effective strategies to prevent and manage responsive behaviours:

Care providers who say “No, no don’t do that” rather than redirection or other activities. This escalates the patient rather than being able to redirect them or interact with them……we tend not to call those care providers that interact like that to come back. (RN participant)
The unit manager also highlighted that Observers who were difficult to work with or who didn’t communicate adequately were less likely to be requested from the private agency when an Observer was required.

*Commands.*

There were some examples of strategies used to manage responsive behaviour that appeared to be ineffective. One scenario involved a patient who was at risk for falls and was trying to get out of bed during an evening shift. Instead of trying to find out why the patient wanted to get out of bed, or asking the patient if they wanted to go for a walk or to the bathroom, the Observer sat in the chair by the patient’s bed side and repeatedly told the patient “you have to stay in bed, you can’t get up, you have to stay in bed”. This went on for more than an hour, where every time the patient would try to get up the observer would say “No you have to stay in bed”. There was no attempt to try to find out if the patient was uncomfortable in any way, if they needed to go to the bathroom, if they felt like going for a walk. (Field Notes Shift2: Evening). This scenario was an example of the Observer response to the responsive behaviour not being as effective as other strategies discussed in the previous scenarios.

*Language barriers.*

In several cases, English was the second language for the Observer. Indeed in one case, the observer was new to Canada and the shift observed was the first shift working in a hospital in Canada. The Observer had difficulties in negotiating and conversing with the patient. In that situation, the researcher had to step in and intervene as there was a significant concern about patient safety. One patient needed to be lifted in bed and another patient started trying to help the Observer lift the first patient up in bed. The observer was unable to connect with the patient and negotiate that this was something he did not need to help with. In the end, the researcher said
that she would get help instead and thanked the patient for his offer of assistance. (Field Notes Shift 7: Evening).

Although there weren’t many examples of responsive behaviours, in the few scenarios where this did occur, there were examples of the multiple strategies that the Observers use to manage responsive behaviour. Most of these strategies were effective however there were a few examples of strategies employed that did not lead to the de-escalation of responsive behaviours.

**Summary of Findings**

The findings from this study provided a description of constant observation practices at two acute care hospital sites as well as some of the intra and extra factors that influenced constant observation performance by the RN and Observer dyads. In conclusion to this chapter, Figure 5 provides a summary of the findings within the framework of internal and external factors important to understanding the dyad performance (Cott, 1995) which will be further explained in the discussion chapter.
Figure 5: Integration of Conceptual Framework and Findings

Extra Dyad Factors

**Unit & Hospital Context**
- Physical structure
  - locked unit
  - number of patients per room
- Skill - mix
  - all RN staff or RN/PSW mix
- Formal RN role
  - supervise the observer
- Formal observer role
  - observe and
  - assist with ADLs and/or
  - provide recreational activities
- Policies & procedures
  - try alternatives first
  - reassess every shift

**Patient Characteristics**
- Older adults (5/6 aged 85+ years)
- All had responsive behaviours
- All were on psychoactive medications
- 3/6 had cognitive impairment
- 3/6 had mental health issues
- 3/6 had functional impairment
- 3/6 had a history of falls
- 4/6 were on anticholinergic medications

Intra Dyad Factors

- Most observers were female and UCPs
- Most RNs were female and had an undergraduate degree
- RNs had a positive perception of constant observation use
- RNs identified physical restraints, use of frequent monitoring and chemical restraints as the most common alternatives to constant observation
- RNs had a positive perception of communication and coordination of care with observers

Constant Observation Performance

**Multi-faceted Observer Role**
- Providing direct care
- Ensuring patient safety
- Sharing information

**Supervisory RN Role**
- Providing support
- Directing patient care
- Sharing information

Constant Observation Outcomes

- Prevention of adverse events
- Management of responsive behaviours
Chapter 5
Discussion

The purpose of this discussion chapter is to highlight how the mixed methods approach and the conceptual framework contributed to developing a deeper understanding and description of constant observation practices. First, the study findings are discussed using the conceptual framework and published evidence in this area. Next, limitations and strengths of the study are described, followed by implications for practice and policy, and areas for future research.

Extra-Dyad Factors

The extra dyad factors include unit and hospital characteristics and patient characteristics. The unit and hospital characteristics that were examined included the lay out of the unit, RN and Observer staffing, nursing team skill-mix, the prescribed roles of the RN and Observer while providing constant observation as well as policies and procedures pertaining to constant observation. Understanding how these factors may have influenced constant observation performance at the two sites will now be discussed.

Unit and Hospital Context

Several unit and organizational characteristics have been outlined that may have influenced constant observation use at the two sites including the unit layout, policies, staffing and skill mix differences.

One characteristic that was present at both sites and may influence the use of constant observation was that Site B was an entirely locked unit and Site A had a locked area of the unit. This made it possible for patients who wandered to walk around the whole unit at Site B and the locked area of the unit at Site A without concern that they would exit. The locked unit may
result in constant observation not being required for all patients who wander. This is consistent with descriptions in the literature of organizations that have decreased the use of constant observation through the creation of entire units or spaces that are locked and used specifically for patients requiring constant observation (Rape et al, 2015; Nadler-Moodie et al, 2009).

The structure of the units at the two sites were different in terms of the availability of three-bed rooms at Site A whereas Site B only had single or two-bed rooms. While both sites used one observer to provide constant observation for more than one patient at a time, the availability of the three-bedded rooms at Site A allowed for one Observer to be assigned to provide surveillance for up to three patients at a time which was not possible at Site B (usual practice was one and sometimes two patients). This strategy of providing observation to multiple patients at the same time has been implemented to decrease the use and costs associated with constant observation in some studies (Giles et al, 2006; Wright et al, 2006; Richman & Sarnese, 2014). However, no evidence was found in the literature review to direct the optimal number of patients that can be provided constant observation by one individual at a time, or the best room arrangements for this to take place, nor the types or numbers of patient characteristics that may warrant changes in the Observer to patient ratio.

Staffing may also have influenced the usage of Observers on these units. Site A always scheduled three observers per shift from the unit’s UCP staff whereas Site B obtained observers from an external staffing agency on an as-needed basis. Since there were always three observers available per shift that could not be sent way if not required for constant observation, it is plausible that Site A may have provided constant observation to patients that may not have required this intervention or no longer required this intervention, because staff were available. This staffing practice may have accounted for a situation witnessed during a non-participant
observation where a semi-comatose patient slept the entire shift while constant observation was being provided. Site A had an RN and UCP skill mix on the unit, and the observer staff were required to provide direct care activities (such as assisting with ADLs) which may have contributed to the need to have observers scheduled for all shifts as part of the unit staffing. Although these staffing variations existed between the two sites, there was no indication that there were different outcomes at the two sites for example, in terms of team work practices and the prevention of adverse events.

Similar to the literature indicating that the majority of hospitals surveyed had policies for constant observation (Worley et al, 2000; Torkelson & Dobal, 1999), both sites had policies around constant observation that included daily reassessment of the need. In addition, Site B had recently implemented staff education about constant observation and it became an expectation that certain alternative interventions had to be exhausted before using constant observation. These alternatives included: moving patients closer to the nursing station, family being asked to stay with the patient, bed alarms, diversional activities, concealment of and regular reassessment of the need for treatment equipment that tethered the patient, regular toileting and adequate pain management. These strategies have been used in different studies seeking to decrease the unnecessary use of constant observation (Salamon & Lennon, 2003; Andre, 2012; Weeks, 2011, Spiva, 2012; Adams & Kaplow, 2013; McNicoll et al, 2014).

**Patient Characteristics**

The characteristics of patients receiving constant observation in the study, as obtained both from the chart review and interviews with the RNs, Observers and Managers, were consistent with characteristics described in the literature as being present in patients receiving constant observation. These characteristics included the presence of responsive
behaviours (Rochefort et al, 2011; Worley et al, 2001; Torkelson & Dobal, 1999; Lambdan et al, 1996), taking psychoactive medications (Rocheford et al, 2011) or anticholinergic medications (Mallet, 2012; Lessard et al, 2013), a history of cognitive impairment (Rochefort et al, 2011; Worley et al, 2001; Torkelson & Dobal, 1999, Lamdan et al, 1996), a history of mental health issues (Worley et al, 2001, Blumefield et al, 2000; Lambdan et al, 1996), a history of falls (Torkelson & Dobal, 1999) and a history of functional impairment. All patient participants in this study had multiple (ranging from three to seven) characteristics that are associated with the use of constant observation. Since certain characteristics such as the presence of delirium, dementia and functional impairment are known to be under-reported in the health record (Bierman, 2001; Clegg, Westby & Young, 2010), it may be the case that the number of characteristics present in the patient participants may be higher.

**Intra-Dyad Factors**

In terms of intra-dyad factors such as RN and observer characteristics, the RNs’ perceptions about communication and coordination of care with the observers, RNs’ attitudes about constant observation and knowledge of alternatives, these may have also influenced constant observation practices. Similar to what has been described in the literature (Worley et al, 2000; Rochefort et al, 2011; Tzeng et al, 2008; Richman & Sarnese, 2014), all the observers were UCPs. Although the literature indicates that the number of years of experience influences nurses’ use of constant observation (Rochefort et al, 2011) this did not appear to be the case in this study, but the small sample size may have made this difficult to ascertain.

There were differences in the average number of alternatives to constant observation that were identified by the RNs at the two sites with RNs at Site B providing a higher average number of alternatives overall. Physical restraints was the most frequently cited item in the
environmental alternatives category, and chemical restraints was the most commonly cited item in the physiological alternatives category, by the RNs. While this finding is consistent with literature indicating that RNs have a positive overall impression of the use of both chemical and physical restraints (McCabe et al, 2011; Myers, Nikoletti & Hill, 2001; Kwasny, Hagen & Armstrong-Esther, 2006), it is also concerning since the expectations according to legislation (Government of Ontario, 2001), standards (College of Nurses of Ontario, 2009) and the evidence (RNAO, 2012; Brada et al, 2012; Park & Tang, 2007) is that restraints should be avoided and only used as a last resort when there is imminent risk of harm to the patient or others.

There was a significant difference between the two sites in the overall importance of the different reasons for using constant observation. RNs at Site A had a higher mean rating of the importance of all the different reasons for using constant observation (such as prevention of falls, treatment interference and wandering) than the RNs at Site B as measured through the Perceptions of Constant Observation Use Questionnaire. Several factors may have contributed to this difference between the two sites including the higher use of constant observation at Site A and the number of staff routinely assigned to provide this service. In addition, the recent education that RNs at Site B had received, to use alternatives first, may have contributed to their lower rating of the importance of constant observation. Previous studies have shown that education can decrease the use of constant observation (Turjanica et al, 1998; Dick et al, 2009; McNicoll et al, 2014; Gillies et al, 2015). While RNs at both sites rated the prevention of falls most highly there were some differences in how highly other reasons were rated and these appear to be consistent with the characteristics of the patients receiving constant observation at the time of data collection. For example, Site A had patients requiring the prevention of treatment interference during the time of data collection whereas Site B had patients that went into other
patients’ rooms. In studies of nurses’ attitudes about the importance of reasons for using physical restraints, prevention of treatment interference and the prevention of falls are highly rated (McCabe et al, 2011; Terpstra et al, 1998; Myers et al, 2001).

RNs at both sites reported a positive perception of the quality of communication and coordination of care with the observers. There were no significant differences in the RNs’ perception of the quality of communication and coordination of care, as measured through the Shortell questionnaire subscales, between the two sites. While no other studies were found measuring communication and collaboration between nurses and observers, prior studies using the same questionnaire to measure communication and coordination of care between members of nursing teams, nurses and physicians, and other staff, have found variability in scores between different units and organizations (Dougherty & Larson, 2005) ranging from negative to positive perceptions of communications and coordination of care.

It had been anticipated that there may be differences as the observers were unit staff at Site A and worked regularly with the RN staff, whereas at Site B the Observer staff were procured from an external agency on an as-needed basis, however, the RN staff at Site B had the ability to request specific observers that worked well with both the RNs and the patients. Both the RN staff and the Manager indicated that they did request Observers with whom they had good experiences and that communicated well. At Site A, since the Observers were regular staff, the RNs and Observers did not have the ability to make such requests. This may have accounted for the similarities in the responses related to communication and coordination of care between the two groups.

Differences in communication and coordination were found in the non-participant observation of the individual RN and Observer dyads (rather than by site). These included the
availability of the RN to the Observer, the direction and support the RN provided to the observer and the information sharing between the two care providers regarding any changes in the patient’s behaviour, health conditions or the plan of care. This is similar to descriptions in the literature whereby there is variability between different RN-UCP dyads around effective teamwork practices (Potter & Grant, 2004; Johnson et al, 2015). Effective team work practices between nurses and UCPs are linked to improved patient outcomes in long term care settings as well as an increase in patient-centred approaches to care by the UCP (McGilton, 2003; Toles & Anderson, 2011).

**Constant Observation Performance**

The actualization of the Observer role and the RN role assisted to provide insight into constant observation practices and the influence of this intervention on patient outcomes.

**Multi-faceted observer role**

In this study the three key components of the Observer role identified were: providing direct care, ensuring patient safety and sharing information. While there is a dearth of studies describing the role of the observer, there are studies that describe the role of the UCP in different settings. The role of the observer had some similarities to those of UCPs working in other settings such as providing stroke care in the community (Giosa, Holyoke, Bender, Tuge & Gifford, 2015), in long term care homes (Qian, Yu, Zhang, Hailey, Davy & Nelson, 2012) and as part of the nursing care team in acute care hospitals. Giosa and colleagues describe the UCP role in providing stroke care to home care clients in Ontario as including the following components: Observe (for hazards in the home), Coach (encourage patients working on specific goals), Assist (with ADLs) and Report (changes in status to the regulated health care provider). In hospital settings, the UCP role has been described as including direct care activities, housekeeping
activities and clerical duties (Spilsbury & Meyer, 2004; Conway & Kearin, 2007). The difference in the Observer role found in this study from other UCP roles is the focus on ensuring patient safety through prevention, surveillance and intervention, although the other role components of providing direct care are similar to those described in other settings through the literature.

The key role for the Observer in ensuring patient safety was continuous surveillance of the patient. Surveillance was often achieved in different ways. At Site A, the Observer was often assigned to provide constant observation up to three patients in a single room, whereas at Site B there was variability – between one to two patients. This variability is consistent with the literature where some studies highlight that constant observation involves continuous one to one monitoring (Torkelson & Dobal, 1999; Blumenfield et al, 2000; Salamon & Lennon, 2003; Mergui et al, 2008; (Jaworowski et al, 2008) and other studies describe constant observation as continuous direct observation of patients (Harding, 2010, Adams & Kaplow, 2013; Spiva et al, 2012) without specification that it needs to be one-to-one. Given the costs of constant observation, many administrators are requiring the grouping of patients together in one room to be watched by one Observer, thereby decreasing costs (Nadler-Moodie et al, 2009; Giles et al, 2006; Donoghue et al, 2005; Wright, 2006). Therefore the common core attributes of constant observation in the literature and in this study include, first: the direct nature of constant observation whereby the surveillance is provided in the proximity of the patient by the health care provider (rather than through technology); and second: continuous surveillance, whereby a health care worker is required to be watching the patient all the time. Indeed at both sites the observer only left the patients when another health care professional was available and took over the accountability to provide the surveillance. The Observer provided continuous surveillance of
the assigned patient(s) while also engaging the patient in other activities such as providing direct care (assistance with ADLs and recreational activities) and sharing information.

There is variability in the literature regarding the role enactment of the Observer. Some of the literature describes the observer role as not providing treatment themselves but rather alerting the RN who would work with the health care team on providing assessment and treatment (Rochefort et al., 2011; Jaworowski et al., 2008). This passive type of constant observation has been described as “Guard Duty” (Torkelson & Dobal, 1999) or “Custodial Gaze” (Dewing, 2012). Other studies describe a more active role of the Observer where the Observer is involved in therapeutic activities (Dewing, 2012) with the patient such as assisting with ADLs and care activities (Segatore & Adams, 2001; Bailey et al., 2009) and/or providing recreational and diversional activities such as conversation, playing individualized music, reading out loud and playing cards (Waszynski et al., 2013; Donoghue et al., 2005; Giles et al., 2006; Bailey et al., 2009). The Observers in the study at both sites had an active role (as described above) although there were some differences in how the Observer roles were enacted at the two sites. Based on role descriptions, at Site A, the Observer role involved a strong focus on providing direct care activities such as providing assistance with ADLs including bathing, toileting and continence care, eating, transfers and ambulation as well as making beds. At Site B, the observer role included a strong focus on providing recreational and diversional activities such as walking together, making conversation and listening to music. Activities were tailored to the individual patient’s background therefore, at both sites a more therapeutic active role of the Observer existed rather than a purely custodial one. Such an active role of the Observer has been proposed to be more beneficial in the literature (Dewing, 2012) in outcomes such as decreasing patient agitation (Waszynski Et al, 2013) and increased participation of patients in activities (Bailey et
Based on the existing literature (Dewing, 2012; Waszynski et al, 2013; Bailey et al, 2009) and the results of this study, demonstrating the contribution of the active role of the Observer in preventing and managing responsive behaviour by assisting with direct care activities and providing recreational activities, the provision of constant observation should optimally be an active role with the ability to provide recreational and diversional activities.

