Locating Critical Care Nurses in Mouth Care: An Institutional Ethnography

by

Craig M. Dale

A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto

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Abstract

Intubated and mechanically ventilated patients are vulnerable to respiratory tract infections. In response, the Ontario government has recently mandated surveillance and reporting of ventilator-associated pneumonia (VAP). Serious respiratory infections – and the related costs of additional care – can be reduced, in part, through oral hygiene. However, the literature asserts that oral care is neglected in busy, high-tech settings. Despite these concerns, little research has examined how mouth care happens in the critical care unit. The purpose of this institutional ethnography (IE) was to explore the social organization of mouth care in one critical care unit in Ontario, Canada. As a reflexive and critical method of inquiry, IE focuses on features of everyday life that often go unnoticed. In paying special attention to texts, the ethnographer traces how institutional forces that arrive from outside the practice setting coordinate experiences and activities. Inquiry began in the field with day/night participant observation to better understand the particularities of nursing care for orally intubated patients. Other data sources included reflexive fieldnotes, stakeholder interviews, and transcripts as well as work documents and artifacts. Over time, the analysis shifted from the critical care unit to the larger social context of Ontario’s Critical Care Transformation Strategy (OCCTS). Analysis traced the discursive and
translocal social relations that permeate nursing work. Findings revealed a disjuncture between the ideals of VAP prevention and the actualities of mouth care. Tensions and contradictions emerged as nurses described their location within an expansive accountability network: nursing duties now extend beyond oral care to a controversial project of epidemiological surveillance. Patient comfort and safety now rest upon a hidden nursing agenda to overcome limited time, training and tools in oral care. Nurses worried that the effectiveness of preventative oral care was inhibited by technical problems of application that remain uninvestigated and unresolved. As a counterpoint to assertions that oral care is neglected, this study demonstrates how nursing knowledge and agency is obscured. Because international infection-prevention guidelines increasingly endorse oral care, novel research investigating the practice problems nurses encounter is warranted.
Acknowledgments

“A sore mouth can cause misery quite disproportionate to the size of the area affected.”

(Allbright, 1984)

“The world can only be grasped by action, not by contemplation.

The hand is the cutting edge of the mind.”

(Bronowski, 1973)

During some of the most challenging points in writing this dissertation, I turned my thoughts to the unremitting work of critical care nursing. For example, if I was awake and writing at 4 AM, it was comforting to know that many critical care nurses were also awake and at work. With my collective experiences in mind, I can confirm that the intensive part of ‘intensive care’ is nursing. Without a doubt, nursing’s mission is arduous and extensive. However, the individual and collective contributions of nursing are rarely acknowledged. The demands of ill bodies are often concealed and unspeakable. In response, this dissertation seeks to bring the innovative work, words and expertise of critical care nurses forward. Without the guidance and generous participation of nurses, this dissertation would not have been possible.

It has been an extraordinary privilege to work with the members my doctoral committee. My doctoral supervisor Dr. Jan Angus is unmatched in her integrity as a scholar, teacher and nurse. Her unwavering intellectual direction, careful timing and pragmatic comments have made
this thesis possible. The many hours we spent speaking about nursing work have enabled an analysis that I did not foresee. I cannot thank her enough for this extensive contribution. Dr. Eric Mykhalovskiy is an exceptional academic and friend. His guidance in institutional ethnography and analytic writing extended my capacities to speak of the world I inhabit. Dr. Taz Sinuff has been a steadfast supporter and colleague. Her clarity, thoughtfulness and scholarship continue to inspire.

To the members of my examination committee, I wish to extend my thanks for the generous and constructive review of this dissertation. I am eternally grateful to Dr. Marilou Gagnon, School of Nursing and Faculty of Health Science, University of Ottawa, Dr. Margaret Fitch of the Lawrence S. Bloomberg Faculty of Nursing, U of T, and Dr. Fiona Webster of the Faculty of Family & Community Medicine, U of T. The collective comments and insights you have posed continue to energize my commitment to nursing and health care inquiry.

I take pleasure in acknowledging the visionary work of Dr. Dorothy Smith, the leadership of Dr. Janet Rankin and the individualized support I received from Dr. Liza McCoy. Their scholarship has brought me into the IE family. They have provided many resources to which I have turned on innumerable occasions. What follows registers their influence and foresight. Thanks to Alan Yoshioka for editorial assistance with the developing chapters.

The generous financial support I have received from the Canadian Institutes of Health Research (CIHR) and the Lawrence S. Bloomberg Faculty of Nursing enabled my tenure as a full time doctoral student. Concurrent to my studies, I also had the advantage of several paid roles in the nursing faculty including research assistant, teaching assistant and clinical instructor. These collective opportunities enabled a space for extended research training and my ongoing academic
development. These favorable conditions are due to an extensive history and vision of nursing scholars. I wish to extend my thanks to Dr. Sioban Nelson for her foresight.

Doctoral training would be inconceivable without the support of colleagues and friends. Early in my term as a graduate student, I had the good fortune to meet Dr. Francine Wynn at the Lawrence S. Bloomberg Faculty of Nursing. Her attention and encouragement have been pivotal. She continues to inspire and open doors. Similarly, I have met many doctoral student colleagues who have made this an unexpectedly joyous journey. I have often commiserated and (more often) celebrated with Marit Leegaard, Maki Iwasi, Oliver Mauthner, Marnie Kramer-Kile, Lisa Seto Nelson, Ruth Lowndes, Laura Fairley, Jennifer Lapum, Shan Mohammed, Jon Oskarsson, Tim Stewart, Laurie Clune, Sophie Pomerleau and Laura Bisaillon. Moreover, I continue to benefit from the abiding friendship, collaboration and inspirational leadership of many critical care colleagues including Dr. Louise Rose, Orla Smith, Dr. Robert Fowler, Dr. Damon Scales, Leasa Knechtel, Grace Walter, Linda Nusdorfer, Lars Kure, Angie Jeffs, Karen McCormick and Deb Carew.

Throughout this process, I have been buoyed by the very special support of family and close friends. Words cannot express my gratitude to my parents, May and Mel Dale, as well as my sister Andrea Dale and her family. To the many friends who have created so many pleasurable diversions, I thank you. Special appreciation is extended to Dr. Mary Louise Adams, Helen Humphreys, Renee Walsh, Heather Wilson, Lesley Fraser and Lucinda Wallace. Finally, I would like to dedicate this dissertation to my partner, Bruce Martin, who has endured and encouraged like no other. The depth of your support is immeasurable. Thank you for such exceptional care throughout this journey.
Notes to the Reader

I wish to offer the following points of assistance for readers. Language specific to the intensive care unit, nursing and health services appears throughout this dissertation. To limit problems of comprehension, a list of abbreviations and a glossary have been provided. Further, I have created a brief history of the mouth in critical care to highlight the importance of the oral space in the development and dilemmas of intensive care. I must emphasize that I will employ the terms critical care and intensive care interchangeably. This means that I use both terms to describe one medical specialty in addition to a repertoire of patient units where intubated and ventilated adult patients receive care. I do not differentiate between these two terms.

Brief quotes from participants will appear within double quotation marks (Bill explained, “…”). I will use single quotations to emphasize an active concept in practice or the literature (e.g., ‘good’ nursing care). In denoting emphasis, I am directing the reader to the tension or pressure for clinicians to carry out the attendant concept.