The information sharing component of the Observer role in the study was important in alerting the RN and other health care providers about the patient’s behaviours including any changes. Information provided by the observer was used to decide on whether constant observation was still required for the individual patient and also to inform the plan of care. While the information sharing component of the observer role has also been identified in the UCP role of providing stroke care in the community (Giosa et al, 2015), this did not appear in role descriptions of UCPs in hospital (Spilsbury & Meyer, 2004; Conway & Kearin, 2007).

In sum, given some variability in the observer role described in the literature and what was identified in this study, this implies that constant observation is implemented differently in different settings based on influences of the external environment and the extra and intra dyad factors described in this study. Several factors were identified in the study that can influence the way an Observer role is implemented. Extra dyad factors described earlier included unit design (number of patients in a room, locked unit), staffing (use of unit staff or procurement from an external agency), formal role descriptions (assistance with direct care such as ADLs and recreation, as compared to custodial care only), policies and procedures (requirement to try alternatives first and reassess constant observation on a daily basis) and the characteristics of the patient population (requiring the Observer to be within arm’s reach or at a greater distance). Intra dyad factors, including the characteristics of the nurse and observer as well as attitudes towards
constant observation, knowledge of alternatives to constant observation and perceptions of communication and coordination of care also influenced constant observation performance.

**Supervisory RN role**

As described in the results of this study, the supervisory RN role in constant observation included directing patient care, supporting the observer and sharing information. In this study, the Observer was highly dependent on the RN for assistance with direct care activities and managing responsive behaviours as well as for relief of constant observation duties when the Observer had to leave the patient room, for example during breaks and when walking with an individual patient. As a result working with a supportive RN was identified as important during the interviews with the Observers.

An effective supervisory RN role was demonstrated by the RN being available to support and provide relief for the observer, discussion of patient needs and developing clear accountabilities of how patient care would be provided as well information sharing about patient needs, the care plan and changes in patient status. These role components are similar to those described in the literature pertaining to RN supporting team work with the UCP in hospital. Studies of RN and UCP teamwork in hospital identified the following as being important for effective team work: understanding each other’s roles, both being involved in direct care activities, information-sharing, helping each other and the RN providing supervision and appropriate delegation (Johnson et al, 2015); showing an appreciation for each other’s contribution and being willing to help each other (Potter & Grant, 2004).

There were differences in delegation practices between the different RN and Observer dyads in the study. At one site, there was a formal process where specific accountabilities were assigned and both the RN and observer had to document that this took place. At the other site,
assigning accountabilities occurred throughout the shift in the interactions between the RN and observer but there was no formal defined process.

**Constant Observation Outcomes**

Not surprisingly the most important outcome of constant observation identified was the prevention of adverse events such as falls, elopement and other harms to the patient or others in the environment, which is similar to what is described in the literature on constant observation (Boswell et al, 2001; Jaworowski et al, 2008; Nadler-Moodie et al, 2009). Additional benefits to constant observation that have not been described in the literature were identified through this study. These other benefits were the prevention and management of responsive behaviours by the Observer. The Observers at Site A were also an important source of information to the patients’ families and other members of the health care team. However at Site B, Observers were prohibited from speaking to families and physicians and were required to ask the RN to provide information to families and physicians. These policy differences may have been related to the fact that Observers at Site A were hospital staff, whereas those from Site B were agency staff.

The lack of adverse events and near misses during the shifts observed may have been due to several factors, including the provision of constant observation and the responsiveness of the Observer to the patient’s needs. It may be that the presence of the Observer lessened the responsive behaviour, or some patients no longer required constant observation, or some shifts observed were those where the patient demonstrated less responsive behaviours due to chance. Patients with delirium may have fluctuations in their behaviours between hyperactive and hypoactive states and in one case a patient who was exhibiting hyperactive delirium the preceding day was somnolent throughout the shift observed.
By being constantly present with the patient over the course of an entire shift or multiple shifts, the Observer had the opportunity to develop a relationship with the patient and was able to understand the patient’s needs. This was recognized as important by the manager and the RNs. Many of the Observers who participated in the non-participant observation appeared to be very responsive to the needs of the patients. By being in the room and being readily available, they were able to act quickly if a patient made a request or required assistance.

Many patients receiving constant observation have dementia and/or delirium leading to impaired judgement or memory impairment (Blumefield et al, 2000; Worley et al, 2000; Rochefort et al, 2011). These impairments may lead to a patient not using the call bell if they require assistance to get a personal article from a bed side table or not remembering that the RN informed them that they would be back shortly to help them walk to the bathroom. By being constantly present in the room, the Observer was immediately able to respond to patient requests and observed needs. Whether it was because the patient was uncomfortable and needed help turning or repositioning in bed, wanted to go to the bathroom, was requesting a drink or needed assistance with finding a telephone number to call a family member, the proximity of the Observer enabled them to provide timely assistance. This removed the need for the patient receiving constant observation to use the call bell and wait for assistance or try to get up without assistance when assistance, in fact, was required. During the shifts observed, because the Observer was readily accessible there was no waiting on the part of the patient. Responding to patient needs has been identified as an important strategy in preventing and deescalating responsive behaviours (RNAO, 2004, 2010, 2012; Dupuis & Luth, 2005; Cohen-Mansfield, 2001).
In addition to being responsive to patient requests and possible adverse events, the Observer used many different strategies to prevent and de-escalate responsive behaviours including orientation, distraction and humour. The evidence suggests that targeted approaches to the factors that may have precipitated a behaviour, providing a compensatory strategy to a stressor or providing purposeful activities tailored to previous interests, are effective in managing responsive behaviours (Gitlin, Kales & Lyketsos, 2012; Cohen-Mansfield, 2001; Dupuis & Luh, 2005). These strategies used by the Observers are consistent with models providing an explanation for responsive behaviours and therefore a framework for intervention strategies (Kovach et al. 2004). Kovach and colleagues (2004) highlight that there are four types of models in the literature to explain responsive behaviours in persons with dementia: pathophysiological (Russo-Neustadt & Gottman, 1997; Sweet et al, 1997), behavioural (Teri & Logsdon, 2000; Terri, Logsdon & McMurry, 2002), unmet needs (Algase et al, 1996) and environmental vulnerability (Lawton, 1986) Interventions to prevent or mitigate responsive behaviours are designed based on these models and have been integrated in the REAP model (McGilton et al. 2013) which includes: relating well with the client (McGilton, Sidani, Boscart, Guruge & Brown, 2012) modifying the environment (Lawton, 1986), providing abilities-focused care (Dawson, Wells & Kline, 1993) and knowing the person (Kitwood, 1997). There were several examples in the results showing the Observer applying such strategies effectively resulting in the de-escalation of the behaviour. Examples included using music with a client who used to play the piano, encouraging clients to perform self-care activities, conversing with the client as well as addressing needs such as thirst, hunger and toileting. Although there were a few examples of Observers applying ineffective strategies, such as directing a patient to stop an action over and
over again, most of the scenarios obtained through the non-participant observation demonstrated the evidence-informed strategies described above by Gitlin and colleagues (2012).

**Limitations**

The most significant limitation of this study was the recruitment issues at one site for the non-participant observation and subsequently post-observation interviews. Since non-participant observation could not proceed without all three parties: the RN, Observer and patient consent to participate, this resulted in a few occurrences where constant observation was discontinued before consent could be obtained from all three parties, or the patient being discharged from the hospital. The requirement for written and signed consent at one site also resulted in recruitment delays as in some cases the substitute-decision maker was not available to participate in the consent process. Another factor influencing the recruitment was the decrease in constant observation use at the one site following RN education and policy development. As a result, most of the data from the non-participant observation and the subsequent interviews with the RN and Observer were from one site only. To compensate for these recruitment difficulties at the one site, an interview was conducted with the Manager to provide additional information on current constant observation practices.

While the additional interview with the manager provided general information about constant observation practices, the interview likely did not fully compensate for the limited observations at Site B. Although there was sufficient data to provide a general description of constant observation practices at the two sites, the limited observations at Site B meant that differences in the way individual observers and nurses at this site interacted and provided constant observation could not be described. Additional observations and interviews at Site B would have also provided the opportunity to further explore whether the differences in constant
observation models of care (for example the use of unit staff at Site A as compared to agency staff at Site B) resulted in different client outcomes such as in the prevention of adverse events and the mitigation of responsive behaviours.

Other issues with the non-participant observation that may have impacted the validity of the findings include that the researcher was not always able to observe from a location where all the verbal interactions could be heard. The nature of the non-participant observation led to the inability to ask questions to clarify what was observed until the end of the shift. Since the post-observation interviews took place in patient care areas, these interviews could not be recorded via audio-tape, as a result the researcher had to document summaries and recollections of what had been reported immediately after the interviews and may not have captured all the nuances of the care being provided and interview responses.

Since data collection only took place at two teaching hospitals in an urban setting, caution should be taken over whether constant observation practices would be similar in other hospitals. An additional limitation is that the questionnaires were administered to the RN staff only and not the Observers. It would have also been helpful to administer the questionnaires to the Observers so as to assess the importance they attributed to the different reasons for using constant observation and also their perceptions of communication and coordination of care. While the PRUQ has been administered to nursing assistants in a few studies (Kwasney et al, 2006; McCabe et al, 2011; Terpstra et al, 1998), no studies were identified that administered the Shortell questionnaires to UCPs.

Finally, while the framework of external and internal factors that have been identified as important to understanding teamwork (Cott, 1995) was used to guide the study, not all the factors
impacting constant observation could be examined in this study due to feasibility concerns such as the inclusion of other health care professionals involved in the patient’s care.

**Strengths**

While there are limitations to the study there are also strengths. The convergent parallel mixed-methods design study used in this descriptive exploratory study allowed for a comprehensive picture of constant observation practices at the two sites. The different sources of data from the questionnaires, interviews and non-participant observation allowed for enhancement of specific findings and for the opportunity to corroborate results and examine divergent results. For example, the importance assigned to one reason for using constant observation at one site “to prevent the patient from bothering others” (obtained through the questionnaires) may be influenced by current patients on the unit that were receiving constant observation for this purpose at the time of data collection (interviews). Another example was that RNs at one site were able to provide a larger list of alternatives to constant observation (questionnaires) however this occurred at the Site where education and new policies had been recently implemented on alternatives. Such comparisons and enhancements would not have been possible with a single method design study.

Additional benefits include the new knowledge gained through this study such as the multifaceted nature of the Observer role, whereby the Observer provided more than surveillance and intervention only when an adverse event was about to happen. The Observer role in preventing and de-escalating responsive behaviour highlights the importance of proactive and preventative interventions in constant observation. The description of the constant observation intervention through non-participant observation is an important addition to the descriptions of constant observation in the literature, which are based on reports of formal role descriptions in...
specific organizations often obtained from an administrator. Finally, the conceptual framework was essential in guiding the concepts to be examined in the study and the study findings have verified the applicability of the different factors in the framework including the extra and intra dyad factors.

**Implications for Health Care Professionals and Practice**

Caring for patients with responsive behaviour is challenging for nurses and Observers. The evidence suggests that it is important to understand the meaning behind behaviours and attempt to modify the underlying causes (Cohen-Mansfield, 2001; Gitlin, 2012; Dupuis & Luh, 2005) however, other studies highlight that hospital staff are not knowledgeable or empowered to assess, prevent and manage responsive behaviour (Teodorczuk et al, 2010; Borbasi et al, 2006; Poole & Mott, 2003; Eriksson & Saveman, 2002). This study has validated the contribution of evidence-informed strategies to mitigate responsive behaviour such as providing nutrition and fluids, assisting with toileting, alleviating discomfort and providing individualized diversional activities. Education and mentoring/role modeling for nursing and Observer staff is essential to empower them to care effectively for patients with, or at risk of, developing responsive behaviours.

Certain attributes of Observer and RN staff appeared to contribute to more effective constant observation performance and subsequent outcomes. For Observer staff, these included being a good communicator with patients and staff, and being knowledgeable of effective strategies to engage patients in activities and prevent/manage responsive behaviours. For RN staff these included providing sufficient information to the observer to direct care activities, clarifying accountabilities of both the observer and RN as well as being available to provide
support to the Observer for both the direct care and ensuring safety components of the observer role.

Feil and Wallace (2014) identified that constant observer programs in hospital should include a process for requesting and discontinuing constant observation, patient eligibility criteria, a pool of observers, specified qualifications for observers, clear job description and accountabilities as well as education for observers. This study suggests that the consideration of alternatives, clear accountabilities for the RN, education for the RN and an individualized patient care plan are also important for effective constant observation practice. Education for both RN and Observer staff regarding the best way to communicate patient information may also be important.

**Implications for Health Care Leaders and Policy**

Constant observation is an important topic for administrators due to the associated costs and lack of clear evidence about the effectiveness of this intervention. Many organizations are seeking to reduce the use of constant observation due to costs. Both organizations in the study were concerned about costs and the effectiveness of constant observation. As a result one site had recently implemented staff education and a new policy about a trial of alternatives first, while the second site was soon to be embarking on staff education and practice changes.

This study has supported that the use of constant observation may reduce the risk of adverse events through vigilance and surveillance on the part of the observer as well as through direct care activities such as assisting with ADLs when required by the patient, providing recreational activities as well as preventing and managing responsive behaviours. Managers, RNs and Observers all identified the role of constant observation in preventing adverse events. It
is recommended that an active Observer role, with a focus on providing recreational and
diversional activities, should be used rather than a custodial-only role (Ray, 2015; Mason,
Mason-Whitehead & Thomas, 2009). While the observation of more than one patient at a time
can decrease costs by requiring fewer staff, it is important to ensure that work load is balanced so
that the Observer is still able to provide the preventative and direct care activities that were
shown to be beneficial in this study and in the literature. In addition, the documentation provided
by the Observer regarding patients’ behaviours and response to interventions was important to
the RNs, patients’ families and other health care professionals in the study. Organizations may
wish to consider including this documentation in the patient’s health record.

There are many strategies that can be implemented to reduce the use of constant
observation such as the prevention of delirium (Sweeney et al, 2008; Laws & Crawford, 2013;
Kratz, 2008; Caplan & Harper, 2007), use of expert psychiatry consultation services (Rausch &
Bjorklund, 2010; Lakatos, 2009), use of alternative strategies first such as: regular toileting,
moving the patient closer to the nursing station, frequent observation and use of safety
equipment such as non-slip socks and regular toileting of patients requiring assistance (Salamon
& Lennon, 2003; Andre, 2012; Weeks, 2011; Spiva, 2012; Adams & Kaplow, 2013; McNicoll et
al, 2014). Since there is no evidence of an increase in adverse events when implementing such
strategies, constant observation should be considered a last resort after a trial of such strategies.
Delirium prevention strategies that use volunteers to provide recreational activities to patients
(Carr, 2013) could also be used in patients with existing delirium as they appear similar to the
recreational strategies provided by observers in this study and may help mitigate responsive
behaviours.
Two different models of providing constant observation were examined in this study: using hospital staff to provide constant observation while also assisting with direct care activities, and bringing in agency staff to provide constant observation and recreational activities. It had been anticipated that the use of hospital staff, that are familiar with the unit, the RNs and the patients, would promote continuity of care and more effective constant. However there were limitations to the hospital staff model in that the Observers had to care for multiple patients limiting their ability to provide recreational activities. In the agency staff model, there was the ability for nurses to select an Observer that would work well with the patient in providing recreational activities tailored to the individual patient. Based on the results of this study it is not possible to recommend the use of hospital staff versus the use of agency staff in providing constant observation. Rather, practice settings should ensure that staff providing constant observation have clear accountabilities, know how to access assistance and have developed an individualized care plan that incorporates the client’s occupational and recreational history in the identification of activities in which the observer will engage the patient. Consideration should also be given to the compatibility between the Observer and the patient as well as ensuring that workload is designed so that the Observer can engage patients in individualized recreational activities.

The knowledge that constant observation is implemented in different ways in different organizations and may be dependent on the consideration of the different extra and intra dyad factors that influence the performance of constant observation, is helpful for administrators responsible for developing organizational policies and procedures for constant observation.
Future Research

This study has advanced the knowledge base regarding constant observation practices, however a number of questions to be answered by future research have been identified. While this study identified that the prevention of adverse events was an important outcome of constant observation as identified by the manager, RN and observer participants, the effect of constant observation on reducing specific adverse events is not apparent in the evidence and requires investigation. In addition, the extent of the use of constant observation in Canadian hospitals is not apparent.

This study identified additional benefits to constant observation in preventing and managing responsive behaviours as well as patient and family satisfaction with care. Further exploration of these benefits and the identification of specific interventions provided that may be replicated by others would be important. While patient and family satisfaction with care through constant observation was identified as a benefit through the manager, RN and Observer participants in this study, it would be important to examine the patient and family perspective of constant observation directly through interviews. Studies in the psychiatric setting indicate that when constant observation is custodial or “guard duty” in nature, this can be distressing to patients (Ray & Allen, 2015; Mason et al, 2009) and undermine the nurse-patient relationship.

It is apparent through the study findings that other health care team members are also involved in the decision making to initiate and discontinue constant observation such as during team rounds, psychiatric consultation services, recommendations by physiotherapists and occupational therapists, therefore, further understanding and optimizing the decision making
process used to initiate and discontinue constant observation would add to the literature. Existing literature describes the requirement for a physician order in some organizations (Worley et al, 2000; Torkelson & Dobal 1999) but does not outline the team decision making process for constant observation implementation.

Lastly, while there are many studies that implemented alternatives to constant observation, or tried to decrease the use by implementing different strategies such as policies, staff education, consultation services and alternative interventions, these studies were limited as they were not well-designed. Higher quality intervention evaluation studies would inform decision making about the appropriate use of constant observation and alternative interventions.

**Conclusions**

This mixed-methods study has added to the literature by providing a detailed description of constant observation practices at two sites, including how and why constant observation is implemented, its perceived benefits, team work between the RN and Observer as well as providing validation to the existing literature on some of the factors and patient characteristics associated with constant observation use. The additional benefits of constant observation identified through this study of preventing and managing responsive behaviours, and effect on patient and family satisfaction, may help to bridge the gap between the evidence suggesting that constant observation is only one of many restraint alternative interventions (RNAO, 2012; Park, Tang, Adam & Titler, 2007) and real clinical practice that suggests it is one of the most widely used interventions (Shever, Titler, Mackin & Kueny, 2011).

The lessons learned through this study are useful in further understanding the role of the observer including the advantages as well as how this role is implemented in collaboration with
the supervising nurse therefore, this study has helped to fill a significant gap in the literature and practice on this commonly used intervention, and has identified additional questions for future research on constant observation.
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### Appendices

**Appendix A: Summary of Literature on Constant Observation (CO)**

<table>
<thead>
<tr>
<th>Author and location</th>
<th>Objectives</th>
<th>Design</th>
<th>Sample</th>
<th>Intervention</th>
<th>Tools and outcome measures</th>
<th>Results</th>
<th>Comments</th>
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<tr>
<td>Worley et al (2000) USA</td>
<td>Determine the pattern of CO use in US hospitals</td>
<td>Cross-sectional survey design</td>
<td>Hospital administrators in acute care hospitals 343 hospitals selected from all US hospitals. Sampled largest hospitals in each area serving 743,000 people</td>
<td>No intervention  Descriptive study of existing intervention of CO practices in hospitals</td>
<td>Paper survey tool used in a unpublished pilot Questions focused on: Number of beds, admission rates, CO practices, type of staff providing CO, staff training, policies, funding, psychiatry consultation and interventions to decrease CO costs Follow up phone call to clarify responses</td>
<td>87.3% use CO 56.3% reported usage was increasing Funded through general hospital budgets Psychiatry consultation required in 40% Variety of providers including regulated, non-regulated, student and family 75% had a policy but only 58% provided training Physician order required in most with documentation in orders and nursing record. Patient population: suicidal ideation 96%, delirium or confusion 72%, elopement risk or homicidal 48%</td>
<td>29% response rate No description of tool development and validation process in pilot study Most hospitals tried to decrease CO costs using different strategies Cost data not collected in most places Psychiatry bias- looking at whether required but did not examine whether other consult services required</td>
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<tr>
<td>Caplan &amp; Harper (2007) Australia</td>
<td>Delirium prevention</td>
<td>Pre and post intervention design</td>
<td>2 five month data collection periods Study 1: Inouye (1999) HELP program implemented excluding</td>
<td>Study 1: Cognition using MMSE on admission and discharge</td>
<td>Delirium Incidence significant difference (p=0.032) Intervention 6.3% Control 38.1%</td>
<td>Very small sample size Adherence to intervention unclear</td>
<td></td>
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<tr>
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<td>Watson et al (2009) Australia</td>
<td>Identify policies and procedures for the management of delirious older adults (behavioural symptoms,</td>
<td>Cross-sectional survey design via email or paper or telephone</td>
<td>All 70 private and public hospitals in Melbourne. 90% overall response rate: 63/70</td>
<td>No intervention</td>
<td>Structured survey tool asking questions about: Policies for restraints and behavioural management, policies for delirium management,</td>
<td>Policy for behaviour management 87% 86% had “sitters” Policy for physical restraints 97% 62% had education re delirium for nursing staff at least annually</td>
<td>No discussion on how all measurement tools were completed and inter-rater reliability Risk for lots of bias due to lack of blinding In study 2 it is unclear how decrease in NA hours were as a result of decrease in delirium incidence</td>
</tr>
</tbody>
</table>

**Intervention:** Age 70+, risk factors for developing delirium and admitted to geriatric unit (acute beds and rehab beds) Control N=21 Intervention N=16 Study 2 looked at use of nursing assistants for one on one care of delirious patients Exclusion: palliative, severe dementia, declined/unable to consent, risk to volunteers (behavioural or medical issues) mobilization component

**Tools and outcome measures:**
- Function using Barthel Index on admission and discharge
- Delirium incidence using CAM q2 week days
- Delirious patients had severity measured using the MDAS (Memorial Delirium Assessment score)
- Adverse events including unplanned readmissions within 1 month of discharge

**Results:**
- Non-significant trend to decrease in delirium duration, decreased incidence of falls, LOS and LTC placement, increased readmission rate.
- Cognition improvement significant difference (p=0.019 MMSE +3.6 I vs -0.6 C)
- Functional improvement (-2.01 vs -5.29C p=0.049)

**Comments:** Decreased LOS (not significant) resulted in $41280 cost savings Decreased nursing assistant costs from 644 hours vs 330 hours.

Survey tool not fully described and unclear if it was validated Minimal guidelines for use of “sitters” Respondents bias Single area of Australia only-
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<tr>
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<tr>
<td>Torkelson &amp; Dobal (1999) USA</td>
<td>Determine patterns of CO use</td>
<td>Cross-sectional survey design Survey via phone</td>
<td>Sample was 84 hospitals that represented 28% of all hospitals of different sizes in one state. Key informant (top nurse administrator or house supervisor) contacted by phone.</td>
<td>Descriptive exploratory design related to CO and sitter practices.</td>
<td>Structured interview via telephone questions on: Requirement of a doctors order, criteria for initiating or discontinuing sitters, sitter alternatives, patient population, who are sitters?, payment</td>
<td>All hospitals used CO. Reasons: danger to self or others (37%), confusion/agitation/elderly (32%), risk for falls (8%), physically unstable (8%), could not be sedated or restrained (4%). Physicians, nurses and families made decisions re CO. Order required for 55% hospitals. Alternatives to CO included family (36%), restraints (14%) bed alarms (9%), use of hospital stss (7%), cameras (7%) placement of two patients in the same room (7%). Most used own staff. Cost data difficult to assess.</td>
<td>Informant bias- senior admin may not know unit level practice Unclear how questions were validated and training of volunteer nursing students that administered the questions.</td>
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<tr>
<td>Sweeney et al (2008) USA</td>
<td>Identify and test alternatives to CO Pre and post intervention design 1 hospital quality improvement data Interprofessional workgroup developed falls and delirium prevention strategies and communicated to all staff. Formalized into hospital policy</td>
<td>Pre and post (2004 pre and 2005 post) Cost of CO Number of falls and use of restraints per 1000 patients</td>
<td>Cost of CO Pre $1.5Million Post $650,000 1 year later: $250,000 Incidence of falls and restraint use remained stable</td>
<td>Pre and post design Unclear what other policies were also implemented that year (confounders) Unclear if patient population remained similar Method of measurement not clearly presented. Dissemination of intervention not clearly presented</td>
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<tr>
<td>Harding (2010) USA</td>
<td>Decrease costs associated with sitter usage Describe any linkage between sitter usage and decreased falls, elopement or assaultive behaviour Descriptive Quality improvement project</td>
<td>Descriptive Quality improvement project 1 acute care hospital On-line request and approval process for sitters Staff allocated to be only sitters and provided training(decrease overtime) Identification of patients at risk for falls and of psychiatric crisis</td>
<td>Cost of CO Overtime costs Description of sitter requests Falls rate Risk for falls via Morse scale Risk for psychiatric crisis via SAD PERSONS scale Falls risk hours Crisis risk hours</td>
<td>90% sitter approval rate 85% had MD order High risk for falls 44% and psychiatric crisis 56% reason for request No elopements or assaults occurred with or without sitters Falls rate did not seem to correlate to sitter hours Overtime costs decreased but total cost increased Authors conclude that no linkage between sitter use and decreased falls, elopement or</td>
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<td>Unclear how similar population with or without sitter were (no description) Tools don’t identify how many adverse events will occur e.g. 48% patients were at high risk for falls 1 organization only Measurement process difficult to understand</td>
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<tr>
<td>Mergui et al (2008) Israel</td>
<td>Identify patient characteristics for the use of CO</td>
<td>Prospective observational study</td>
<td>714 consecutive patients referred to consult psychiatry over 7 months 150 had CO 156 drawn randomly out of the remaining 564 patients as controls</td>
<td>No intervention</td>
<td>35 item data sheet collected info on demographics, physical and psychiatric diagnoses and indications for CO Descriptive statistics and between group differences tested using parametric and non-parametric tests as indicated</td>
<td>CO group were younger, had suicidal concerns and alcohol/substance abuse CO less often used for organic brain syndrome (delirium and dementia) as compared to other studies IHD or COPD associated with longer duration of CO</td>
<td>Population was those referred to consult psychiatry so does not reflect all at risk. No inpatient psychiatry unit so sample may have had more patients not usually on medical/surgical units. Data collected by treating psychiatrist rather than RA. Culturally many elderly had family or caregiver at bedside</td>
</tr>
<tr>
<td>Rausch &amp; Bjorklund (2010) USA</td>
<td>To determine the impact of a psychiatric liaison nurse on constant observation costs</td>
<td>Pre and post intervention design</td>
<td>1 acute care hospital</td>
<td>Introduction of a psychiatric liaison nurse Mon-Fri Tracked each CO consult Open pager policy Provided consultation to nursing staff – education and support, problem-solving, care plan development with team on alternatives to CO</td>
<td>Number of constant observation shifts Cost Rate of falls</td>
<td>62% consults were for delirium/confusion 17% suicidal ideation 10% elopement risk 50% patients were 61 years or older CO shifts decreased by 50% Costs decreased by 53% No increase in falls rate</td>
<td>QI project so unclear if patient population pre and post were similar. 1 hospital only. Interesting to see if sustained over time cost of role not included in calculation. Self-efficacy of nurses in CO alternatives- decrease in need for</td>
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<td>Turjanica et al (1998) USA</td>
<td>To evaluate the impact of a patient safety program on CO costs</td>
<td>Pre and post intervention design</td>
<td>1 acute care hospital</td>
<td>Development of a policy for patients requiring CO Education for staff re universal safety interventions Geriatric consultation for “confused” elderly Psychiatric consultation for suicidal patients Both inter-professional</td>
<td>Pre and post chart audits on reason for CO and demographics Cost of CO</td>
<td>Pre: 51% were suicidal 36% confusion/agitation Yearly CO expense was $87,477 Post: cost decreased by 50% CO ordered for specific reasons as per policy: 1) harm to self or others 2) confusion 3) wandering 4) restlessness/interference with equipment</td>
<td>QI project so unclear if patient population pre and post were similar 1 hospital only Interesting to see if sustained over time Did not look at any patient/safety outcomes</td>
</tr>
<tr>
<td>Tzeng &amp; Yin (2007) Taiwan</td>
<td>To describe roles of family members in providing care for patients in hospital</td>
<td>Cross-sectional survey design</td>
<td>Convenience sample of 102 family members and neighbours recruited by 51 nursing students</td>
<td>No intervention Descriptive study</td>
<td>1 page questionnaire Instrument Questions: Relationship with patient Employment status Private care giver also hired? Roles Reason for providing care pretested on 10 nursing students</td>
<td>97.1% had at least one experience caring for hospitalized family member 9.1% hired private aide Roles: physical care 87.9%, psychological support 80.8% and communication with medical team 60.6% Majority had employment Rationale: afraid patient would not</td>
<td>Described role of relative not aide Staying with patient seems to be required cultural practice rather than for specific situations Convenience sample only Use of nursing students to recruit may be problematic as they may have felt obligated to participate</td>
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<td>Tzeng et al (2008) USA</td>
<td>To evaluate the adoption of the Patient Attendant Assessment Tool (PAAT) on requests for sitters, restraint use, Falls rates and falls injury rates</td>
<td>Retrospective descriptive study</td>
<td>2 acute care adult medical units in one hospital</td>
<td>Introduction of the PAAT tool</td>
<td>3 types of data collected for pre implementation period (13 months) and post implementation period (5 months): Unit monthly reports on sitter requests, restraint use, sitter fill requests, RN staffing and order for restraint types Quarterly quality data for each unit on injuries from falls and total number of falls per 1000 patient days PAAT reports-frequency of each risk factors and average score per month</td>
<td>Units were similar Fill/request rate improved after implementation of PAAT High sitter requests led to less total number of restraints but total fall rate was higher</td>
<td>Sitters did not reduce falls but rather there was an increase-authors attribute to accountability when m any people involved but could it be that more sitter requests means more people at high risk Retrospective nature Unclear how tool and scoring was developed No validity and reliability analysis of PAAT Compliance rates</td>
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<tr>
<td>Nadler-Moodie et al (2009) USA</td>
<td>To describe the impact of SAFE units on sitter usage/costs</td>
<td>Quality improvement project Descriptive</td>
<td>One acute care hospital/ trauma centre</td>
<td>Development of a Specialized Adult Focused Environment (SAFE) unit Where cohorting patients who require</td>
<td>Monthly sitter costs per unit</td>
<td>Sitter use on trauma $19,224/month but decreased to $8889/month post SAFE Sitter use on medicine went from</td>
<td>Sitter costs decreased but unclear how much alternative SAFE staffing (3 staff for 3 rooms with enhanced therapist) cost</td>
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CO (actively suicidal excluded) in a redesigned area of a unit. Staff all received special education on communication, behaviour management and restraint alternatives. Unit staffed so a staff member could be in each room all the time. Access to daily PT, OT and speech. Multiple SAFE units (3 rooms) implemented in 5 areas of the hospital.

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<tr>
<td>Blumenfield et al (2000) USA</td>
<td>To determine predictors and correlates of CO as well as cost and length of CO per admission</td>
<td>Retrospective chart review</td>
<td>All patients on CO during a 9 month period at one hospital (N=119,)</td>
<td>Not applicable</td>
<td>115 charts were reviewed as 4 were incomplete Charts reviewed by an RN on light-duty using a 127 item data collection form. Data collected on demographics, medical history, presenting medical problems, reason for CO, medication use, restraint use and</td>
<td>71.3% were male and 28.7% female Most common diagnosis was organic brain syndrome 42.1% (delirium and dementia), no mental illness 21.1%, mood disorder 15.8% Mean duration (without one extreme outlier) of CO was 11.9 days, median 7.5 days.</td>
<td>Costs of renovations No data provided on patient safety outcomes such as restraint use, falls rates etc.</td>
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$18,301 to $3223/month pre and post SAFE
Authors state restraint use decreased but did not provide numbers

Training on data collection tool use and operational definitions for items collected not described.
Clinical findings while on CO. Cost was calculated based on hourly rate paid to people providing CO.

The variables disorientation (9.4% \(p=0.001\)), psychiatric medication (4.1% \(P=0.017\)) and absence of alcohol use (4% \(p=0.021\)) contributed to 17% (adjusted \(R^2\)) of the variance in cost. Correlated significantly associated with cost of CO include psychiatric visits, psychiatric meds, age, confusion, disorientation, combative/agitated.