When quoting participants, I use a verbatim style of reporting in using exact words from our conversation. In sections where I reproduce interview transcripts, I identify myself as Craig and participants are assigned a pseudonym. For example:

Craig: My question or comment for the participant

Participant: Verbatim comments from the participant

In addition to participant pseudonyms, the name of the study hospital has also been replaced. Together, these forms of anonymity are used to shift the focus away from an individuated
analysis. In turn, I ask the reader to consider nursing knowledge as an active practice. To bring the reader inside the temporal and material action of critical care nursing I use excerpts from my field notes. These are typically several paragraphs long. To distinguish my own narrative and presence in field notes, these sections appear italicized.
### Abbreviations

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<td>AACN</td>
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</tr>
<tr>
<td>ABC</td>
<td>Airway, breathing and circulation</td>
</tr>
<tr>
<td>BAL</td>
<td>Bronchoalveolar lavage</td>
</tr>
<tr>
<td>CACCN</td>
<td>The Canadian Association of Critical Care Nurses</td>
</tr>
<tr>
<td>CCIS</td>
<td>Critical Care Information System</td>
</tr>
<tr>
<td>CCS</td>
<td>The (Ontario) Critical Care Secretariat</td>
</tr>
<tr>
<td>ETT</td>
<td>Endotracheal tube</td>
</tr>
<tr>
<td>HAI</td>
<td>Healthcare-associated infection</td>
</tr>
<tr>
<td>ICU</td>
<td>Intensive care unit</td>
</tr>
<tr>
<td>IP&amp;C</td>
<td>Infection prevention and control</td>
</tr>
<tr>
<td>MOHLTC</td>
<td>The Ministry of Health and Long-Term Care of Ontario</td>
</tr>
<tr>
<td>MP</td>
<td>Muco-purulent</td>
</tr>
<tr>
<td>OCCTS</td>
<td>The Ontario Critical Care Transformation Strategy</td>
</tr>
<tr>
<td>PCM</td>
<td>Patient Care Manager</td>
</tr>
<tr>
<td>SDD</td>
<td>Selective digestive decontamination</td>
</tr>
<tr>
<td>SOD</td>
<td>Selective oral decontamination</td>
</tr>
<tr>
<td>VAP</td>
<td>Ventilator-associated pneumonia</td>
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</table>
## Glossary

<table>
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<th>Term</th>
<th>Definition</th>
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<tr>
<td>Bacterial translocation</td>
<td>The movement of disease-causing bacteria from one bodily space to another. For example, aspiration of bacteria-laden oral secretions into the lungs.</td>
</tr>
<tr>
<td>Benchmarking</td>
<td>An accounting strategy used to compare clinical and operational performance between units or institutions. For example, the rate of VAP may be compared between hospitals. The ideal benchmark is set by an organization identified as being a leader in the field.</td>
</tr>
<tr>
<td>Bronchoalveolar lavage</td>
<td>A medical procedure where a bronchoscope is passed through the nose or mouth into the lungs. Fluid may be released and then recollected to diagnose infection or lung disease.</td>
</tr>
<tr>
<td>Bundle</td>
<td>A set of evidence-based practice interventions that may improve patient outcomes when used together.</td>
</tr>
<tr>
<td>Charting-by-exception</td>
<td>A mechanism intended to reduce nursing work of documentation. Charting-by-exception limits inscription to variances or abnormal findings that require attention and/or intervention.</td>
</tr>
<tr>
<td>Endotracheal tube</td>
<td>A clear plastic tube passed through the oral airway and trachea to deliver gases to the lungs.</td>
</tr>
<tr>
<td>Extubation</td>
<td>Removal of a tube from the airway.</td>
</tr>
<tr>
<td>Health care associated infection</td>
<td>An infection transmitted within the hospital environment.</td>
</tr>
<tr>
<td>Hygiene</td>
<td>The science and practice of health maintenance and illness prevention.</td>
</tr>
<tr>
<td>Intensivist</td>
<td>A physician with specialty training in critical care.</td>
</tr>
<tr>
<td>Intubation</td>
<td>The emergent or planned act of placing an endotracheal tube.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>------</td>
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<tr>
<td>In situ</td>
<td>A Latin phrase incorporated in medical terminology to mean ‘in position’ or as they appear normally.</td>
</tr>
<tr>
<td>In vitro</td>
<td>A Latin phrase used to describe a research experiment where components of an organism are isolated (in glass containers) from their usual biological surroundings.</td>
</tr>
<tr>
<td>Monitor</td>
<td>A device for observing or measuring an important condition or function.</td>
</tr>
<tr>
<td>NG tube</td>
<td>A nasogastric tube (catheter) placed through the nose (or mouth) to decompress stomach gas, drain fluid or deliver nutrition and medication.</td>
</tr>
<tr>
<td>Nosocomial infection</td>
<td>An infection that was not present or incubating prior to the patient’s arrival in the hospital and ICU.</td>
</tr>
<tr>
<td>Performance indicator</td>
<td>Also known as a clinical performance indicator. It expresses a key dimension of health care quality such as the numbers of people who obtain an infection while in hospital.</td>
</tr>
<tr>
<td>Ventilator</td>
<td>A life support machine designed to move therapeutic gases in and out of the lungs of a patient who is unable to breathe, or breathe sufficiently.</td>
</tr>
<tr>
<td>Ventilator-associated pneumonia</td>
<td>A type of hospital pneumonia that occurs after 48 hours of mechanical ventilation.</td>
</tr>
<tr>
<td>Xerostomia</td>
<td>Also known as a dry mouth or dry mouth syndrome. A reduction in salivary flow is accompanied by a reduction in the antimicrobial activity of saliva. This state may contribute to pain, dental caries and opportunistic infections.</td>
</tr>
<tr>
<td>Yankauer</td>
<td>A hand-held device used to remove secretions from the oral space.</td>
</tr>
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</table>
# A Brief History of the Mouth in Critical Care