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<td>Salamon &amp; Lennon (2003) USA</td>
<td>To assess whether a protocol for assessing at risk patients would reduce CO costs without negatively impacting patient outcomes</td>
<td>Pre and post intervention design</td>
<td>1 59 bed rehab &amp; sub-acute unit in one hospital</td>
<td>Protocol for CO use Use of alternatives first (closer to nursing station, suicide precautions, family asked to stay with patient, alarms, diversional activities, concealment of medical lines, reassessment of</td>
<td>Pre and post monthly unit falls rates (12 months each) and falls with fractures Pre (3 months) and post (12 months) CO shifts worked and expenditure on CO</td>
<td>Gradual decline in use of CO and costs No significant changes in fall rates or falls resulting in fractures Restraint data could not be collected as data for pre period could not be verified</td>
<td>Pre comparison period was only 3 months Unclear if patient population characteristics were similar in both the pre and post intervention period Why mention restraints if could not collect the data?</td>
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lines, toileting, pain management) Approval of CO by manager CNS and Manager led team meetings to discuss cases Education to staff

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<td>Boswell et al (2001) USA</td>
<td>To analyse the costs and benefits of a CO program in relation to patient satisfaction and falls</td>
<td>Retrospective review of readily available organizational data</td>
<td>Seven adult inpatient medical and surgical units at one hospital</td>
<td>No intervention</td>
<td>Patient falls via hospital occurrence report Fall expense cost estimate based on recent research Patient overall satisfaction and patient satisfaction with response to calls from hospital satisfaction surveys Cost of “non-return” of patients who were dissatisfied calculated based on population estimates of # hospitalizations and outpatient visits per year for patients 65+ Sitter costs</td>
<td>Marginal increase in falls for each sitter shift (incremental cost of $0.67) Minor decrease in patient dissatisfaction overall generating $2.29 per sitter shift and call bell dissatisfaction decreased a small amount resulting in a revenue enhancement of $1.72 per sitter shift. Sitter shift costs $160 Therefore there was a net expense per sitter shift of $156.24</td>
<td>Authors surprised at increase in falls but patients requiring sitters are at higher risk 1 site only Complicated calculations Looking at cost benefit of sitter only Revenue generation less relevant for single payer/publicly funded system like Canada</td>
</tr>
<tr>
<td>Kratz (2008) USA</td>
<td>Implement Pre and post intervention design</td>
<td>Pilot on 7 Medical and surgical units and then full implementation</td>
<td>Education of staff to implement delirium prevention strategies focusing on early mobilization, non-pharmacological Falls rate Restraint usage Benzodiazepine usage Meperidine usage Sitter usage</td>
<td>Falls, delirium rates and sitter usage decreased in pilot Decrease in falls rate, restraint usage, benzodiazepine and</td>
<td>Unclear why different outcome measures reported for pilot and full implementation</td>
<td>Only patient outcome described was falls and falls with fractures Took place on 1 unit only</td>
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<td>Shever et al, 2011 USA</td>
<td>To describe nursing practices related to fall prevention</td>
<td>Cross-sectional interviews</td>
<td>140 nurse managers (from a total of 184 recruited from 51 hospitals in 18 states)</td>
<td>None</td>
<td>Semi-structured interviews. 30 questions asking about hospital practices, risk assessment on the units and interventions. Interview guide reviewed by content experts. Pilot tested first.</td>
<td>96% had a fall prevention policy. All used a risk assessment tool but concern about low specificity of tools (everyone at risk). Most common interventions: bed alarms (89%), Rounds (70%), sitters (68%), relocating patient close to nursing station (56%).</td>
<td>2 of most common interventions (bed alarms and sitters) have little evidence to support their use. Nurse Manager report rather than point of care staff may vary.</td>
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<tr>
<td>Jin et al, 2000 USA</td>
<td>To determine whether psychiatry medical resident experience influences ordering of constant observation</td>
<td>Retrospective chart review of psychiatric consultations over a six month period in an acute care hospital</td>
<td>153 consultation notes over a six month period</td>
<td>none</td>
<td>Comparison of residents who had received training in consultation psychiatry versus those who hadn’t. Also whether more CO was ordered during the day or after hours. Residents without training were more likely to order CO (44.1% of the time) versus those with training (15.4% of the time). After hours those with training were less likely (22.1%) to order CO than those. More CO ordered after hours? related lack of staff physician support or due to patient behaviours (sundowning) and less staff? No major adverse events whether patients had CO or</td>
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<td>Donoghue et al, 2005 Australia</td>
<td>To determine whether the introduction of volunteer companion-observers would reduce falls</td>
<td>Pre and post intervention design</td>
<td>1 acute aged care unit</td>
<td>Nurses identified high risk patients hospital volunteers (unpaid) recruited to sit with high risk patients and call RN for help. Also provided social activity. Available weekdays 8 AM -8PM in a 4 bed room</td>
<td>Falls rate per 1,000 bed days</td>
<td>Pre intervention mean falls rate 15.6 per 1000 bed days Post- intervention mean falls rate was 8.8 per 1000 bed days. 44% reduction (p&lt;0.00 OR 0.56 95% CI 0.45-0.68) Estimated monthly reduction of 6.8 falls per 1000 bed days. There was an increase in falls over the holidays (December) when no volunteers present.</td>
<td>No description of similarity or difference between patient populations in pre and post intervention period. Lack of volunteers overnight when most falls occur. Falls rate for 18 months pre and 18 months post.</td>
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| Giles et al, 2006 Australia | To determine whether the introduction of volunteer companion-observers would reduce falls | Pre and post intervention design | 2 medical wards in 2 different hospitals | Patients identified at high risk were put into a four bed safety bay with volunteers watching them 9 am to 5 PM on week days | Number of falls per occupied bed days(OBD) | Pre intervention 14.5 falls per 1000 OB Post intervention 15.5 falls per OBD No significant difference Failers pre and post intervention similar in age, sex and length of stay Families satisfied about role 92% (22)nurses thought volunteers | No falls reported when volunteers present but 24% falls took place in safety bay when volunteers not present. Volunteers not present 16 hours per day 4 month pre and 4 month post implementation period measured. |
were useful but 29% (7) thought volunteers needed too much supervision

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<tr>
<td>Jaworowski et al, 2008 Israel</td>
<td>To provide a review regarding constant observation in general hospitals</td>
<td>Literature review and description of CO practices in Israel</td>
<td>Not applicable</td>
<td>No description of literature search strategy and review of literature strategy Description of staff providing CO in Israeli hospitals</td>
<td>No evidence that CO reduces suicide rates in hospital Organic brain syndrome and suicide risk most common reasons for use CO provided by a variety of staff on Israel including nursing staff, nursing aides, security staff and private paid</td>
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<td>Discussion of medic-legal and ethical concerns including an Israeisupreme court decision that hospitals should provide CO for patients at suicide risk</td>
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<td>No description of search strategy or review process</td>
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<td>Unclear where data re CO staff in Israeli hospitals came from</td>
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<td>Most of the discussion appeared to be the expert opinion of the authors with some literature woven in.</td>
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<td>Weeks, 2011 USA</td>
<td>To evaluate the impact of a “no sitter orders” policy on the rate of falls</td>
<td>Pre and post intervention design</td>
<td>1 hospital</td>
<td>Discontinue physician orders for sitters Protocol for sitters: suicidal patients, those on court order or in restraints</td>
<td>Falls per patient day Fractures per patient day</td>
<td>Pre(21 months): 0.00543 falls per patient day 0.0000652 fractures per patient day Post(42 months): 0.00436 falls per patient day</td>
<td>No data on reduction in sitter use and costs provided No significant difference in falls and fracture rates Patient population not described</td>
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RNs use alternative fall prevention strategies and initiate sitters only if those strategies fail.

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<tr>
<td>Rochefort(1), 2011 Canada</td>
<td>To determine whether high RN b demands are associated with increased sitter use</td>
<td>Nested case-control study</td>
<td>1 hospital system All patients who had a sitter over a 2 year period (n=1179) 4 controls for each case (n=4167) randomly selected from those not receiving a sitter(n=42033)</td>
<td>Not applicable</td>
<td>Nursing Payroll database: Overtime hours Absenteeism Work experience Baccalaureate degree Patient:RN ratio Patient:patient care assistant ratio Sitter payment database:hours of sitter use DAD, ADT and pharmacy database for patient characteristics: Age, sex, psychoactive drugs, diagnoses, Charlson comorbidity index Multivariate logistic regression to estimate relationship between job demands and sitter use. Descriptive statistics to summarize patient and nurse characteristics</td>
<td>Sitter used for 2.7% of all patients Sitter use more prevalent in older male adults with delirium or dementia, psychiatric illnesses, those on psychotropic medication and at risk for falls (all p&lt;0.001). RN overtime associated with increased sitter use (OR 2.08 95% CI 1.32-3.29) Higher RN experience associated with less sitter use (OR 0.77 95% CI 0.66-0.89) Higher RN education associated minimally with increased sitter use (OR 1.04 95% CI11.02-1.05)</td>
<td>Single hospital system Alternatives to sitters not examined Patient risk factors for sitter use only measured with discharge diagnostic codes Patient acuity not examined Alternative observers such as private sitters not examined Higher baccalaureate level association with sitter</td>
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<td>Study: Rochefort(2), 2011 Canada (Same study as Rochefort(1) but focus on costs)</td>
<td>Objective: To examine the relationships between patient and nurse staffing characteristics associated with high sitter use costs</td>
<td>Study Design: Prospective study</td>
<td>Setting: 1 hospital system</td>
<td>Data: All patients who had a sitter over a 2 year period (n=1151 patients who contributed 1179 hospitalizations)</td>
<td>Data Source: Not applicable</td>
<td>Nursing Payroll database: Overtime hours, Absenteeism, Work experience, Baccalaureate degree, Patient:RN ratio, Patient:patient care assistant ratio</td>
<td>Sitter Payment database: hours and costs of sitter use</td>
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<td>Mallet (2012) Canada</td>
<td>To examine the possible association between pharmacological mechanisms and sitter use</td>
<td>Retrospective case-control study</td>
<td>1 hospital system over a 2 year period Case: all medical patients aged 65+ who received a sitter N=143 Control: 1 per case randomly selected from all medical patients 65+ who did not receive a sitter</td>
<td>none</td>
<td>Number of psychotropic drugs non-adjusted for renal function Total anticholinergic load Number of clinically significant drug-drug interactions Multivariate logistic regression to assess the association while controlling for patient demographic characteristics and comorbidities</td>
<td>Patients with sitters had a higher overall anticholinergic load and more drug-drug interactions in the period prior to sitter use Every additional drug with an anticholinergic load increased the likelihood of sitter use by 1.4 (95% CI 1.1-1.7)</td>
<td>Small sample at one site Important as decreasing anticholinergic load and drug-drug interaction is potentially modifiable in clinical practice Did not examine the association with prolonged sitter use and ongoing pharmacological mechanisms</td>
</tr>
<tr>
<td>Al-Asmary (2010) Saudi Arabia</td>
<td>To assess patterns of sitter use and impact on quality of care</td>
<td>Cross-sectional interview survey design Over 3 month period</td>
<td>1 hospital Adult patients (n=203) admitted to the hospital Sitters (n=125) Medical and nursing staff (n=213)</td>
<td>None</td>
<td>3 different questionnaires 1 for each group Patient questionnaire content: medical history, presenting medical problem, reason for sitter 9if any), need for sitter Sitter questionnaire: Pattern and duration of sitting, potential benefits and harm of being a sitter</td>
<td>Presence of sitters not a significant determinant of increased satisfaction Majority of sitters are volunteer untrained relatives or friends with role to provide social support 73% of sitters have other jobs 58.4% were women Only characteristic associated with sitter presence was having a private room(OR</td>
<td>High response rates 98% sitters, 96% patients, 89% staff Sitter use higher in Saudi Arabia 61.6% of patients vs 2.7% of patients in Canada Questionnaires pilot tested but components of questionnaires not described</td>
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<td>Spiva (2012) USA</td>
<td>To determine whether a sitter reduction program negatively affects falls rates</td>
<td>Pre and post intervention descriptive design</td>
<td>One 633 bed acute care hospital</td>
<td>Sitter reduction program consisting of: Sitter decision tree Sitter justification and evaluation form Letters to nurses and physicians Scripting for family and patient by nursing staff Letter for patient and family with a list of private home care agencies</td>
<td>7 month pre-intervention and 7 month post-intervention data collection period Falls Patient days Sitter hours Sitter costs Adjusted for unit types</td>
<td>Sitter costs decreased from $536,955 pre to $215,132 Sitter hours decreased from 47,218 to 17,208 hours Paired t-test statistically significant decrease for both Falls (199 to 197) and falls rates (2.45 to 2.39) decreased slightly but not significant Decreased use and costs on all units</td>
<td>Single site No description whether patient population (in terms of risk factors for sitter use) were comparable between the 2 points Fidelity with intervention implementation not described</td>
</tr>
<tr>
<td>Adams, J. &amp; Kaplow, R. (2013). A sitter reduction program in an acute health care</td>
<td>To determine whether sitter use could be decreased by 50% without a significant</td>
<td>Pre and post intervention design However different components</td>
<td>One acute health system with 4 hospital sites containing 57 inpatient units</td>
<td>Interdisciplinary team developed a multi-component intervention consisting of:</td>
<td>Readily available organizational cost, utilization and quality metrics data: Annual cost of sitter use</td>
<td>Sitter costs per year pre-implementation was $477,561.86 and post-implementation was $91,991.27</td>
<td>Cost-reduction project at one hospital site Different interventions implemented at</td>
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negative impact on quality. of the intervention were implemented at different time points Daily nursing safety huddles Monthly rounds to address environmental concerns Purchase of equipment such as non-slip socks, bed alarms, low beds, chair alarms, arm bands and activity aprons. Electronic sitter request form with specified criteria for requesting a sitter Staff education on alternatives and indications for sitters. Communication with staff, physicians, patients and families about the change Sitter utilization Fall rate Restraint use Sitter use was decreased by >50% The falls rate (Falls/1,000 patient days did not increase since the sitter reduction program was implemented and remained at 3.5 falls/1000 patient days. Restraint use did not change either and remained at 3% prevalence rate which met the hospitals target metrics. Biggest challenge was change management for nursing staff.

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<tr>
<td>Capezuti, E. &amp; Brush, b. (2008). Nursing observation: essential or substitutable? Geriatric Nursing, 29, (5), 350-351.</td>
<td>Opinion column of the use of sitters to replace observation by nurses</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Provide a historical overview of observation by nurses. Comment that design of private rooms rather than open wards and staffing has led to different time-points so difficult to determine which intervention is impacting which outcome Different outcome results were reported for different time periods so unclear exactly when the “intervention” period began.</td>
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nurses not being able to observe patients as closely hence the use of sitters. Advocate that sitters should not replace the nurses’ surveillance role and that sitters should be actively involved in the care of patients by providing assistance with ADLs, diversion and social interaction rather than purely observing and preventing patients from getting out of bed.

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<tr>
<td>Dewing, J. (2012). Special observation and older persons with dementia/delirium: a disappointing literature review. <em>International Journal of Older People Nursing</em>, 8, 19-28.</td>
<td>To establish the state of current published research on special observation for older persons with dementia and/or delirium To make recommendations for research and practice</td>
<td>Literature review 2000-2010 CINAHL, BNI and PsycINFO data bases Search terms: Special; observation, 1:1 observation, constant observation and 1:1 nursing</td>
<td>41 abstracts were retrieved related to special observation but none were found specifically for persons with delirium and dementia. 16 papers were excluded as were about staffing ratios in high-dependency nursing</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Unable to find any literature specific to older people with delirium and dementia Identified a lack of conceptual clarity with the definitions related to special observation Generally used for patients who are at risk Not much evidence for using this intervention</td>
<td>Methodology of reviewing the articles resulting in the themes identified was not described. Did not capture a lot of the North American literature on constant observation through the search strategy Majority of papers were mental health related.</td>
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</table>
Combined with delirium and dementia units such as ICUs or special care units for people with dementia. This left 25 papers for review of which 22 were from mental health and three from general or adult nursing.

- Length of usage varies
- Engagement style varies from “custodial gaze” to engaged in therapeutic care activities which is seen to be more beneficial.
- Special observation is costly and there are no clear cut criteria for initiating this intervention
- Gender issues should be a consideration – asking patients their preference in terms of the Sex of the observer

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<tr>
<td>Brown, DS., Donaldson, N., Bolton, LB. &amp; Aydin, CE. (2010). Nursing-sensitive benchmarks for hospitals to gauge high-reliability performance. <em>Journal for Healthcare Quality</em>, 32, (6), 9-17.</td>
<td>To provide hospitals with benchmarks for nursing-sensitive indicators</td>
<td>Cross-sectional survey design</td>
<td>196 Acute-care hospitals in the western USA belonging to the Collaborative Alliance for Nursing Outcomes (CALNOC) Data from 2007-2008</td>
<td>None</td>
<td>List of indicators with operational definitions and measures. Standardized reporting and data collection processes Indicators divided into Outcome measures such as falls/1000 patient days, Nosocomial pressure ulcers and</td>
<td>On Medical/Surgical units: Sitter hours mean is 3.55% of total care hours SD 4.1 Range of 0% for top performing hospital (10th percentile) and 8.07% for lowest performing hospitals (90th percentile).</td>
<td>Sitter hours defined as: the percent of total hours of care (not included in total care hours).</td>
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To highlight that decreasing sitter use did not result in an increase in falls and fall-related injuries

Pre and post intervention design

1 US hospital

Change in practice so that sitters were provided by policy or nursing assessment rather than physician order.

Criteria:
- Involuntary commitment
- Suicidal ideation
- In restraints

Nurses implemented alternatives such as bed alarms, non-slip socks, fall prevention stickers, encouraging family to stay with patients

Number of Falls
- Falls/patient day
- Number of fractures
- Fractures/patient day

Reported hospital data from 21 months pre-intervention and 42 months post-intervention

Pre-intervention
- 250 falls
- 0.00543 falls/patient day
- 3 fractures
- 0.0000652 fractures/patient day

Post-intervention
- 375 falls
- 0.00436 falls/patient day
- 5 fractures
- 0.0000581 fractures/patient day

No increase in falls or fracture rate post intervention

No description if patient population was equivalent

Difficult to compare raw numbers for different time periods pre and post

Did not report significance of numbers.

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<tr>
<td>Laws, D. &amp; Crawford, CL. (2013). Alternative strategies to constant patient observation and</td>
<td>Decrease the use of sitters by 20% as compared to 2011 baseline With no increase in adverse events</td>
<td>Pre and post intervention design</td>
<td>One 173 bed acute care hospital in California</td>
<td>Multidisciplinary team designed an intervention to identify patients at risk of behaviours requiring CO (pre-op clients with dementia and</td>
<td># work place injuries Falls per 100 patient days Falls with major injury/death #FTE for observation</td>
<td>State exceeded goal of decreasing sitter use by 20% but did not report numbers 80% decrease in staff injuries related to combative patients</td>
<td>Multiple interventions implemented at different time points so hard to know what made a difference Objective was to decrease sitter use but</td>
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sitters. *JONA, 43*, (10), 497-501. USA

hospitalized patients with delirium). Also developed a policy for sitter use. Delirium prevention strategies including medication review, identifying underlying needs for behaviours, referrals to psychiatry. Discussions in daily rounds.

Falls and injury rates provided post but didn’t provide baseline. No outcome results provided both pre and post.

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<td>Wilkes, L., Jackson, D., Mohan, S. &amp; Wallis, M. (2010). Close observation by “specials” to promote the safety of the older person with behavioural disturbances in the acute care setting. <em>Contemporary Nurse, 36</em>, (1), 131-142. Australia</td>
<td>To describe an initiative at a hospital of “specialling” for older people with behavioural disturbance(s)</td>
<td>Descriptive design Two sources of data: Review of specialling observation documentation and request for specialling form Interviews with nurses and specials (observers)</td>
<td>420 bed acute care hospital in Australia Interviews with 10 staff: 3 specials and 7 nursing/administrative staff 50 sets of forms Request for specialling form and specialling observation chart</td>
<td>Implemented “specialling” whereby a person sits with an older person with behavioural disturbance. This person completed a Specials observation chart over the shift. Nurses and managers request specials by completing a request form. Spent 1M Australian dollars in a one year period on specials.</td>
<td>Source 1: Review of 50 sets of “Request for Patient Specials Form” and “Specials Observation form” from a 1 year period. Source 2: Semi-structured interviews with a purposive sample of nurses and specials. 7 nurses and 3 specials participated. Questions about current practice and best practice for older adults with behavioural disturbance.</td>
<td>72% requests were for 24 hour “specialling” and 16% for nights. 92% requests for patients with agitation/confusion, 44% self-harm, 40% danger to others, 43% wandering, 16% falls risk. Strategies documented to manage wandering risk include observation, valium, bedrails up, medication review, pain control, physical restraint.</td>
<td>Suggestion to improve observer/special documentation as minimal information documented on the observation form</td>
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To manage falls:
observation and
bedrails.
Key themes from
interviews included
the gap in service for
this client population,
the need for
education of nurses
and specials and
suggestions for
improvement.

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<tr>
<td>Wright, K. (2006). Falling head over heels: reducing falls in high risk neurosurgical inpatients with the implementation of a “high risk falls room”. <em>18</em>, (1), 3-7. Australia</td>
<td>To decrease the incidence of falls on a neurosurgical unit</td>
<td>Pre and post intervention design</td>
<td>1 neurosurgical unit in an acute care hospital in Australia</td>
<td>Multidisciplinary team used PDSA (Plan-Do-Study-Act) cycle to design intervention after a literature review: -cohort high risk patients in a 4 bed high-risk falls room -supervision by a nursing assistant acting as sitters 24 hrs/day -1RN assigned to the room for continuity -Falls risk categorization -staff education -patient/family education brochure</td>
<td>Age Daily falls risk assessment Glasgow coma scale LOS in high risk room Falls and near miss falls Diagnoses Data above presented monthly to unit quality management group</td>
<td>9 months of data post intervention 100% compliance with risk assessment and arm band use High risk patients being appropriately placed in the high risk falls room Decreased falls incidence from 6.5 falls/month to 1 fall in 9 months. The above fall was a near miss rather than a fall.</td>
<td>No description of the role of the nursing assistant/sitter and the staff education.</td>
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<td>Rogers, A. &amp; Gibson, C. (2002). Experiences of orthopaedic nurses caring for elderly patients with acute confusion. <em>Journal of Orthopaedic Nursing, 6</em>, 9-17. Canada</td>
<td>To describe the experiences of orthopaedic nurses caring for elderly clients with delirium</td>
<td>Qualitative exploratory</td>
<td>10 RNs working on a 37 bed orthopaedic unit in an acute care hospital in Eastern Canada</td>
<td>No intervention</td>
<td>Semi-structured tape-recorded interviews Questions about the identification and management of delirium as well as the effect on the nurses</td>
<td>Strategies used to manage the confused patient include constant surveillance, eliminating the underlying cause, humor and reorientation For the disruptive/hard to manage patient, strategies used</td>
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<td>Waszynski, C., Veronneau, P., Therrien, K., Brousseau, M., Massa, A. &amp; Levick, S. (2013). Decreasing patient agitation using individualized therapeutic activities. <em>AJN, 113</em>, (10), 32-39. USA</td>
<td>To assess whether a multisensory individualized therapeutic activities for patients receiving constant observation result in a decrease in agitation</td>
<td>Mixed methods pre and post intervention design</td>
<td>Convenience sample of 74 patients receiving constant observation during the 7 month study period in an acute care hospital in Eastern Canada Interviews with PSWs (student nurses) providing both CO and the intervention</td>
<td>Personal approach form to gather information on the patient’s lifestyle, hobbies and leisure activities from the patient or family Targeted intervention chosen to match the patient preference, Cognitive capability and physical capacity e.g. puzzles, reading the news, listening to music, walking, games etc.</td>
<td>Agitated behaviour scale completed pre, during and post intervention Personal approach form Interviews with observers.</td>
<td>Decrease in agitation score during and post intervention especially in patients with moderate and high agitation pre intervention Completing the personal approach form is helpful in developing a rapport with the patient and/or family. Observers felt that they were having a positive effect with the intervention and were making a difference.</td>
<td>Meaningful use of observer beyond surveillance Would have been interesting if interviews were completed with patients/families about their experience of the intervention Lack of a control group Risk of rater bias as the observer was completing the measures as well as delivering the intervention</td>
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<td>Lessard, A., Charbonneau-Allard, F.J., Rochefort, C.M., Tamblyn, R.M. &amp; Mallet, L. (2013). Anticholinergic Load as a modifiable risk factor of sitter use in acute care hospitals. <em>Pharmacoepidemiology and Drug Safety</em>, 22, (Suppl. 1), 1-521 Canada</td>
<td>To describe the prevalence and characteristics of anticholinergic load, drugs not adjusted for renal function and drug-drug interactions as well as their association with sitter use.</td>
<td>Retrospective case-control</td>
<td>All medical patients aged 65+ who received a sitter at 1 academic acute care health centre in 2010 (n=143). 1 control for each case randomly selected from the same population that however did not receive a sitter.</td>
<td>No intervention</td>
<td>For each patient the following were determined from chart review: 1) Number of psychotropic medications non-adjusted for renal function 2) Total anticholinergic load 3) Number of clinically significant drug-drug interactions</td>
<td>Multivariate logistic regression used to assess the association while controlling for demographics, co-morbidities and other risk factors for sitter use. Compared to controls patients with sitters had a higher anticholinergic load and more drug-drug interactions in the period prior to sitter use. Every drug with an anticholinergic load of 1 increased likelihood of sitter use by 1.4 (95% CI 1.1-1.7)</td>
<td>Minimize anticholinergic medication use in older adults especially those at risk of developing delirium.</td>
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<td>Lamdan, R.M., Ramchandani, D. &amp; Schindler, B. (1996). Constant observation in a medical – surgical setting: the role of consultation-liaison psychiatry.</td>
<td>To describe the role of consultation-liaison (CL) psychiatry in the care of patient requiring constant observation in</td>
<td>Retrospective descriptive design using chart review</td>
<td>All patients (64) receiving CO during the 6 month study period at one hospital site Comparison group from other patients</td>
<td>CL psychiatry required for all patients receiving CO however 58 patients received CL psychiatry and 6 did not.</td>
<td>Chart review of: Demographic data Medical and psychiatric diagnoses History of substance use Timing and length of CO Length of stay</td>
<td>Most common reason for CO was suicidal ideation (47%) Other reasons included confusion, agitation and disruptive behaviour. 69% of patients CO started early in</td>
<td>CL psychiatry discontinued CO on 14 patients who may otherwise have continued to receive CO. Hypothesize that mandatory referral to CL psychiatry may lead to cost-savings</td>
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| **Psychosomatics, 37, 368-373. USA** | an acute-care hospital | referred to CL psychiatry | Dates and reason for referral 
Psychotropic medications 
Responsive behaviours 
Suicidal risk 
Use of restraints | hospital stay (within 3 days) 
34% patients also needed restraints 
Average length of time on CO was 4.8 days. 
No significant differences in demographics | by discontinuation of CO is some patients. |
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<td><strong>Dasgupta, M. &amp; Brymer, C. (2015). Poor functional recovery after delirium is associated with other geriatric syndromes and additional illnesses. <em>International Psychogeriatrics, 27, (5), 793-802. Canada</em></strong></td>
<td>To determine how often geriatric syndromes, care issues (including CO) and additional diagnoses occur in delirious people and whether they correlate with worse functional recovery.</td>
<td>Prospective descriptive and observational design</td>
<td>355 patients with delirium from 1235 medical patients admitted to hospital aged over 70 years screened at one acute care hospital site in Ontario</td>
<td>None</td>
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<td>355 delirious patients followed through admission until discharge. Primary outcome was functional recovery (poor was death, LTC home admission, decrease in ADL score). Function assessed through OARS Baseline cognition through IQCODE MDAS for delirium severity RA assessed patients for delirium and chart for geriatric syndromes, behavioural issues affecting care, medications and additional diagnoses. Care issues assessed included refusal of care, use of restraints,</td>
<td>Poor functional recovery occurred in 69% delirious patients. Geriatric syndromes and additional diagnoses were common and associated with poor functional recovery. Care issues were common but not associated with poor recovery. 28% patients had sitters 31% had physical restraints used 8.8% required security.</td>
<td>Unknown how many had both sitters and restraints. Limitations- some issues such as geriatric syndrome only collected through chart review. Sample size was small and study only took place at one location.</td>
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<td>Cho, SH., Kim, YS, Yeon, KN, You, SJ &amp; Lee, ID. (2015). Effects of increasing nurse staffing on missed nursing care. <em>International Nursing Review, 62</em>, 267-274. South Korea</td>
<td>To examine the effects of nurse staffing on missed nursing care. Decrease use of family and sitter care givers.</td>
<td>Cross-sectional survey design</td>
<td>All staff nurses working on units is a hospital system.</td>
<td>Increased staffing from 17 patients to 1 RN to 7 patients per 1 RN on four out of thirteen units.</td>
<td>MISSCARE survey tool- has 2 parts Part A – perceptions of missed care Part B- reasons for missed care.</td>
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<tr>
<td>Feil, M. &amp; Wallace, SC. (2014). The use of patient sitters to reduce falls: best practices. <em>Pennsylvania Patient Safety Advisory, 11</em>, (1),</td>
<td>To outline best practices for the use of sitters to reduce patient falls.</td>
<td>Review article Synthesis of evidence</td>
<td>Data submitted by 75 hospitals participating in a falls reduction and prevention collaborative</td>
<td>Use of sitters</td>
<td>Reduction in falls Measured through hospital self-assessment tool that is submitted to the collaborative Tool evaluates the structure and content of hospital falls</td>
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<td>Gillies, L, Coker, E, Montemuro, M &amp; Pizzacalla, A. (2015). Sustainability of an innovation to</td>
<td>Describe the sustainability of implementing a Gentle Persuasive Approach</td>
<td>Description of program implementation</td>
<td>1 hospital site</td>
<td>GPA involves education to care staff on principles of patient-centred care, meaning behind responsive</td>
<td>None provided/described</td>
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- prevention programs as compared to best practices. Analysis of survey responses and rate of falls with and without harm. 
- A process for requesting and discontinuing sitters 
- Patient eligibility criteria 
- A pool of sitters 
- Criteria for sitter qualifications 
- A sitter job description with expectations for behaviour and responsibilities 
- A training program for sitters. 

Correlation between use of sitter program and less falls with harm (p<0.05) Through meta-regression analysis identified 3 practices associated with less falls with harm (pool of sitters, criteria for sitter qualifications and sitter training) 

- toileting schedule, staying within arms-reach, safe environment, hand-off to other staff if leaving for break etc., focusing on observing the patient and not being distracted. 
- Training for sitters: patient handling/ transfers, behaviour management/ de-escalation, diversional activities.
support and respond to persons with behaviours related to dementia and delirium. *Journal of Nursing Administration, 45*, (2), 70-73. Canada