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1840s</td>
<td>Volatile anesthetic gases were introduced to facilitate painless surgery. Nurses were frequently employed to administer anesthetic soaked sponges over the mouth of a patient during procedures.</td>
</tr>
<tr>
<td>1847</td>
<td>Dr. John Snow invented the chloroform inhaler comprising an occlusive facemask and reservoir for anesthetic gases.</td>
</tr>
<tr>
<td>1922</td>
<td>Sir Ivan Magill, a surgeon and anesthesiologist, created the first endotracheal tube to facilitate access to the face, mouth and jaw during surgery. This replaced the delivery of volatile anesthetic gases through an occlusive mask over the nose and mouth.</td>
</tr>
<tr>
<td>1926</td>
<td>The Magill laryngoscope blade was invented to ease the insertion of the endotracheal tube through the mouth for surgical procedures.</td>
</tr>
<tr>
<td>1953</td>
<td>World’s first medical-surgical intensive care unit (ICU) opens in Copenhagen, Denmark during the poliomyelitis epidemic. Mortality decreases when treatment shifts from negative pressure ventilation (e.g., iron lung) to positive pressure ventilation delivered through oral endotracheal tubes.</td>
</tr>
<tr>
<td>1956</td>
<td>Anesthesiologist Peter Safar publishes the ABCs of resuscitation: head-tilt, chin lift (A); mouth-to-mouth breathing (B); chest compressions (C).</td>
</tr>
<tr>
<td>1969–1974</td>
<td>Case studies emerge describing high-mortality pneumonia in ventilated ICU patients. Aside from contaminated ventilator equipment, the oral space is identified as one possible source of bacterial transmission.</td>
</tr>
<tr>
<td>Year</td>
<td>Event</td>
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<tr>
<td>1981</td>
<td>The first Centers for Disease Control (CDC) Guideline for the Prevention of Nosocomial Pneumonia is published.</td>
</tr>
<tr>
<td>1997</td>
<td>Bacterial translocation from the oral space to the lungs of mechanically ventilated patients is confirmed by a study using DNA matching (Garrouste-Orgeas et al., 1997).</td>
</tr>
<tr>
<td>2002</td>
<td>In the United States, the National Quality Forum publishes 28 “never events” deemed as serious and preventable health errors. In 2008, these were tied to Medicare non-payment. VAP was added to the list of possible never events for future inclusion.</td>
</tr>
<tr>
<td>2004a</td>
<td>Following the Severe Acute Respiratory Syndrome (SARS) outbreak of 2002–2003, the Ontario government establishes the Critical Care Secretariat. It implements a strategy of performance measurement and quality improvement that includes VAP surveillance.</td>
</tr>
<tr>
<td>2004b</td>
<td>The CDC updates its guide on pneumonia prevention and recommends the creation and distribution of an oral care guideline in all care units, as well as staff education and training in infection control.</td>
</tr>
<tr>
<td>2006</td>
<td>As one part of a $90-million investment in improved efficiencies and effectiveness, the Ontario Critical Care Secretariat implements a Critical Care Information System (CCIS) in 210 adult ICUs. Data collected and reported daily includes but is not limited to patient admission diagnosis, demographics, life support interventions, unit bed availability and infections such as VAP.</td>
</tr>
<tr>
<td>Year</td>
<td>Description</td>
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</tr>
<tr>
<td>2008</td>
<td>The oral (versus nasal) route of endotracheal intubation is recommended in Canadian guidelines for the prevention of VAP (Muscedere et al., 2008).</td>
</tr>
<tr>
<td>2009</td>
<td>As part of a comprehensive plan to create a higher level of transparency, the Ontario government mandates hospitals to publicly report on eight patient safety indicators related to hospital-acquired infections. Under Regulation 965 of the Public Hospitals Act (PHA), hospitals are required to disclose their VAP rate through their website.</td>
</tr>
</tbody>
</table>
| 2010 | The American Association of Critical-Care Nurses (AACN, 2010) issues an oral care practice alert to standardize evidence-based VAP prevention strategies. It recommends a formal unit policy including the following:  
  • Brush teeth, gums and tongue at least twice a day using a soft pediatric or adult toothbrush.  
  • Provide oral moisturizing to oral mucosa and lips every 2 to 4 hours.  
  • Use an oral chlorhexidine gluconate (0.12%) rinse twice a day for adult patients who undergo cardiac surgery.  
  • Routine use of oral chlorhexidine gluconate (0.12%) in other populations is optional. |
| 2012 | The Centers for Disease Control confirms that VAP diagnostic criteria and definitions are neither specific nor sensitive. A new diagnostic system of ventilator-associated events (VAEs) is introduced. |
| 2013 | International guidelines for the prevention of sepsis are updated and endorse two forms of preventative oral care: a) oral decontamination with chlorhexidine rinse and b) selective oral decontamination with antibiotic pastes and/or selective digestive decontamination to prevent VAP. |
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A Reflexive Preface

One might ask why a reflexive preface is necessary for a nursing dissertation on mouth care in the critical care unit. This is a question that has caused me no shortage of deliberation. In this age of evidence-based medicine, it feels provocative to speak from first-hand experience. Examples of researchers speaking directly to audiences from a place of personal understanding are in short supply. This gap in voice may be just as true for critical care nurses, whose work may be better known through practice guidelines or institutional policies and procedures. I have often been perplexed by the receding presence of clinicians and researchers in text. However, stepping outside convention allows me to begin a new thread of scientific conversation by first opening up my collective experiences in mouth care.

My foray into doctoral work is, in part, a response to this imbalance in voice. Not recognizing myself in expert accounts of mouth care has sustained a problematic distance from something I routinely experience. Even though I have accumulated years of practice in mouth care I feel as though I have been written out of the story. My own mouth and body have been the source of innumerable life experiences. Moreover, my body continues to be the place from which I experience the world. Yet its fullness remains curiously absent when I speak and read about mouth care. Within this reflexive preface I hope to open up my position relative to this strange existence where I am at once here but not seen or heard. By opening my own mouth, I aim to reflect upon my collective experience in order to expand understanding of mouth care and contribute something helpful to critical care nursing practice.
What is reflexivity?

England (1994, p. 84) describes efforts in reflexivity as “self conscious analytical scrutiny”. Adams (2006) expands this idea by adding that any form of reflexive self-awareness should acknowledge a particular location in the social world. Inquiry into the way I speak of the mouth and the place this language inhabits is central to this study. Terms such as ‘oral hygiene’ have frequently superimposed themselves over less authoritative terms such as ‘mouth care’. I have frequently found myself oscillating between these two terms as I move between clinical and academic environs. Reflexivity regarding this double existence has been particularly helpful. The fact that I know ‘mouth care’ does not hold academic weight denotes an understanding of an organized social world. Using this lens, it is apparent that a scientific way of speaking of the mouth rests upon an established framework of endorsed knowledge. My consciousness and way of speaking are therefore entrenched in a social world that transcends the locality of any one critical care unit.

Nettleton (1988) suggests we tacitly know our mouths as a vulnerable boundary between body and environment. I take this to mean that knowledge of the mouth, and its problems, is organized and transmitted to us in many ways. In this line of thought I have always been concerned with the cleanliness of my mouth and appearance of my teeth. On a cognitive level I understand that scientific concepts in germ theory revolutionized medicine and establish a focused rationale for all forms of health work (Harvard University Library, 2008). However, my awareness of this does not remain at a rational level. Worry about the appearance and cleanliness of my own mouth continues to generate a physical feeling of unease. Somehow, this knowledge resides in my body.
When I think of the importance of mouth care, I see mental images from the media that suggest acceptable forms of work. For example, toothbrush advertisements typically show a group of uniformed health professionals surveying a set of perfectly white teeth. Similarly, the glistening smile and fresh breath advertised on a billboard can be achieved by chewing a particular brand of gum approved by dentists. Finally, the checklist of mouth problems on my toothpaste container suggests I should be concerned with issues beyond cavities. These messages, in concert with scientific fact, speak to my private practices of hygiene to keep the threat of dirt and dangerous bacteria outside my body.

I will begin this preface by noting my personal relationship to mouth care that links to my cultural assumptions about hygiene.

**Private spaces**

Of course, it would be convenient to suggest that my interest in mouth care is simply a critical response to the cultural zeitgeist of medical risk and its evidentiary procedures. What is extracted from everyday nursing work attends to this focus. These interests include hygiene and all matters of cleanliness to which nursing is accountable. However, it would be more appropriate to say that my interest predates my professional knowledge. How do I tell others that personal life lessons about mouth care significantly inform my nursing work? How does one explain that unacknowledged social forces influence mouth care in the critical care unit?