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<td>Wray, K &amp; Rajab-Ali, R. (2014). Safety Watch Reducing Constant Observation Through Nurse Empowerment and Accountability. <em>Journal of Nursing Administration, 44</em>, (4), 237-243. USA</td>
<td>Evaluate the impact of a “Safety Watch Program” on falls rates, restraint use and costs of CO</td>
<td>Pre and post intervention design</td>
<td>1 hospital site</td>
<td>Safety Watch includes an algorithm for managing patients at risk of harm that the RNs implement. Algorithm includes patient assessment and strategies to manage 3 patient presentations: confusion/falls risk, pulling at lines and combative/aggressive. If these fail then RNs can assign observation- may not be one to one. APN support</td>
<td>CO costs CO hours Falls rate Restraint usage</td>
<td>Reduction of CO costs by 41% Reduction in CO hours by 42.6% Falls rates decreased by 10% and restraint usage decreased by 30.8% Comparison of 1 year pre and 1 year post.</td>
<td>Algorithm includes frequent checks by nursing staff and trial of use of unit staff to observe a group of patients closely. So still providing observation but through usual unit staffing.</td>
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<tr>
<td>Authors</td>
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<td>Rape, C., Mann, T., Schooley, J. &amp; Raney, J. (2015) Managing Patients With Behavioral Health Problems in Acute Care: Balancing Safety and Financial Viability. <em>Journal of Nursing Administration, 45</em>, (1), 7-10. USA</td>
<td>Evaluate a program to manage patients with behavioural problems (mental health issues) in acute care hospital</td>
<td>Pre and post intervention design</td>
<td>1 acute care hospital site</td>
<td>Creation of a new unit for patients requiring CO Unit is locked and is designed to be environmentally safe (suicide and homicide risk) and includes video monitoring from nursing station. RN and NA staff receive education. RN empowered to decide between q15-30 minute checks vs 1 on 1 CO.</td>
<td>Sitter costs Sitter hours Violent events Suicide and other adverse events</td>
<td>Reduction in sitter salary costs by 57%-savings of $260,000 per quarter. 45% reduction in sitter hours 50% reduction in violent events requiring restraints No other adverse events such as suicide Unclear what proportion of patients were older adults with delirium and/or dementia vs patients with other psychiatric disorders. Did not report on falls rates.</td>
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<td>Lang, CE (2014). Do sitters prevent falls? A review of the literature. <em>Journal of Gerontological Nursing, 40</em>, (5), 24-33. USA</td>
<td>To determine whether sitters prevent falls in hospitalized older adults To make recommendations for practice settings</td>
<td>Literature review</td>
<td>CINAHL, MEDLINE, PsycINFO, and the Psychology and Behavioral Sciences Collection searched between 1995 and 2013 Search terms “falls” and all of “sitter”, constant observation”, “nursing assistant” and “companion” English language papers</td>
<td>Only articles related to sitters and falls were retained</td>
<td>12 studies were retained for the review Quality was IV or V on quality of evidence scale (settler)- all were correlational descriptive studies, program evaluations and quality improvement projects. No evidence either way. Sitter reduction studies showed no increase in fall rates; studies implementing sitters to reduce falls</td>
<td>No controlled trials Quality of evidence poor- small studies Outcome measures varied Often multiple interventions were implemented when sitters were reduced so hard to know impact of sitter Poor quality studies with a lack of descriptive clarity Need larger studies with controls and clear definitions</td>
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<td>Jeffers, S., Searcey, P., Boyle, K., Herring, C., Lester, K., Goetz-Smith, h. &amp; Nelson, P. (2013). Centralized video monitoring for patient safety: a Denver Health Lean journey. <em>Nursing Economics, 31, (6), 298-306.</em> USA</td>
<td>Increase patient safety, prevent elopement and decrease falls while reducing costs from use of sitters</td>
<td>Pre and post intervention design</td>
<td>1 acute care hospital site</td>
<td>Implementation of Central video monitoring for patients at risk of harm using Lean methodology. Sitters trained as video monitoring technicians Have a manual, documentation that is transferred into health record. Shift change report with nursing units and can speak to RNs in real time if there is a risk (through call bell system). Still use CO for certain high risk patients (suicide, elopement and imminent risk of falls and patients CO usage and costs. Falls rates and benchmarking with accreditation authority over a 2 year period</td>
<td>CO usage and costs. Falls rates and benchmarking with accreditation authority over a 2 year period. Prevention of many adverse events/near misses documented through CVM- 57 falls, seven oxygen therapy disruptions, and 10 IV catheter pulls. Also prevention of violence to staff (patient had a concealed weapon). Now meet benchmark for falls rate whereas they did not before. Decrease in CO usage and costs.</td>
<td>Can’t use for elopement risk as camera is static so some patients can move out of range.</td>
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<td>McNicoll, L., K. Butterfield, K., Fedo, J. &amp; Riley, B. (2014). Dramatic reduction in constant observation usage using a comprehensive multidisciplinary approach. <em>Journal of the American Geriatrics Society, 62</em>: S142. USA</td>
<td>Determine effectiveness of an intervention to decrease CO use</td>
<td>Pre and post intervention design</td>
<td>1 acute care hospital site</td>
<td>Multidisciplinary team used root cause analysis to develop intervention to decrease CO use. Intervention -safety watch policy- 1 CO for multiple lower risk patients -safety watch unit for high risk patients (falls, delirium and dementia) -education of nurses and COs as well as supervisors -protocol for ETOH and drug withdrawal -increased psychiatric consultation -processes for suicidal patients</td>
<td>Hospital wide CO rates and falls rates for a 3 year time period</td>
<td>Decreased use of CO hours by 49% significant (p&lt;0.001). Falls rates stayed consistent but injurious falls decreased (but did not report whether this was statistically significant).</td>
<td>1 site only As per graph provided restraints rate was already falling and falls rate was fluctuating up and down.</td>
</tr>
<tr>
<td>Bailey, M, Amato, S &amp; Mouhlas, C. (2009). A creative alternative for providing constant observation on an acute brain-injury</td>
<td>To determine whether the constant observation alternative met these goals:</td>
<td>Pre and post intervention design</td>
<td>One 21 bed acute brain injury rehabilitation unit at one hospital site</td>
<td>Changed sitter role to Rehabilitation Patient Companion(RPC) and provided education on new role</td>
<td>FIM score (Functional measure) Participation in activities Satisfaction tool used not reported in detail Sitter salary costs</td>
<td>No change in FIM score ↑participation in activities Positive feedback from nursing staff about the intervention</td>
<td>Role of PSW continued to provide CO however also involved other activities too.</td>
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<td>Author and location</td>
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<td>Carr, FM. (2013). The role of sitters in delirium: an update. <em>Canadian Geriatrics Journal</em>, 16, (1), 22-36, Canada</td>
<td>To describe the role of sitters in hospitalized patients with delirium</td>
<td>Literature Review</td>
<td>Medline, Cochrane Database of Systematic Reviews and PubMed searched between 1960 and Oct.2011</td>
<td>None</td>
<td>Search terms were sitter, companion, nurse’s aides, special care aides, delirium, constant observation and acute confusional state. 1 Reviewer. Research articles. English articles only.</td>
<td>37 articles included in the review. Sitter role varies depending on setting. No standardization or criteria for education and training of sitters. Most promising roles were related to studies on delirium prevention interventions. Included roles of volunteers in HELP program who are not “sitters” as visit patients 3 times per day</td>
<td>Sitter role was defined more broadly as person hired for observation or companionship. So included studies that were unrelated to constant observation. Seemed to define sitters as any unregulated care provider and not necessarily those providing CO.</td>
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<td>Author and location</td>
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<td>Andre, C., et al. (2012). &quot;Optimizing the use of bedside patient safety assistants to improve productivity,&quot;</td>
<td>To determine whether a standardized nurse-driven protocol could reduce CO costs while not increasing adverse events</td>
<td>Pre and post intervention design</td>
<td>1 medical unit at an acute-care hospital site</td>
<td>Developed an algorithm based on the literature for when observers/patient safety assistants could be used</td>
<td>PSA/observer utilization from nursing service data Falls and elopement rates from incident reports Measured for 60 days post and used 6 months pre.</td>
<td>↓CO utilization hours from 3832 to 1188 hours per month (69%) Mean # pts needing CO went from 5 to 2. ↓costs by 49,003 in the 60 days</td>
<td>Intervention not described Post intervention not measured long enough for meaningful measurement</td>
</tr>
<tr>
<td>Dick, A, LaGrow, s &amp; Boddy, J. (2009). The effects of staff education on the practice of “specialling” by care assistants in an acute care setting. <em>Nursing Praxis in New Zealand</em>, 25, (1), 17-26. New Zealand</td>
<td>To evaluate whether an education intervention can decrease costs associated with “specialling” (which is the same as CO)</td>
<td>Pre and post intervention design (single case time-series design)</td>
<td>5 medical and surgical units at one acute care hospital site</td>
<td>20 min education to all staff at hand-over time on patient assessment, alternative interventions to CO, appropriate use of medications and restraint and new policy for specialling. Nurse leaders reassess patients needing CO daily to recommend alternatives. Every 15 minute observation implemented to one PSW can observe multiple patients</td>
<td>Cost and episodes of specialling collected through two records The Specialling Request Form and the Record of the number of hours of specialling required.</td>
<td>Pre intervention mean monthly number of specialling episodes was 414. Post intervention was 221/month which is a significant difference (p&lt;0.05). Costs also dropped from $56,947 pre to $28,998/month which was also significant.</td>
<td>Also tried to control for seasonal and ward variations.</td>
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<td>Capron, S. (2010).</td>
<td>&quot;Improving care provided for elderly demented patients requiring constant</td>
<td>Pre and post intervention</td>
<td>1 acute care hospital site</td>
<td>Need for CO to be determined by Charge RN rather than psychiatry consult RN Specialising rounds by management and psychiatry nurse to monitor compliance and provide support Guidelines for specialising and educational tools Education and monitoring of specials</td>
<td>None described</td>
<td>State that there was an increase in quality of care, a decreased amount of costs and a decreased number incidents (Of adverse events) Details are not provided</td>
<td>Abstract from a conference. Change from pre to post not described</td>
</tr>
<tr>
<td>Lakatos, B. E.</td>
<td>Outcomes of a Psychiatric Nursing Resource Service, University of Connecticut.</td>
<td>Pre and post intervention</td>
<td>2 medical and 3 surgical units at one acute care hospital site</td>
<td>Psychiatric nursing resource service that provided education to staff, expert consultation for clients in the hospital and clinical coaching of staff.</td>
<td># Consultation requests # Calls for assistance from security Use of constant observation- number of patient care assistant FTE nurse's comfort and competence in providing</td>
<td>Decrease in the number of calls to security by 57% but then increased back up by 10% the following year (change in client population- more traumatic brain injury)</td>
<td>Only 20.4% by nurses response rare to the electronic survey</td>
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<tr>
<th>Author and location</th>
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<th>Intervention</th>
<th>Tools and outcome measures</th>
<th>Results</th>
<th>Comments</th>
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<tbody>
<tr>
<td>To examine the use of sitters in hospitals</td>
<td>Cross-sectional survey design</td>
<td>Security personnel hospital representatives (1984) on the International Association of Healthcare Security and Safety</td>
<td>None</td>
<td>Questionnaire designed to take less than 10 minutes to complete with questions about hospital sitter use and activities.</td>
<td>150 (7.56%) respondents 81.74% use in-house sitters who are usually paid for by the nursing department (71.82%) Sitters most often are nursing assistants. Patients needing sitters are those at risk for falls or elopement as well as suicidal and homicidal. Sitters are ordered and stopped by the patient care team.</td>
<td>No description of countries that the respondents were from or characteristics of the organizations that responded. No pilot testing or validation of questions in survey described.</td>
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48.54% said sitter can care for more than 1 patient. Only 5.83% required sitter to be the same sex as the patient. Sitter proximity to patient varied from within arm’s reach to outside the room but able to observe the patient.

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<tr>
<td>Burtson, PL. &amp; Vento, L. (2015).</td>
<td>To evaluate the implementation of a standardized nurse driven sitter protocol and the use of mobile video monitoring</td>
<td>Pre and post intervention design</td>
<td>1 acute care hospital site</td>
<td>Two interventions - implementation of mobile video monitoring for most patients previously requiring sitters e.g. risk of falls and pulling tubes/lines - new sitter protocol where sitters only permitted for 1) new admits with suicidal ideation before psychiatric assessment 2) moderate to high suicide risk 3) gravely disabled or cognitively impaired with risk for elopement or wandering 4) risk of harm to others</td>
<td>Return on investment cost analysis (Annual cost of new equipment and staff required for video monitoring) as compared to reduction in sitter costs Pre and post falls rates, falls with injuries and restraints</td>
<td>Return on investment 8.9 times the initial investment 47.1% reduction in sitter costs and VMT costs Sitter use, falls rates and restraint rated were at the benchmarks or slightly above benchmarks set by Collaborative Alliance for Nursing Outcomes pre implementation. They fell below the benchmarks over the course of implementation</td>
<td>3 years of follow up data which is better than most previous pre and post studies when implementing interventions to decrease sitter use</td>
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<td>Author and location</td>
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<td>Schoenfisch, AL., Pompeii, LA., Lipscomb, HJ., Smith, CD., Upadhayaya, M. &amp; Dement, JM. (2015). An urgent need to understand and address the safety and well-being of hospital “sitters”. American Journal of Industrial Medicine, 58: 1278-1287.</td>
<td>To describe sitter use and the prevalence of and circumstances surrounding incidents of violence against sitters by patients and families</td>
<td>Mixed methods design using surveys, interviews and focus groups</td>
<td>Subset of 41 sitters from a larger sample (5385) of hospital staff at 6 acute hospital sites in to states who had experienced violence from patients and families</td>
<td>None</td>
<td>Survey-questionnaire asking about experience of violence from patients and families including types of violence, event description, patient characteristics, location, weapons involved and perception of contributing factors Focus group and interviews to further explore the above incidents</td>
<td>31/41 sitters had experienced violence most commonly physical assault (69 episodes), physical threats (77 episodes) and verbal assaults (119 episodes) in the past 12 months. 94% of the time, the patient was the assailant and weapons used were body parts (fist, nails) or body fluids. Patient characteristics were confusion, sundowning, substance misuse and behavioural issues. Other issues: -lack or role clarity in sitter role, inadequate staff back-up for violence events, lack of communication from staff re what to expect e.g. good hand-over and lack of training to deal with behaviours.</td>
<td>Small sample size as part of a larger study however first to highlight violence specific to sitters</td>
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Appendix B

Observation Data Collection Form

Date:

Nurse ID#

Observer ID#

Patient ID #

Site (circle one):  Site 1  Site 2

Shift (circle as appropriate):  Day  Evening  Night  Weekday  Weeknight

<table>
<thead>
<tr>
<th>Time</th>
<th>Descriptive notes</th>
<th>Reflective notes</th>
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Appendix C

Interview Questions Post-Observation

Thank you for allowing me to observe you during this shift. I have a few questions to ask you related to what took place today and constant observation in general. I also have a few questions about you and your work experience and education.

This is what I observed during this shift (Provide a summary of what was observed during the shift).

1) Does this capture your experience today? Please tell me more....

2) What was the reason for constant observation today?

3) Can you tell me about a time when constant observation worked well?

4) What made it work well?

5) Can you tell me about a time that constant observation did not work well?

6) What made it not work well?

7) Where did today’s experience fit in terms of working well or not?

8) Is there anything else important to discuss about constant observation?

Thank you so much for your time.
Appendix D

Nurse Demographic Questionnaire

Age (years): ______

Sex (circle what applies)  Female  Male

Do you currently hold certification in Gerontology from the Canadian Nurses Association?
(circle what applies): Yes  No

Education (circle highest level in Nursing that applies):

Diploma  Undergraduate (e.g. BSc.N)  Graduate (e.g. MN or MSc.)

Experience as a nurse: years ______ months ______

Length of time working on this unit: years _____ months ______
Appendix E

Observer Demographic Questionnaire

Age (years):  ______  

Sex (circle what applies):  Female  Male

Education (circle highest level):

Certificate  Diploma  Undergraduate (e.g. BSc. or BA)  Graduate (e.g. MA or MSc.)

Credential (circle below):

Personal support worker (PSW)  Practical Nurse  Registered Nurse  Other (please describe)

Experience as an observer:  years ______  months ______

Length of time working on this unit:  years ______  months ______
Appendix F

National General Hospital Constant Observation (CO) Practices Survey


The survey contained eight sections focusing on: a) hospital and unit description; b) constant observation practices; c) staff providing constant observation; d) staff training on constant observation; e) policies and procedures related to constant observation including eligible patient population; f) funding source for constant observation; g) expert consultation and h) cost saving alternatives to constant observation.
Appendix G

Patient Chart Review Data Collection Sheet

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<th>Study ID#</th>
<th>Site</th>
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Date and shift of Observation: DD/mm/yyyy | Day | Evening | Night
Weekend

Age (years):

Gender (M or F): M F

Date Constant Observation (CO) ordered: dd/mm/yyyy

# Days or hours on CO:

Reason for CO initiation:

Order for CO? Yes No

Consent for CO obtained? Yes No

Baseline cognitive impairment (history of dementia): Yes No

Delirium documented: Yes No

Mental Health diagnosis: Yes No

Functional Impairment at preadmission documented (describe)@: Yes No

History of falls (in hospital or prior to admission): Yes No

History of alcohol or drug misuse: Yes No

Responsive behaviours documented in hospital$: Yes No

Any medications with psychoactive properties*: Yes No

Any medications with anti-cholinergic properties^: Yes No

*Psychoactive medications (e.g. opioids, benzodiazepines, other sedatives, antidepressants, antipsychotics, anesthetics):

^Medications with anti-cholinergic properties (e.g. antihistamines, antidepressants, antiemetics, antipsychotics, antivertigo, cardiovascular, gastrointestinal, muscle relaxants, parkinsonism, urinary incontinence)

@ Impairment in Function
Activities of daily living e.g. bathing, dressing, transferring, feeding, continence and or toileting (Katz, Down, Cash & Grotz, 1970)

Or instrumental activities of daily living e.g. shopping, laundry, finances, using the telephone, meal preparation, housekeeping, transportation and medication management (Lawton, MP & Brody, EM, 1969)

Or in mobility (requiring assistance or a gait aid or supervision)

Responsive behaviour (vocal/verbal, physically non-aggressive or aggressive): Wandering, elopement, pacing removal of medical equipment, agitation, physical or verbal aggression, attempting to ambulate without assistance when assistance required for safe ambulation (Cohen-Mansfield, J, 2000)

Medications with anti-cholinergic properties Therapeutic Categories (Drug List*)

Antihistamines
• chlorpheniramine, cyproheptadine, diphenhydramine, hydroxyzine

Antidepressants
• amoxapine, amitriptyline, clomipramine, desipramine, doxepin, imipramine, nortriptyline, protriptyline, paroxetine

Antiemetics
• prochlorperazine, promethazine

Antipsychotics
• chlorpromazine, clozapine, olanzapine, thioridazine

Antivertigo
• meclizine, scopolamine

Cardiovascular
• furosemide, digoxin, nifedipine, disopyramide

Gastrointestinal
• Antidiarrheal: diphenoxylate atropine
• Antispasmodics: belladonna, clidinium, chlordiazepoxide, dicyclomine, hyoscyamine, propantheline
• Antiulcer: cimetidine, ranitidine

Muscle Relaxants
• cyclobenzaprine, dantrolene, orphenadrine

Parkinsonism
• amantadine, benztropine, biperiden, trihexyphenidyl

Urinary Incontinence
• oxybutynin, propantheline, solifenacin, tolterodine, trospium

NOTES
*Not an inclusive list.
Responsive behaviour (vocal/verbal, physically non-aggressive or aggressive): Wandering, elopement, pacing removal of medical equipment, agitation, physical or verbal aggression, attempting to ambulate without assistance when assistance required for safe ambulation (Cohen-Masnfield, J, 2000)

Medications with anti-cholinergic properties Therapeutic Categories (Drug List*)

Appendix H
Perceptions of Constant Observation Use Questionnaire

Please answer the following questions about constant observation (the use of sitters or observers)
In caring for the older adult, constant observation (sitters) is sometimes used as an alternative to/or along with physical restraints.
Below are reasons sometimes given for using constant observation for older adults. In general, how important do you believe the use of sitters are for each reason listed? (Please circle the number that represents your choice).