Like most others, I first learned to do mouth care in the home, where an established set of ideas generated personal accountabilities. Brushing one’s teeth was a part of a larger social script of necessary work. Books, magazines, billboards and television advertisements echoed rules governing personal practices of oral care. The daily ritual of standing before the bathroom sink, shuttling toothbrush and toothpaste in and around one’s mouth was good. In public school, we
were given disclosing tablets (chewable pills) that gave a magenta stain to residual plaque on our teeth. Those who sported pink teeth in subsequent school days were marked accordingly. Inattentiveness led not only to tooth decay but to a punishable failure. Dental caries were a pox on the parental pocketbook and an economic burden of which I was often reminded.

Growing up, I found dental procedures uncomfortable for several reasons. Reprimands for poor self-care, by my dentist, included special fluoride applications that made me gag. He excavated cavities without the mercy of local anesthetic while stating, “Children don’t feel pain like adults.” The power of the dentist over my mouth was an inversion of everyday norms. I was vulnerable to his views as he crossed over into a space I did not want him to enter. As a result, power inequities in healthcare inform my perspective. Outside views to my mouth can generate social pain as a level of incompetence is assigned. I have done my best to avoid these problems. However, best intentions do not always prevent this outcome. The mouth can be a literal and figurative source of misinformation, betrayal and pain.

When thinking of oral health I often recall growing up around my maternal grandmother, who struggled in these matters. Her story reminds me of the importance of social and material resources in matters of health. Dental care in the ‘old country’ meant having diseased teeth extracted. After moving to Canada in the 1950s, she was entrenched in an ongoing battle to negotiate dentures that fit. Odd oral sounds and jaw movements gave away her struggle as she shifted her dentures around her mouth to find a comfortable position. On occasion, I would encounter her without her troubling dentures. For example, she would remove them prior to sleeping. This may have been a relief for her, but the transformation never failed to shock. How her face would collapse upon itself without the support of dentures was initially grotesque and frightening.
My grandmother’s toothless presentation was, in part, an early lesson regarding social norms. Diseased bodies and the private practices of hygiene should be cautiously displayed. Socialized responses can be upsetting. I now acknowledge her work of concealment; she tried to hide her toothless appearance by removing her teeth only at night. I did not question how she understood the requisite practice of removing and cleaning her dentures. However, I now imagine she sought solace during this brief respite from discomfort. In retrospect, controlling my response to her appearance was important. I now realize that I had the power to inflict harm through unfiltered reactions and statements. Pain and suffering originating in the mouth can “cause misery quite disproportionate to the size of the area affected” (Allbright, 1984, p. 40).

Many voices directed me to avoid these painful problems as I grew up in Canada. Parents, teachers and dentists spoke to me directly. Others spoke in images through the media. They formed a chorus of social norms endorsed by scientific knowledge. Perfectly groomed people cheerily brushing their teeth day and night on television and in magazines: they championed the work of good oral health by demonstrating perfect teeth. I wanted those brilliant white smiles and unproblematic lives. They did not have drills excavating their mouths. Their faces did not grotesquely collapse, and their teeth did not reside in a glass at night. The latest toothbrush, toothpaste and rinse promised an impeccable smile and healthy existence. Being coveted and romanced was a promising dividend. Today, these interlaced ideals still occupy my thoughts and mobilize personal work towards this end. Importantly, these ideas join up with messages commonly associated with institutions such as health, science, gender and socioeconomic class.

The intersection of social scripts brings me to the problem of transgression. In many ways, it also organizes my oral health activities. While invasive dental procedures are painful, so
are the embarrassments that occur if one deviates from social norms. Having poor oral health is unspeakable, as the dirty work of body care requires a shift into private spaces. As a result people have difficulty telling one another if their teeth are unsightly or their breath is foul. The threat of social embarrassment for all parties in such a conversation sustains a significant silence. Social offences generate barriers and designate unacceptable knowledge and behaviour.

Although my mother came from Scotland, she would often tell me, “People in the UK have bad teeth. They just don’t care.” This putative indifference shocked me, and the appearance of those from the UK took on an alien form. I still look for these foreign signs in the smiles of others. Staying out of taboo territory is important, as one might be labeled incompetent or a threat to the larger social order.

Keeping up appearances in relation to this tacit knowledge has been a significant influence in my life. This has resulted in specific forms of work that my social position and circumstances sustain. This includes purchasing endorsed products, brushing my teeth twice a day and attending dental appointments twice a year. However, adherence in these matters has not promoted an uncomplicated relationship with health experts. I still worry about being criticized for incompetence. Childhood memories complicate my feeling towards dental health experts, as they can misrepresent my efforts. Everyday contingencies that may inhibit oral health can be erased in the dental examination. Taking their place are overriding representational artifacts, such as x-rays highlighting cavities or sundry imperfections. My everyday work is overwritten by the dominant account contained in professional records. The sound of the dental drill may be the signatory instrument.
Professional spaces

Professional nursing roles have repeatedly exposed me to ‘best’ practice in education, policy and research. A steady stream of new concepts continues to enter nursing work to condition existing practices. This means that current nursing routines may be relabeled as ineffective or harmful and require practice change in turn. As this happens, a sense of otherness is often generated concurrent to the arrival of expert knowledge. For example, scientific authors appear to speak authoritatively to my practice. The ability of esteemed ideas to move across time and space through texts is credited to what McCoy (2007, p. 701) calls “extralocal” power. Moreover, the ability of ideas to initiate and sustain practices such as mouth care sets up an “intertextual circle” of ongoing, recognizable work, whether that is personal or professional in nature (Smith, 2006, p. 85).

In this dissertation, I focus on two types of nursing work: oral care and documentation (policy, documents and forms). The latter plays an important role in defining the former. By delineating care, texts generate accountabilities and boundaries around bodies. Points of contact between people are now crucial, as bodies have social culpability in disease transmission (Nettleton, 1988). Ontario’s Regulated Health Professions Act (RHPA) governs my work as a nurse by controlling which bodily openings I can enter “with an instrument, hand or finger” (CNO, 2009, p.3). Moreover, it restricts how far into each bodily opening I may enter. Professional competence and patient risk are a central focus therein. However, the opportunity to talk about my experience enacting textually mediated accountabilities has been limited to date.

As a student nurse I found many aspects of hands-on mouth care unspeakable. Certainly, probing into another person’s mouth was no exception, as it crossed the public-private divide. I did not receive special instruction when my nursing classmates and I undertook an
ironic exercise in mouth care via a nursing ‘skills’ laboratory. Positioning a toothbrush inside a fellow student’s body was odd: I suddenly lacked dexterity, and a familiar instrument became foreign. As I participated in the laboratory, I worried about hurting my fellow students’ gums or making them gag. Despite not knowing how to proceed, the class managed to get through this student exercise. However, its oddity was not verbalized. Keeping up appearances in this instance meant sustaining a particular type of professional silence. Inhabiting this stance did not allow me to consider how embodied experience informed this work.

The transition to nursing employment in a busy medical unit did not provide exception to the unspeakable experiences of mouth care. As a new graduate I recall being assigned a patient recently discharged from the critical care unit. The patient’s tracheostomy was made of shiny metal and protruded mechanically from her neck. It was noisy and spewed foul sputum over the soiled dressing at its base. I methodically disassembled and cleaned the tracheostomy as memorized from procedural steps and frequencies noted in hospital policy. In my commitment to these standards I almost missed looking in the patient’s mouth. Layers of dried, yellow mucus adhered tenaciously to the roof of her mouth and her tongue. Scrubbing with saline and peroxide did not suffice. I recall having to give up and move on to the urgent calls of other patients. In the days that followed, I learned that the patient required a bronchoscopy to remove dried mucus that had fallen into her airway. The unspeakable burden of caring for multiple ill patients etched itself in my mind. Could nurses ever do enough? Was this my fault?

My training and transfer to a critical care unit more than fourteen years ago related to my concerns regarding insufficient time for patient care. I was constantly running up against the temporal demands of six to thirteen patients per shift. Yet I quickly learned that gaps also exist in well-staffed critical care units. There, medical and managerial data has increasingly identified
shortcomings in practice. When oral care was transformed into an intervention to prevent serious respiratory illness, I became excited about the possibilities for improved patient outcomes. Despite the promise of nursing, mouth care is still discussed in reference to omissions in agency and knowledge. *What forces hold these gaps in place?*

**The mouth as text**

The approach to texts in Institutional Ethnography (IE) is specific to social coordination. However, I have frequently considered how bodies are often read. Even though the mouth is a physical source of speech, it can convey meaning separately from this activity. The encrusted mouth of the recently discharged critical care patient spoke to me of unmet care needs. I thought of her inability to perform her own mouth care and how her body had been changed by illness. Similarly, as I open my own mouth, other things may be said in addition to the messages I intend to express. If my teeth are uneven or missing, this may mediate meaning about my health, adherence to self-care or economic status. Reading physical messages in others has always been automatic on my part; it is difficult to stop. The body is a rich source of meaning as it is written upon with age and experience in the world. Taken together, these ideas direct me to consider a larger social reality where resources are inequitably distributed, resulting in different bodily messages.

My proximity to critically ill bodies has provided valuable insights regarding mouth care work and its intertextual connections to overarching social discourses. Perspectives from the dentist’s chair, as a grandchild and a hospital nurse have contributed particular appreciation for health work and the unspeakable demands of bodies. Positionality in these matters remains crucial. Experience is embodied and the resultant knowledge can be recalled, albeit sometimes only on a tacit level. In the critical care unit, tissue discoloration, open wounds and fluids leaking
from the body signify urgent problems and necessary work. Further, sustained engagement with bodies perceived to be contaminated or vulnerable is draining. However, my physical and emotional capacity to take on this protective role is not routinely recognized.

Speaking here about unspoken personal experiences feels emancipatory. My introduction to the work of Dorothy Smith (1990a) has shown me that this type of reflection offers a way forward. Reflection illuminates the accomplishments of words. My reading of Bakhtin (1984) has also expanded my understanding of the coordinating properties of texts. The ideas that flow from these academics are important to apply to mouth care in the critical care unit. Bakhtin (1984) notes that new ways of communicating produce a hierarchy of words. For example, the emergence of evidence-based critical care guidelines has promoted new terms such as ‘oral decontamination’ (with antimicrobial solutions and pastes). This has assertively renamed and repositioned what I know as mouth care within proximal patient encounters. This outside-in perspective has been difficult to resist, as it offers clean, logical views of bodies and practice. As a result, the science of hygiene successfully organizes what Smith (1987, p. 50) might call a “disjuncture” between direct experience of the world and its social expression.

The problematic, or situated perspective, from which I begin this inquiry relates to the jarring nature of words. The evidentiary ideals of science are frequently disconnected from the dynamic interpersonal actualities of care. This renders terms such as “neglect” or “omission” somewhat pointed; they feel like accusations of incompetence. The tensions I experience within these discourses form my point of departure for this project. My lay and professional perspectives in mouth care persuade me to question how the social world influences mouth care in the critical care unit.
Nursing practice is often seen to be independent of the bodies and social relations to which it actually belongs. In conceptual terms, the mouth is similarly separated from the body. It is subject to particular forms of knowledge (biomedicine) and surveillance (public health). I have participated in this ongoing foregrounded discussion by documenting and speaking to my work in scientific, abstract terms. Accordingly, I have endured a problem of estrangement, a bifurcation between knowledge and experience. A foregrounded discourse of science and risk ignores the overt and overwhelming nature of ill bodies. Moreover, it offers an inadequate explanation of the nursing care gaps with which it is concerned. The intertextual conversations and knowledge behind mouth care offer an untold story of forces influencing what is knowable in the critical care unit. By elevating the backgrounded experiences of nurses engaged in this work, I hope to bring these two ways of speaking into conversation in order to mitigate a problematic silence.

“If silence is golden, there will have been something deadly about its glitter.”

(Royle, 2003)
Chapter 1
An Introduction to the Study

In surveying historical concerns in oral care, Exley (2009) writes that “inequalities in oral health and healthcare, [highlight] how, as with medicine, those with the greatest need for preventative dental services were – and continue to be – less likely to access services” (p. 1097). Despite knowledge that poor oral health can advance to debilitating acute and chronic illnesses, oral health services remain under-investigated, underfunded and out of reach for most vulnerable populations (The Lancet, 2009). In tracing this disparity, Nettleton (1991) notes how the individual, rather than the state, has been made accountable for preventative oral health. In fact, she argues that women have filled this gap in the domestic sphere. As a result, women became agents of dentistry and the state as they worked to minimize the occurrence of disease in the family.

In an analogous move to Nettleton’s (1988, 1991) ethnographic work of tracing the movement of oral health accountability into the home, I am investigating a similar phenomenon, but in a different sphere. In this case, I consider the social organization of nursing delivered oral care in the ICU. Although critical care nurses have always provided oral care to their patients, the purpose of this effort is now registered on a different scale. The new “epidemiological intelligence” that emerged in the early twentieth century has evolved and sustains a new set of social relations in these matters (French & Mykhalovskiy, 2012, p. 174). Oral care is now deemed effective in the prevention of serious infection and death in mechanically ventilated patients. However, an infusion of dental and oral hygiene specialists have not been mobilized in response to this recent scientific discovery. Instead, nurses must now ‘clean up’ what is often described as inequitable attention to oral care in the critically ill.
Mykhalovskiy and Weir (2004) contend that modern forms of health knowledge are frequently “productive” in distributing accountability for disease prevention (p. 1063). That is to say that certain scientific ideals and discourses cultivate a powerful desire for people to respond in predetermined ways. Further to this notion of an organized world of health work, Exley (2009) sets forth a call for greater inquiry into how oral health happens: new perspectives that are relevant for lay, professional and policy stakeholders to consider. My interest in taking up this call has been many years in the making. In fact, it predates my own personal awareness of the social organization of oral health as a focus of scholarly investigation. More specifically, my attentiveness originates in the everyday processes and practices that make up critical care nursing. From my vantage at the bedside, I became aware of how research findings were being used to underwrite major changes in the way mouth care was described, delivered and evaluated.

One example of the distribution of health accountability can be seen in the growing inducement for critical care nurses to read and implement research evidence in preventative oral health. This is mediated, in part, by the expansive presence of persuasive texts:

In recent decades in North America and Western Europe, population-based knowledges have been increasingly drawn upon in the work of managing and regulating health services. Among them, biostatistics, health services research, and clinical epidemiology rely heavily on statistical expertise in coming to know and intervene in the health and health care of populations (Mykhalovskiy, 2001, p.269).