<table>
<thead>
<tr>
<th>Reason for Using Constant Observation</th>
<th>Not at all important</th>
<th>Somewhat important</th>
<th>Most important</th>
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<tbody>
<tr>
<td>1. Protecting an older person from:</td>
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<tr>
<td>a) Falling out of bed?</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>b) Falling out of chair?</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>c) Unsafe ambulation?</td>
<td>1</td>
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<td>3</td>
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<tr>
<td>2. Preventing an older person from wandering?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Preventing an older person from taking things from others?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Preventing an older person from getting into dangerous places or supplies?</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>5. Keeping a confused older person from bothering others?</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>6. Preventing an older person from:</td>
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<tr>
<td>a) Pulling out a catheter?</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>b) Pulling out a feeding tube?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>c) Pulling out an IV?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>d) Breaking open sutures?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>e) Removing a dressing?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. Providing quiet time or rest for an overactive older person?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. Providing for safety when judgement is impaired?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. Substituting for staff observation?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Protecting staff or other patients from physical abusiveness/combattiveness?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Managing agitation

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please go to the next page

12. Please identify measures which could be used instead of constant observation for the behaviours or situations listed on the previous page.

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Adapted from the “Perceptions of Restraint Use Questionnaire© developed by Evans and Strumpf (1986, 1990)

The authors give permission for the use of this instrument.

Please go to the next page
Appendix I

The following questions are about relationships and communication within the unit with a focus on communication and coordination of care between nurses and observer staff.

"Excerpted and adapted from The Organization and Management of Intensive Care Units. Copyright 1989, Shortell and Rousseau."

SECTION ONE: RELATIONSHIPS AND COMMUNICATIONS WITHIN THE UNIT

For each of the following statements, please circle the number under the response that best reflects your judgment.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse-to-Observer Relationships</td>
<td></td>
</tr>
<tr>
<td>It is easy for me to talk openly with the observers of this unit</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I can think of a number of times when I received incorrect information</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Communication between observers and nurses in this unit is very open</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>It is often necessary for me to go back and check the accuracy of</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>information I have received from observers in this unit</td>
<td></td>
</tr>
<tr>
<td>I find it enjoyable to talk with the observers of this unit</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>When observers and nurses talk with each other in this unit, there is a</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>good deal of understanding</td>
<td></td>
</tr>
<tr>
<td>The accuracy of information passed on by the observers on this unit</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>leaves much to be desired</td>
<td></td>
</tr>
<tr>
<td>It is easy to ask advice from observers in this unit</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I feel that certain observers don’t completely understand the</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>information they receive</td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>General relationships and communications: these statements refer to general relationships and communications within the unit</td>
<td>1</td>
</tr>
<tr>
<td>I get information on the status of patients when I need it</td>
<td>1</td>
</tr>
<tr>
<td>When a patient's status changes, I get relevant information quickly</td>
<td>1</td>
</tr>
<tr>
<td>There are needless delays in relaying information regarding patient care</td>
<td>1</td>
</tr>
<tr>
<td>In matters pertaining to patient care, observers call nurses in a timely manner</td>
<td>1</td>
</tr>
</tbody>
</table>

"Excerpted and adapted from The Organization and Management of Intensive Care Units. Copyright 1989, Shortell and Rousseau."
Appendix J

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Information & Consent for the Manager of the Unit

Title
Constant Observation for Older Adults in Acute Care: A Mixed Methods Study

Site Investigator

Principal Investigator
Rola Moghabghab RN(EC) MN GNC(C) PhD (candidate)

Thesis Supervisor
Katherine McGilton RN PhD Associate Professor, Lawrence S Bloomberg Faculty of Nursing.

24 Hour Phone Number

Sponsor
The study is a partial requirement of the PhD thesis requirements of the Lawrence S Bloomberg Faculty of Nursing, University of Toronto

Introduction
You are being asked to take part in a research study. Please read this explanation about the study and its risks and benefits before you decide if you would like to take part. You should take as much time as you need to make your decision. You should ask the study staff to explain anything that you do not understand and make sure that all of your questions have been answered before signing this consent form. Before you make your decision, feel free to talk about this study with anyone you wish. Participation in this study is voluntary.

Background and Purpose
This study is a partial requirement of the PhD thesis requirements of the Lawrence S Bloomberg Faculty of Nursing, University of Toronto.

You have been asked to take part in this research study because you work as a Unit Manager on XX unit where constant observation is provided at times. Constant observation which involves constant surveillance, often by an unregulated care provider (observer or sitter) is commonly used for older adults with delirium and/or dementia in hospitals. There is little literature on what takes place during constant observation and how the nurse responsible for the patient and the observer work together. Therefore the purpose of this research study is to describe the practices of the nurse and observer,
the characteristics of the nurse, observer and patient as well as to explore the perceived benefits and limitation of constant observation.

About 70 people from 2 places will be in the study. About 30 will come from XXX Hospital.

**Study Design**

- This study describes what takes place during constant observation and how the nurse and observer work together.
- In order to capture some of the information required for the purposes of the study, you are being asked to participate in a semi-structured interview to complete a questionnaire on constant observation practices on your unit and hospital.

**Study Procedures**

- You will be asked to identify a time and location convenient to you to participate in a 20-30 minute interview to answer questions about constant observation practices on your unit and hospital.
- The interview will involve responding to questions:
  - about a description of your unit,
  - constant observation practices,
  - staff providing constant observation,
  - staff training,
  - policies and procedures,
  - funding for constant observation,
  - alternative to constant observation and
  - access to consultation services related to constant observation.

**Risks Related to Being in the Study**

There are no known risks if you take part in this study, but being in this study may make you feel uncomfortable. The time to complete the interview may be an inconvenience to you. If you have an extremely busy schedule and/or are trying to balance multiple personal and work life demands, you may feel stress at the thought of participating in this study. You may refuse to answer questions at any time if there is any discomfort.

**Benefits to Being in the Study**

You will not receive any direct benefit from being in this study. Information learned from this study may help to increase the understanding of constant observation and may benefit patients in the future.

**Voluntary Participation**

Your participation in this study is voluntary. You may decide not to be in this study, or to be in the study now and then change your mind later. You may leave the study at any time without affecting your employment status. You may refuse to answer any question you do not want to answer.
Confidentiality

The information that is collected for the study will be kept in a locked and secure area by the study team for 7 years. Only the study team or the people or groups listed below will be allowed to look at your records.

The following people may come to the hospital to look at the study records to check that the information collected for the study is correct and to make sure the study followed proper laws and guidelines:

- Representatives of the study organizing committee.
- XXX Hospital Research Ethics Board.

All information collected during this study will be kept confidential and will not be shared with anyone outside the study unless required by law. Any information about you that is sent out of the hospital will have a code and will not show your name or address, or any information that directly identifies you. You will not be named in any reports, publications, or presentations that may come from this study.

If you decide to leave the study, the information about you that was collected before you left the study will still be used. No new information will be collected without your permission.

Expenses Associated with Participating in the Study

You will not have to pay for any of the procedures involved with this study. You will not be reimbursed for your participation in this study.

Conflict of Interest

The investigator has an interest in completing the study to meet the PhD thesis requirements at the University of Toronto. The investigator’s interests should not influence your decision to participate in this study. You should not feel pressured to join this study.

Questions About the Study

If you have any questions, concerns or would like to speak to the study team for any reason, please call: Rola Moghabghab at 416-689-9539 or by email: rola.moghabghab@mail.utoronto.ca

If you have any questions about your rights as a research participant or have concerns about this study, call XXX, Chair of the XXX Hospital Research Ethics Board (REB) or
the Research Ethics office number at XXX. The REB is a group of people who oversee the ethical conduct of research studies. These people are not part of the study team. Everything that you discuss will be kept confidential.

Consent

This study has been explained to me and any questions I had have been answered. I know that I may leave the study at any time. I agree to take part in this study.

_________________________________  ___  __________________________
Print Study Participant’s Name          Signature                     Date

(You will be given a signed copy of this consent form)

My signature means that I have explained the study to the participant named above. I have answered all questions.

_________________________________  ___  __________________________
Print Name of Person Obtaining ConsentSignature                     Date

Was the participant assisted during the consent process? □ YES □ NO

If YES, please check the relevant box and complete the signature space below:

□ The person signing below acted as a translator for the participant during the consent process and attests that the study as set out in this form was accurately translated and has had any questions answered.

_________________________________  ____________________________
Print Name of Translator Signature                     Date
The consent form was read to the participant. The person signing below attests that the study as set out in this form was accurately explained to, and has had any questions answered.

_________________________  ______________________
Print Name of Witness   Signature

Date

Relationship to Participant
Appendix K

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Questionnaire Information for All Nurses on the Unit

Title
Constant Observation for Older Adults in Acute Care: A Mixed Methods Study

Site Investigator
XXX

Principal Investigator
Rola Moghabghab RN(EC) MN GNC(C) PhD (candidate)
416-689-9539

Thesis Supervisor
Katherine McGilton RN PhD Associate Professor, Lawrence S Bloomberg Faculty of Nursing. 416-597-3422 x2500

24 Hour Phone Number
416-689-9539

Sponsor
The study is a partial requirement of the PhD thesis requirements of the Lawrence S Bloomberg Faculty of Nursing, University of Toronto

Introduction
You are being asked to take part in a research study. Please read this explanation about the study and its risks and benefits before you decide if you would like to take part. You should take as much time as you need to make your decision. You should ask the study staff to explain anything that you do not understand and make sure that all of your questions have been answered before signing this consent form. Before you make your decision, feel free to talk about this study with anyone you wish. Participation in this study is voluntary.

Background and Purpose
This study is a partial requirement of the PhD thesis requirements of the Lawrence S Bloomberg Faculty of Nursing, University of Toronto.

You have been asked to take part in this research study because you work as a staff nurse on XX unit and have been involved in providing constant observation. Constant observation which involves constant surveillance, often by an unregulated care provider (observer or sitter) is commonly used for older adults with delirium and/or dementia in hospitals. There is little literature on what takes place during constant observation and how the nurse responsible for the patient and the observer work together. Therefore the purpose of this research study is to describe the practices of the nurse and observer,
the characteristics of the nurse, observer and patient as well as to explore the perceived benefits and limitation of constant observation.

About 70 people from 2 places will be in the study. About 30 will come from XX Hospital.

**Study Design**

- This study describes what takes place during constant observation and how the nurse and observer work together.
- In order to capture some of the information required for the purposes of the study, you are being asked to complete a survey.
- The survey will take 15-20 minutes for you to complete.
- In addition you will be asked about your interest in participating in the second part of this study. The second part of the study involves the researcher observing you and an observer (sitter) working together to provide constant observation to a patient for an entire shift. If you are interested in participating in the second part of the study, please let the researcher know so the researcher can provide you with further information.

**Study Procedures**

- All nurses working on the unit are being asked to complete this survey. The survey consists of three parts:
  - Demographic questions about you
  - A questionnaire focusing on how well nurses and observers (sitters) communicate and coordinate care together
  - A questionnaire asking about the importance of different reasons for using constant observation and possible alternatives to constant observation
- Completion of the survey indicates that you have consented to participate.
- If you decide to complete the survey, please return the completed survey to the **constant observation survey box** located xxxxx

**Risks Related to Being in the Study**

There are no known risks if you take part in this study, but being in this study may make you feel uncomfortable. The time to complete the survey may be an inconvenience to you. If you have an extremely busy schedule and/or are trying to balance multiple personal and work life demands, you may feel stress at the thought of participating in this study. You may refuse to answer questions at any time if there is any discomfort.

**Benefits to Being in the Study**
You will not receive any direct benefit from being in this study. Information learned from this study may help to increase the understanding of constant observation and may benefit patients in the future.

**Voluntary Participation**

Your participation in this study is voluntary. You may decide not to be in this study, or to be in the study now and then change your mind later. You may leave the study at any time without affecting your employment status. You may refuse to answer any question you do not want to answer.

**Confidentiality**

The information that is collected for the study will be kept in a locked and secure area by the study team for 7 years. Only the study team or the people or groups listed below will be allowed to look at your records.

The following people may come to the hospital to look at the study records to check that the information collected for the study is correct and to make sure the study followed proper laws and guidelines:

- Representatives of the study organizing committee.
- X Hospital Research Ethics Board.

All information collected during this study will be kept confidential and will not be shared with anyone outside the study unless required by law. Any information about you that is sent out of the hospital will have a code and will not show your name or address, or any information that directly identifies you. You will not be named in any reports, publications, or presentations that may come from this study.

If you decide to leave the study, the information about you that was collected before you left the study will still be used. No new information will be collected without your permission.

**Expenses Associated with Participating in the Study**

You will not have to pay for any of the procedures involved with this study. You will not be reimbursed for your participation in this study.

**Conflict of Interest**

The investigator has an interest in completing the study to meet the PhD thesis requirements at the University of Toronto. The investigator’s interests should not influence your decision to participate in this study. You should not feel pressured to join this study.
Questions About the Study

If you have any questions, concerns or would like to speak to the study team for any reason, please call: Rola Moghabghab at 416-689-9539 or by email: rola.moghabghab@mail.utoronto.ca

If you have any questions about your rights as a research participant or have concerns about this study, call XXX, Chair of the XXX Hospital Research Ethics Board (REB) or the Research Ethics office number at XXX. The REB is a group of people who oversee the ethical conduct of research studies. These people are not part of the study team. Everything that you discuss will be kept confidential.

Consent

This study has been explained to me and any questions I had have been answered. I know that I may leave the study at any time. By completing the survey this implies I agree to participate in the study.
Appendix L

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Information for Staff Nurses and Observers on the Unit

Title
Constant Observation for Older Adults in Acute Care: A Mixed Methods Study

Principal Investigator
Rola Moghabghab RN(EC) MN GNC(C) PhD (candidate)

Thesis Supervisor
Katherine McGilton RN PhD Associate Professor, Lawrence

24 Hour Phone Number
416-689-9539

Sponsor
The study is a partial requirement of the PhD thesis requirements of the Lawrence S Bloomberg Faculty of Nursing, University of Toronto

Introduction

You are being asked to take part in a research study. Please read this explanation about the study and its risks and benefits before you decide if you would like to take part. You should take as much time as you need to make your decision. You should ask the study staff to explain anything that you do not understand and make sure that all of your questions have been answered before signing this consent form. Before you make your decision, feel free to talk about this study with anyone you wish. Participation in this study is voluntary.

Background and Purpose

This study is a partial requirement of the PhD thesis requirements of the Lawrence S Bloomberg Faculty of Nursing, University of Toronto.

You have been asked to take part in this research study because you are involved in providing constant observation to patients on this unit. Constant observation which involves constant surveillance, often by an unregulated care provider (observer or sitter) is commonly used for older adults with delirium and/or dementia in hospitals. There is little literature on what takes place during constant observation and how the nurse responsible for the patient and the observer work together. Therefore the purpose of this research study is to describe the practices of the nurse and observer, the characteristics of the nurse, observer and patient as well as to explore the perceived benefits and limitation of constant observation.
About 70 people from 2 places will be in the study. About 30 will come from XX Hospital.

**Study Design**

- This study describes what takes place during constant observation and how the nurse and observer work together
- In order to capture some of the information required for the purposes of the study, you are being asked to participate in observation for a shift or several shifts and then in an interview to collect information on constant observation practices as well as the benefits and limitations from your perspective.

**Study Procedures**

You are being asked to participate in the following:

- Answer some demographic questions which should take approximately 5 minutes
- Be observed by the researcher while providing care to a patient receiving constant observation for the duration of a shift or multiple shifts. Below are some more details about what being observed will involve:
  - The researcher will be observing from an unobtrusive location and will not participate in or interrupt any patient care activities unless there is a legal obligation or a risk of patient safety.
  - The focus of the observation is to examine constant observation practices including how the nurse and observer work together
  - If you are providing an intervention such as personal care and wish the researcher to leave the location, then please feel free to let her know.
  - So as not to distract care processes, the researcher may step out of the observation area to document when there is little activity in the patient room
  - The only time the researcher may interrupt or intervene in patient care activities is if the researcher witnesses a situation that may lead to immediate harm to the patient including any instances of abuse. This is because as a regulated health professional, the researcher has a professional obligation to intervene in any instances involving abuse. Any instances of abuse will be reported to the unit manager. In instances of sexual abuse of a patient by a regulated health professional, the researcher has an obligation to make a mandatory report to the health professionals’ regulatory body.
- After being observed and towards the end of the shift, you will be asked to participate in a 15-20 minute interview. The purpose of this interview is for the researcher to share her observations during the shift and ask for your perspective on what took place during the shift. In addition you will be asked questions about the benefits and limitations of constant observation.
Risks Related to Being in the Study

There are no known risks if you take part in this study, but being in this study may make you feel uncomfortable. You may feel self-conscious and uncomfortable being observed for the duration of a shift. The time to complete the interview may be an inconvenience to you. If you have an extremely busy schedule and/or are trying to balance multiple personal and work life demands, you may feel stress at the thought of participating in this study. You may refuse to answer questions at any time if there is any discomfort. You may also ask to discontinue being observed at any time if there is discomfort.

Benefits to Being in the Study

You will not receive any direct benefit from being in this study. Information learned from this study may help to increase the understanding of constant observation and may benefit patients in the future.