In the above referenced quote, Mykhalovskiy (2001) speaks to several important changes in the organization of contemporary health services, language and intellectual thought. Expert knowledge is now closely circumscribed by particular modes of health information. In this case, statistical forms of clinical judgment are used to standardize patient care, reduce costs and harmonize clinical decision-making on behalf of the public, health professions and government
payers. What Traynor (1999, p. 189) calls the “inscriptions of science” (e.g., numerical data, scientific articles and clinical practice guidelines) now constitute a dominant feature of everyday life in health care settings. However, some clinicians are worried about these arrangements:

Mills and Spencer (2003) raise an alarm about the risks inherent in evidence-based practice, arguing that administrators can co-opt evidence-based practice to promote efficiency through the rigid, research-based standardization of care. For nurses, the enemy is no longer only the discourse and goals of men/physicians, it is also the ever-expanding discourse and objectives of corporate capitalism (Wall, 2008, p. 49).

In this instance, Wall (2008) picks up on Mykhalovskiy’s (2001) prior observation and raises a concern about the unintended consequences resulting from practice knowledge that is grounded in statistical expertise. In this case inequities, rather than improvements, may devolve from an evidence-based framework. In particular, she worries about the omission of nursing perspectives when evidence is used to produce efficiencies. With all of the above points taken together, uneven attention to on-the-ground practice realities may perpetuate inequitable access to oral care; hygiene and its constituent activities may remain outside the awareness of most health stakeholders who are caught up in an evaluation of the evidence (Liaschenko & Peter, 2004).

As it pertains to a contemporary discourse of oral hygiene, the pressure for critical care nurses to respond to expert knowledge may be somewhat different than the organization of domestic oral health work described above by Nettleton (1991) at the turn of the twentieth century. She shows how print and radio media carried dental care discourses into the home to organize women’s attention to family hygiene. Certainly, the threat of maternal transgression in the prevention of dental caries and chronic oral disease was a potent motivator of the time. However, my desire to practice in conformity with scientific ideals today is conditioned by a growing anxiety around serious respiratory infection, pandemic and related uncertainties
regarding the capacities of the health care system (French & Mykhalovsky, 2012). Failure to implement expert recommendations for oral hygiene in the ICU could lead to infection transmission and death. That is to say, oral health and other forms of hospital hygiene are now indelibly linked to a sweeping range of fears, expectations and potentially catastrophic transgressions.

Much has been written about the moral responsibility of women in managing the health of families (Nettleton, 1991) and populations through nursing roles (Allen, 2004). Liaschenko and Peter (2004, p. 490) assert that women undertake the brunt of “housekeeping” duties that make up the bulk of health work. However, being a man in a predominantly female profession has drawn me to see that the nature of oral care for critically ill patients is not self-evident. Cleaning bodies is assumed to be mundane. Therefore, hygiene rarely enjoys the attention given to a hot topic of medical interest such as ventilator-associated pneumonia (VAP).

The purpose of this institutional ethnographic study is to open up this invisibility and understand its making. It does so by offering a close examination and analysis of the social organization of mouth care work that nurses perform for orally intubated and mechanically ventilated adults. Hygiene and its effective use have become a method for improved health care outcomes and efficiencies. Because mouth care can mitigate the incidence of serious respiratory infection, nursing work of preventative oral care has come under scrutiny. In Ontario, the Ministry of Health and Long-Term Care (MOHLTC) has undertaken a significant project to monitor costly infections occurring in the critical care setting including VAP. The prevailing logic suggests that ongoing surveillance of VAP is necessary to ensure a circuit of continuous quality feedback and targeted performance improvement. Hospital system sustainability and public safety is said to hang in the balance.
In this thesis, I move alongside a new accountability circuit of infection prevention to understand the tensions and contradictions that follow its path. VAP is arguably one of the most researched issues in the history of critical care. However, its prevention is under-analyzed for what it can tell us about the social organization of oral hygiene. Mouth care, as one of several VAP prevention strategies, has received scant attention by nursing scientists working in qualitative methods (Dale, Angus, Sinuff & Mykhalovskiy 2012). Given that nurses are the only clinicians who undertake oral care in the critical care setting, a study of this nature is long overdue. Hence, I focus on the experiences of a group of critical care nurses, their interdisciplinary colleagues and an extended set of health leaders. The manner in which their work and textual accountabilities link up forms the basis of my analysis. In using a critical ethnographic approach to map social relations, I follow how nurses experience health reform and consider the implications for patient care.

**What is mouth care?**

In studying oral care in the critical care unit, I have often been reminded of the situational irony of a purportedly low-tech act becoming vitally important in a high-tech setting. Learning how to perform this care has taken time and practice. Therefore, I have always been struck by accusations that nurses neglect oral care and lack knowledge in this area of practice. I would counter that there is a gap between the real, embodied issues of doing this work and the way mouth care is discursively known. Whereas I have always known ‘mouth care’, I encounter it transformed into ‘oral hygiene’ as I step away from the bedside. Oral hygiene is touted as scientific care of the teeth and mouth (Treter Roth & Creason, 1986). As a science and practice of health maintenance, hygiene is described as the optimal way to support critically ill patients for recovery (Vollman, 2006). Its central aim in the intubated and mechanically ventilated patient
is to reduce oral bacteria and excessive secretions that may be aspirated into the lungs (Felder, Mitchell & Bridges, 2010).

In the nursing literature, good oral hygiene has requisite knowledge-based components. To be effective, it should fall within the parameters of an evidence-based protocol accessible to the bedside nurse (Binkley, Furr, Carrico & McCurren, 2004; Cason, Tyner, Saunders, & Broome, 2007; Fitch, Munro, Glass, & Pellegrini, 1999; McNeill, 2000; Sole, Byers, Ludy, Zhang, Banta & Brummel, 2003; Vollman, 2006). These textual tools are considered important as researchers argue that oral care is deprioritized or neglected in critical illness. Moreover, nurses perform less mouth care than they report (Grap, Munro, Ashtiani, & Bryant, 2003; Hanneman & Gusick, 2005). In response, a type of educational campaign must be waged to move it higher on the priority list of nursing accountabilities (Ross & Crumpler, 2006; Vollman, 2009). However, the circumstances and conditions in which oral care is neglected are somehow elusive. Is it something to do with a competing list of clinical priorities, or is it inadequate nursing knowledge? What exactly is deprioritizing mouth care and where did it come from? How did it get into the critical care unit and why does it remain there?

As I have read and reread many papers on the subject, it has come to my attention that authorized text-based resources are emphasized as essential media of nursing activity in oral care. Resources in this regard are documents such as scientific studies, evidence-based guidelines, checklists, physician orders and oral-health rating scales (Ross & Crumpler, 2006). These items generate a clean, logical view to nursing work. When oral care is deficient, authors recommend additional layers of text as a form of correction (Fitch et al., 1999; Ross & Crumpler, 2007). As reminders of duty, text-based resources typically list oral care products manufactured by the pharmaceutical industry alongside a protocol to ensure their use (for example, see Garcia,
et al., 2009). Though these items have a logical appeal, their concerns are somewhat removed from the experiences that accompany oral care. Why my embodied knowledge is not part of this discussion remains elusive.

**Why is this a problem?**

In the biomedical literature, care of the mouth is deemed a vital area for research because of its link to mechanical ventilation. As a core modality of life support, ventilation confers benefits and risks. Mouth care is known to attenuate one of those risks, namely, VAP, the most common infection in ventilated, critically ill patients (Weinstein, Bonten, Kollef & Hall, 2004). VAP is associated with a 15% to 60% mortality rate depending on patient characteristics. On average, it can add 8.7 days (95% CI 4.51–12.97) to the ICU length of stay and prolong hospital length of stay by 11.5 days (95% CI 9.86–13.04) (Muscedere et al., 2010). Further, it contributes between $10 million and $82 million in annual costs to the Canadian health care system (Muscedere, Martin & Heyland, 2008). VAP is simultaneously described as a preventable infection, an economic burden and a serious threat to public safety.

Despite knowledge of the mouth’s role in VAP causation, dental health professionals do not treat intubated and ventilated patients. Therefore, a critical analysis of nurses’ position as agents of oral care is warranted. Turning to sociological literature on the mouth and body has been helpful in considering an inequitable account of what nurses are being asked to do. Foremost is a gap regarding authentic descriptions of nursing work in the oral space. Lawler (1991) suggests this is possible as the dominant, biomedical language of practice has a tendency to “scientise and sanitise” the messy reality of illness (p. 218). This moves the centrality of the body and its needs to a peripheral position. Even though nursing is fundamentally concerned
with the care of bodies, it can be difficult for nurses to describe what they look, smell and feel like through a contemporary medico-managerial discourse.

Parker (1997) and Benner (1994) define this aforementioned problem as an issue of articulation. Moreover, they go on to say that it generates a disconcerting silence. In tandem with conventions of bodily propriety, vast experiential knowledge from direct care remains unspoken. This generates an ironic need to locate the body in nursing. As a word of orientation to the nature of nursing work, Wiltshire and Parker (1996, p. 23) note:

Nurses work with people who have fragile boundaries – people whose skin breaks down; people for whom eating, drinking, breathing, voiding or defecating are rendered problematic; people who are in pain or cannot sleep. When such basic bodily functions become questionable nursing is required. ‘To nurse’ and ‘nurse’ are relational not definitive or exclusionary concepts […]. The broken-down boundaries of the sick body are stanched, augmented and supplemented, by the enabling body of the nurse. Such dealings with the dysfunctional, broken down or transgressed body in turn afflict the nurse, and draw from her/his bodily capacities.

Wiltshire and Parker (1996) suggest that biomedicine’s organizational language elides the ongoing or fluid conversation between the body of the patient and the nurse. They imply that privileging abstract, scientific categories renders patient care invisible. This is because work and the structural practice context disappear from the analysis (Nelson & McGillion, 2004). As a form of correction, Nettleton (1988) recommends that researchers keep bodies and activity in view. Ill bodies mediate powerful social knowledge about social norms and important practices. Further, bodies place demands on caregivers’ attention and time that need to be accounted for. Together, these ideas suggest that problems of patient care require a multilevel approach and analysis.
In following the discursive and intellectual terrain of Canadian health system reform, Mykhalovskiy and Weir (2004) explore how evidence-based practice (EBP) is both a social and political force. Suffused with a new urgency to improve patient and system level problems, a tension exists between managerial concern for cost containment and the patient-provider experience. Similarly, Wall (2008) draws attention to disparities between people or groups (nurses and women in her account) who may experience and benefit from an evidence-based paradigm quite differently. Central to these arguments is a limitation in “ways-of-seeing” (Murray, Holmes & Rail, 2008, p. 275) what is happening at the point of care (Rankin, 2003). Critics of EBP contend that a narrow conception of valid and reliable evidence, as originating in controlled studies, is seriously flawed: the methods and results effectively eschew patient and clinician experiences (Rycroft-Malone et al., 2004; Traynor, 2002).

In contrast to a purported neutrality embedded in numerically informed evidence, Murray et al. (2008) and Wall (2008) contend that medical science has been co-opted to privilege economic modes of governance and efficiency. Alongside this shift is the imperative for greater ‘transparency’ and ‘accountability’ in the distribution of public goods such as health care services (Choiniere, 2011; Holmes, Murray, Perron & McCabe, 2008; Rankin & Campbell, 2009). However, Wall (2008) points out that the social and material terrain of health is not one in which all things are equal. Rather than a controlled scientific experiment, evidence-informed practice enters into a multifactorial nexus of ongoing concerted activities, social rules, resource constraints, gender norms and human interpretation (Porter & O’Halloran, 2012). This means that much work remains to be done in order to bring different ways of seeing and knowing into balance (Rycroft-Malone et al., 2004).
In speaking to a dissonance between the ideals and realities of practice, critics of EBP aim to unsettle rational assumptions that population-based information is the only intellectual procedure available with which to study, design and evaluate health services. Those challenging the dominant “episteme of health care” (Wall, 2008, p. 49) do so because the strategic goals of enhanced transparency, at the patient-provider interface, are failing to live up to their expectations. In other words, numerical data cannot penetrate the material and social actualities that stem from the push for greater “accountability, efficiency and ‘gold standard’ excellence” (Holmes et al., 2008, p. 396). For example, Hamilton and Campbell (2011, p. 281) contend that “boardroom knowledge” of safe, efficient and effective patient care is decidedly different when viewed from a frontline nursing perspective. This is important, as Choiniere (2011) and Rankin and Campbell (2006) note how health reform may leave nurses little time to implement the high quality patient care that is espoused in evidence-based practice.

**Research approach**

Researching a bifurcation between words and reality is not a straightforward task; it requires several steps. Smith (1990b) suggests that consciousness of a disjuncture between concepts and practices is simply an entry point to inquiry. Campbell (2003, p. 17) calls this sense of being out of step a problematic or “latent puzzle” that begins the journey. Understanding how a larger set of social relations is implicated necessarily begins within the work of interest. The strategy in IE is to explore how the local and extralocal are brought together through people’s work with texts. How documentary processes might contribute to a sense of disjuncture becomes possible by contrasting what is actually happening against authorized accounts of care.

IE’s materialist method of building a dependable account differs from other forms of research, as it does not begin in theory or predetermined categories. Instead, it starts in the
“particularities of our lived worlds” (Smith, 1987, p. 8) to build an understanding of what people do and how their work is put together. Observation and interviews are used to generate a deeper understanding of local activities as well as rich ethnographic description. Texts (and their collection for analysis) are important as they offer a view to language and priorities being foregrounded in everyday work (Smith, 1990a). These empirical strategies offer the opportunity to see how people, text and activity come together; the organizational capacities of texts are therefore understood in context.

IE’s attention to the movement of textual information enables a mapping process to key institutional stakeholders (for example, researchers, health managers or policy makers) outside the immediate study setting. Interviews and document collection are used to understand the efforts and interests of this second layer of informants. In conducting this sequence of inquiry, the institutional ethnographer sketches the interconnectivity between people across multiple sites. This mapping of larger associations permits an expansive view that may not be visible to all parties in their everyday activities, and it also allows a critical ethnographic comparison of prevailing ideals with the actualities embedded in practice. Work, knowledge and the problems requiring correction can be interrogated in turn.

An outline of the chapters

This dissertation sets out an argument over eight successive chapters. The intent is to break through the “medico-administrative” discourse (Nettleton, 1991, p.102) of contemporary health services to understand how critical care nurses experience accountabilities related to oral care. I focus on particular sites or contexts of nursing, which include the extant literature, education, the critical care unit and its texts. In this first chapter, I explain how I intend to do something other than simply outline that oral care is poorly understood. As a counterpoint to
concerns that nurses are neglectful of their obligations, I aim to trace the accomplishments of texts and the translocal coordination of local nursing activities.