Voluntary Participation

Your participation in this study is voluntary. You may decide not to be in this study, or to be in the study now and then change your mind later. You may leave the study at any time without affecting your employment status. You may refuse to answer any question you do not want to answer.

Confidentiality

The information that is collected for the study will be kept in a locked and secure area by the study team for 7 years. Only the study team or the people or groups listed below will be allowed to look at your records.

The following people may come to the hospital to look at the study records to check that the information collected for the study is correct and to make sure the study followed proper laws and guidelines:

- Representatives of the study organizing committee.
- XXX Hospital Research Ethics Board.

All information collected during this study will be kept confidential and will not be shared with anyone outside the study unless required by law. Any information about you that is sent out of the hospital will have a code and will not show your name or address, or any information that directly identifies you. You will not be named in any reports, publications, or presentations that may come from this study.

If you decide to leave the study, the information about you that was collected before you left the study will still be used. No new information will be collected without your permission.

Expenses Associated with Participating in the Study
You will not have to pay for any of the procedures involved with this study. You will not be reimbursed for your participation in this study.

**Conflict of Interest**

The investigator has an interest in completing the study to meet the PhD thesis requirements at the University of Toronto. The investigator's interests should not influence your decision to participate in this study. You should not feel pressured to join this study.

**Questions About the Study**

If you have any questions, concerns or would like to speak to the study team for any reason, please call: Rola Moghabghab at 416-689-9539 or by email: rolamoghabghab@mail.utoronto.ca

If you have any questions about your rights as a research participant or have concerns about this study, call XXX, Chair of the XXX Hospital Research Ethics Board (REB) or the Research Ethics office number at XXX. The REB is a group of people who oversee the ethical conduct of research studies. These people are not part of the study team. Everything that you discuss will be kept confidential.

**Consent**

This study has been explained to me and any questions I had have been answered.

I know that I may leave the study at any time. I agree to take part in this study.

_________________________  ___  ________________________
Print Study Participant's Name   Signature   Date

(You will be given a signed copy of this consent form)

My signature means that I have explained the study to the participant named above. I have answered all questions.
Was the participant assisted during the consent process? □ YES □ NO

If YES, please check the relevant box and complete the signature space below:

☐ The person signing below acted as a translator for the participant during the consent process and attests that the study as set out in this form was accurately translated and has had any questions answered.

_____________________________  __________________________
Print Name of Translator   Signature   Date

Relationship to Participant   Language

☐ The consent form was read to the participant. The person signing below attests that the study as set out in this form was accurately explained to, and has had any questions answered.

_____________________________  __________________________
Print Name of Witness   Signature   Date

Relationship to Participant
CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Information for Patient/Substitute Decision Maker

Title
Constant Observation for Older Adults in Acute Care: A Mixed Methods Study

Principal Investigator
Rola Moghabghab RN(EC) MN GNC(C) PhD (candidate)
416-689-9539

Thesis Supervisor
Katherine McGilton RN PhD Associate Professor, Lawrence S Bloomberg Faculty of Nursing.

24 Hour Phone Number
416-689-9539

Sponsor
The study is a partial requirement of the PhD thesis requirements of the Lawrence S Bloomberg Faculty of Nursing, University of Toronto

Introduction

You are being asked to take part in a research study. Please read this explanation about the study and its risks and benefits before you decide if you would like to take part. You should take as much time as you need to make your decision. You should ask the study staff to explain anything that you do not understand and make sure that all of your questions have been answered before signing this consent form. Before you make your decision, feel free to talk about this study with anyone you wish. Participation in this study is voluntary.

Background and Purpose

This study is a partial requirement of the PhD thesis requirements of the Lawrence S Bloomberg Faculty of Nursing, University of Toronto.
You have been asked to take part in this research study because you are currently receiving constant observation while you are in hospital. Constant observation means that you have a care provider watching you all the time to ensure your safety. Constant observation is commonly used for older adults in hospitals. There is not a lot of information about how constant observation is provided and how the nurse and observer (health care worker providing constant observation) work together. So the purpose of this research study is to describe the practices of the nurse and observer, the characteristics of the nurse, observer and patient as well as to explore the perceived benefits and limitation of constant observation.

About 70 people from 2 places will be in the study. About 30 will come from XXX Hospital.

**Study Design**

- This study describes what takes place during constant observation and how the nurse and observer work together
- In order to capture some of the information required for the purposes of the study, the researcher will be observing how the nurse and observer provide one to one monitoring for you and how they communicate and coordinate care together
- At the end of the observation, the researcher will look at your health record to collect information.

**Study Procedures**

You are being asked to participate in the following:

- Having the researcher observe how the nurse and observer provide one to one monitoring for you for an entire 8 hour shift or several shifts. Below are some more details about what being observed will involve:
  - The researcher will be observing from an unobtrusive location and will not participate in or interrupt any hospital care activities unless there is a legal obligation or a risk to your safety.
  - If you are receiving care that leads you to feel uncomfortable having the researcher watch you, then please feel free to ask her to leave.
  - The researcher may step out of the observation area to write notes several times during the shift. The researcher may also leave the observation area if the nurses or other staff ask her to leave.
  - The only time the researcher may interrupt or intervene in your care is if there is a risk to your safety such as if you are about to fall or if someone is mistreating you.
- Allow the researcher to look at your health record to collect the following information:
  - Your age and gender
  - Whether you have a medical history of dementia, delirium or mental health issues
  - Whether you have a history of alcohol or drug use
  - Whether you have difficulties with day to day activities such as moving around
  - Whether you have had any falls in the past or any other behaviours that may cause concerns about your safety
  - Whether you are on certain medications that may cause drowsiness or confusion

**Risks Related to Being in the Study**

There are no known risks if you take part in this study, but being in this study may make you feel uncomfortable. You may feel self-conscious and uncomfortable being observed by the researcher. You may also feel uncomfortable about having the researcher look at your health record. You may ask to discontinue being observed at any time if there is discomfort. You may ask the researcher to not look at your health record at any time if there is discomfort.

**Benefits to Being in the Study**

You will not receive any direct benefit from being in this study. Information learned from this study may help to increase the understanding of constant observation and may benefit patients in the future.

**Voluntary Participation**

Your participation in this study is voluntary. You may decide not to be in this study, or to be in the study now and then change your mind later. You may leave the study at any time without affecting your care. You may refuse to answer any question you do not want to answer.

**Confidentiality**

The information that is collected for the study will be kept in a locked and secure area by the study team for 7 years. Only the study team or the people or groups listed below will be allowed to look at your records.
The following people may come to the hospital to look at the study records to check that the information collected for the study is correct and to make sure the study followed proper laws and guidelines:

- Representatives of the study organizing committee.
- XXX Hospital Research Ethics Board.

All information collected during this study will be kept confidential and will not be shared with anyone outside the study unless required by law. Any information about you that is sent out of the hospital will have a code and will not show your name or address, or any information that directly identifies you. You will not be named in any reports, publications, or presentations that may come from this study.

If you decide to leave the study, the information about you that was collected before you left the study will still be used. No new information will be collected without your permission.

**Expenses Associated with Participating in the Study**

You will not have to pay for any of the procedures involved with this study. You will not be reimbursed for your participation in this study.

**Conflict of Interest**

The investigator has an interest in completing the study to meet the PhD thesis requirements at the University of Toronto. The investigator’s interests should not influence your decision to participate in this study. You should not feel pressured to join this study.

**Questions About the Study**

If you have any questions, concerns or would like to speak to the study team for any reason, please call: Rola Moghabghab at 416-689-9539 or by email: rola.moghabghab@mail.utoronto.ca
If you have any questions about your rights as a research participant or have concerns about this study, call XXX Chair of the XXX Hospital Research Ethics Board (REB) or the Research Ethics office number at XXX. The REB is a group of people who oversee the ethical conduct of research studies. These people are not part of the study team. Everything that you discuss will be kept confidential.

**Consent**

This study has been explained to me and any questions I had have been answered.

I know that I may leave the study at any time. I agree to take part in this study.

_________________________  ___  __________________________
Print Study Participant’s Name  Signature  Date

(You will be given a signed copy of this consent form)

My signature means that I have explained the study to the participant named above. I have answered all questions.

_________________________  ___  __________________________
Print Name of Person Obtaining Consent  Signature  Date

Was the participant assisted during the consent process?  □ YES  □ NO

If YES, please check the relevant box and complete the signature space below:
☐ The person signing below acted as a translator for the participant during the consent process and attests that the study as set out in this form was accurately translated and has had any questions answered.

________________________________________  __________________________
Print Name of Translator  Signature  Date

Relationship to Participant  Language

☐ The consent form was read to the participant. The person signing below attests that the study as set out in this form was accurately explained to, and has had any questions answered.

________________________________________  __________________________
Print Name of Witness  Signature  Date

Relationship to Participant
Appendix N

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Information and Consent form for Additional Manager Interviews

Title
Constant Observation for Older Adults in Acute Care: A Mixed Methods Study

Principal Investigator
Rola Moghabghab RN(EC) MN GNC(C) PhD (candidate)

Thesis Supervisor
Katherine McGilton RN PhD Associate Professor, Lawrence S Bloomberg Faculty of Nursing. 416-597-3422 x2500

24 Hour Phone Number
416-689-9539

Sponsor
The study is a partial requirement of the PhD thesis requirements of the Lawrence S Bloomberg Faculty of Nursing, University of Toronto

Introduction

You are being asked to take part in a research study. Please read this explanation about the study and its risks and benefits before you decide if you would like to take part. You should take as much time as you need to make your decision. You should ask the study staff to explain anything that you do not understand and make sure that all of your questions have been answered before signing this consent form. Before you make your decision, feel free to talk about this study with anyone you wish. Participation in this study is voluntary.

Background and Purpose

This study is a partial requirement of the PhD thesis requirements of the Lawrence S Bloomberg Faculty of Nursing, University of Toronto.

You have been asked to take part in this research study because you are involved in providing constant observation to patients on this unit. Constant observation which involves constant surveillance, often by an unregulated care provider (observer or sitter)
is commonly used for older adults with delirium and/or dementia in hospitals. There is little literature on what takes place during constant observation and how the nurse responsible for the patient and the observer work together. Therefore the purpose of this research study is to describe the practices of the nurse and observer, the characteristics of the nurse, observer and patient as well as to explore the perceived benefits and limitation of constant observation.

About 70 people from 2 places will be in the study. About 30 will come from XXX Hospital.

**Study Design**

- This study describes what takes place during constant observation and how the nurse and observer work together
- In order to capture some of the information required for the purposes of the study, you are being asked to participate in an interview to collect information on constant observation practices.

**Study Procedures**

You are being asked to participate in the following:

- Answer some demographic questions which should take approximately 5 minutes
- Participate in a 25-55 minute interview, in a location and time convenient to you, to answer questions about constant observation practices and your perceptions about constant observation.
- The interview will be tape-recorded.

**Risks Related to Being in the Study**

There are no known risks if you take part in this study, but being in this study may make you feel uncomfortable. The time to complete the interview may be an inconvenience to you. If you have an extremely busy schedule and/or are trying to balance multiple personal and work life demands, you may feel stress at the thought of participating in this study. You may refuse to answer questions at any time if there is any discomfort. You may also ask to discontinue the interview at any time.

**Benefits to Being in the Study**
You will not receive any direct benefit from being in this study. Information learned from this study may help to increase the understanding of constant observation and may benefit patients in the future.

**Voluntary Participation**

Your participation in this study is voluntary. You may decide not to be in this study, or to be in the study now and then change your mind later. You may leave the study at any time without affecting your employment status. You may refuse to answer any question you do not want to answer.

**Confidentiality**

The tape-recordings of the interviews will be transcribed and then the tape-recordings will be destroyed. The transcripts of the tape-recordings will not include your name or any other information that would directly identify you.

The information that is collected for the study will be kept in a locked and secure area by the study team for 7 years. Only the study team or the people or groups listed below will be allowed to look at your records.

The following people may come to the hospital to look at the study records to check that the information collected for the study is correct and to make sure the study followed proper laws and guidelines:

- Representatives of the study organizing committee.
- XXX Hospital Research Ethics Board.

All information collected during this study will be kept confidential and will not be shared with anyone outside the study unless required by law. Any information about you that is sent out of the hospital will have a code and will not show your name or address, or any information that directly identifies you. You will not be named in any reports, publications, or presentations that may come from this study.

If you decide to leave the study, the information about you that was collected before you left the study will still be used. No new information will be collected without your permission.
Expenses Associated with Participating in the Study

You will not have to pay for any of the procedures involved with this study.

You will not be reimbursed for your participation in this study.

You will however receive a small gift card as a token of appreciation for your participation.

Conflict of Interest

The investigator has an interest in completing the study to meet the PhD thesis requirements at the University of Toronto. The investigator’s interests should not influence your decision to participate in this study. You should not feel pressured to join this study.

Questions About the Study

If you have any questions, concerns or would like to speak to the study team for any reason, please call: Rola Moghabghab at 416-689-9539 or by email: rola.moghabghab@mail.utoronto.ca

If you have any questions about your rights as a research participant or have concerns about this study, call XXX, Chair of the XXX Hospital Research Ethics Board (REB) or the Research Ethics office number at XXX. The REB is a group of people who oversee the ethical conduct of research studies. These people are not part of the study team. Everything that you discuss will be kept confidential.

Consent

This study has been explained to me and any questions I had have been answered.

I know that I may leave the study at any time. I agree to take part in this study.

________________________________________  __________  ________________
Print Study Participant’s Name  Signature  Date
(You will be given a signed copy of this consent form)

My signature means that I have explained the study to the participant named above. I have answered all questions.

_________________________    __________    ________________
Print Name of Person Obtaining Consent Signature Date

Was the participant assisted during the consent process?  □ YES  □ NO

If YES, please check the relevant box and complete the signature space below:

□ The consent form was read to the participant. The person signing below attests that the study as set out in this form was accurately explained to, and has had any questions answered.

_________________________    ________________
Print Name of Witness Signature Date

______________________________
Relationship to Participant
Appendix O

Interview Questions for Additional Manager Interviews

- One thing I noticed when I was here before was that the observer seemed to do other things beyond observing- can you tell me your thoughts about that?
  - What are the roles and accountabilities of the observer?

- Can you tell me about the policies related to constant observation?
- Describe the decision-making process in initiating and discontinuing constant observation
  - Any areas that are contentious?

- Tell me about the success of your constant observation practices?
  - Tell me about a time when constant observation went well…what made it go well?
  - Tell me about a time that constant observation didn’t go well….what made it not go well?

- Nurses and Observers also mentioned that working well together was important for a good shift
  - Can you tell me your thoughts about that?

- Tell me about any recent changes/planned changes to constant observation practices?

- Is there anything else important to discuss about constant observation that we haven’t talked about already?
  - Tell me more
Appendix P: Research Ethics Board Approval

PROTOCOL REFERENCE # 20636
December 5, 2013

Dr. Kathy McGilton
FACULTY OF NURSING

Ms. Rola Moghabghab
FACULTY OF NURSING

Dear Dr. McGilton and Ms. Rola Moghabghab,

Re: Administrative Approval of your research protocol entitled, "Constant observation for older adults in acute care: A mixed methods study"

We are writing to advise you that the Office of Research Ethics (ORE) has granted administrative approval to the above-named research protocol. The level of approval is based on the following role(s) of the University of Toronto (University), as you have identified with your submission and administered under the terms and conditions of the affiliation agreement between the University and the associated TAHN hospital:

- Graduate Student research - hospital-based only
- Storage or analysis of De-identified Personal Information (data)

This approval does not substitute for ethics approval, which has been obtained from your hospital Research Ethics Board (REB). Please note that you do not need to submit Annual Renewals, Study Completion Reports or Amendments to the ORE unless the involvement of the University changes so that ethics review is required. Please contact the ORE to determine whether a particular change to the University's involvement requires ethics review.

Best wishes for the successful completion of your research.

Yours sincerely,

Daniel Gyewu
REB Manager
Appendix Q: Permission to Use ICUnurse-physician questionnaire

February 12, 2013

Rola Moghabghab
PhD Student
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
155 College Street, Suite 130,
Toronto, Ontario M5T 1P8 Canada

Dear Ms. Moghabghab:

I am writing in response to your recent request for permission to use our ICU nurse-physician questionnaire. This letter should serve as formal indication that you have our permission to use the questionnaire as long as it is cited in any publications and written materials that may result from your research. The proper citation for use is: “Excerpted from The Organization and Management of Intensive Care Units. Copyright 1989, Shortell and Rousseau.” I would like to emphasize that permission does not extend to either Section II (The Workplace and Facilities) or Section III (The Organization Culture) of the original full-length questionnaire that are under control of Human Synergistics and require written permission from Human Synergistics (these sections are not in the short version). You may adapt any of the other questions in the questionnaire as necessary for your purposes. Additional information regarding the ICU project and related materials is available at http://shortellresearch.berkeley.edu/ICU.htm.

We would be very interested in learning of the results (a summary only) of your research. Our best wishes in your work.

Sincerely,

Stephen M. Shortell

Stephen M. Shortell, Ph.D.