I align my interests with Smith’s (2005) generous conception of work as anything that takes time, energy and focus. In doing so I do not set out to provide an exhaustive account of oral care and all of its variations and contingencies. Instead, this is an opportunity to spend time alongside nurses to understand how their work in oral care happens. As a reflexive and critical approach to the social world, IE relies on my own embodied awareness as a resource rather than a disadvantage. In particular I observe the circumstances in which people encounter documentary forms of accountability. Because the circulation of pre-printed texts (in print or electronic version) is a characteristic feature of evidence-based practice, this offers the possibility to empirically trace its trajectory. The work of producing, circulating, reading and enacting texts thus become important sites of investigation.

In chapter two I explore and contrast the various literatures in oral health with a particular focus on the contribution of critical care nurses. This literature is characterized by a move towards evaluative research methods over the last fifty years. I describe how this has organized nursing focus away from the immediate needs of patient comfort and towards an institutional concern for infection control. I argue that the nursing literature has produced a distance from oral care as a material practice. Moreover, nursing descriptions of the issues and interventions that comprise mouth care have contracted over time. My analysis contends that this is a serious problem as it oversimplifies what nurses are being asked to do and constitutes a barrier to realistic communication between nurses.

A central conversation in the literature is oral neglect. This is clearly evident in published concerns of critical care nurses (Berry & Davidson, 2006; Allen Furr, Binkley, McCurren &
Carrico, 2004; Grap et al., 2003; Jones, H., Newton & Bower, 2004; McNeill, 2000) as well as pilot interview narratives. Here, I introduce interview excerpts to illustrate how a duty to correct hygienic problems is experienced by critical care nurses. I show a duality in language and experience: a prominent biomedical discourse of oral hygiene in addition to a lesser-known nursing language of mouth care. This serves to illuminate how expert biomedical language can inadequately describe the complex work nurses do. In sequence, this points to the importance of undertaking a novel approach to inquiry.

In chapter three, I introduce the tenets of IE and the notion of people as experts in their everyday activities. I compare and contrast IE to other qualitative and ethnographic methods. My discussion of observation, interview and document analysis illustrates the value of ethnographic methods in uncovering nursing work. Finally, I suggest IE is the best method with which to empirically map knowledge-organizing work in oral care. IE’s unique empirical focus on texts and accountabilities permits an opportunity to trace how nurses are made accountable, and further, what aspects of nursing work remain visible across time and space. In chapter four I describe the study setting, participants, data collection methods and analytic procedures. In positioning nurses as experts, I explain how I used their recommendations and introductions to find a second layer of institutional informants and a link to a larger set of social relations.

Chapter five represents the first substantive set of findings and explores the intensively social nature of oral care. In taking up the standpoint of critical care nurses, I begin this chapter in the material practices and routines of the critical care unit. In moving toward a more complex appreciation of the work that nurses do, I simultaneously move away from an oversimplified rhetoric where mouth care is merely a ‘basic’ nursing act. I do so through my field notes. In recontextualizing this work through in situ description, I move away from an in vitro or
decontextualized research account. I show how patients and the institution of health depend upon nurses’ developing a broad repertoire of skills to advance a competing set of priorities. The knowledge that nurses accrue in their proximal work is oriented to an exceedingly complex and diverse project.

In chapter six, I undertake a close examination of the forms and inscription efforts that I observed in my fieldwork. I show how a particular reading of those forms takes place and the manner in which they link up with a larger set of institutional actors and relevancies. I pay particular attention to the binding nature of the nursing flowsheet as a central document of ICU care. The complex intersecting and overlapping work of interdisciplinary documentation demonstrates how difficult it can be to maintain a holistic account of the patient. In following the interlocking nature of one particular set of texts, I demonstrate how nursing concerns in oral care effectively disappear at the point of care. Despite this knowledge, nurses experience pressure to keep up their documentary efforts as they support important routines and diagnostic work.

In chapter seven, I introduce the larger social context in which critical care services now operate. The Ontario Critical Care Transformation Strategy (OCCTS) outlines a model in which recent experiences stemming from the serious acute respiratory syndrome (SARS) pandemic inform a new accountability circuit of infection surveillance. Anxieties about provincial critical care services being overwhelmed by high demand for ventilation (in a pandemic or otherwise) are used as a rationale for investing in textual technologies of management. I show how critical care nurses are enrolled in new work to sustain this model. On top of their patient care duties, new surveillance accountabilities are downloaded to nurses. They must adhere to strict rules in the daily collection and transfer of unit-level patient information to a government database. This
serves to fulfill the government’s realization of real-time data analysis including a focus on province-wide ICU capacity.

As one part of the data transfer requirement, VAP diagnoses are shared with the government every day. However, this obligation involves added administrative work of nursing-led data collection, storage and cleaning. This new accountability invariably draws senior nurses away from preventative hygienic improvements at the bedside and further into the intricacies of statistical reports. In tracing the movement of data forward, I explain how it circulates from the bedside to the boardroom and back again. The tensions that follow the data trail are discussed and their implications for nurses and patients are considered in chapter eight.

**Summary of major results and conclusions**

The central argument that I advance in this thesis attends to the ongoing disappearance of nursing actualities. Despite nursing’s essential role in the health care system, the current preoccupation with statistical forms of health knowledge preclude nursing concerns and needs from coming forward. I contend that a great distance has emerged between the way oral care is discursively known and the complexities of its material enactment. Moreover, this is a potentially dangerous arrangement. Given that Western health systems are “beset by a deep anxiety” around infection and pandemic (French & Mykhalovskiy, 2013, p. 175), it is problematic that nursing actualities remain out of focus. In oral care, as in other practices, critical care nurses use their bodies in particular ways. This requires them to remain physically close to patients. As it relates to infection prevention, the nature and benefits of nursing work are currently under-analyzed for their social contribution.

My analysis focuses, in part, on what IE can clarify about the work that nurses actually do. The benefit of this empirical approach is in its ability to open up an alternative formulation of
the knowledge and expertise of critical care nurses. In this case, my ethnographic fieldwork is important for nurses, researchers, educators and policy-makers to consider. Ethnographic methods are highly effective in explicating practice realities in addition to revealing what people do rather than relying upon assumptions or partial accounts. In combining observation, interview and text analysis, IE reveals less visible features of nursing work and assists in clarifying how those activities are obscured.

With the notion of rendering work visible, I focus on what is less evident about the activities and concerns that nurses demonstrate in the work of evidence-based oral care. During my time in the field I had the opportunity to learn how the act of oral care is a pivotal and vulnerable encounter for patients and nurses alike. Critically ill ventilated patients are fully dependent on nurses for oral comfort in addition to the control of pathogenic oral bacteria that may cause serious respiratory infection. However, a number of factors inside and outside the ICU may conspire against routine nursing interventions. Quality outcome metrics such as VAP rates serve as an indirect indicator of the success of a variety of preventative nursing measures. However, they do not bring the circumstances or people behind those activities forward. My analysis argues that health services metrics, as a type of reverse (or retrospective) reading of the care encounter, do little to inform us of quality, safety and transparency in patient care.

One of the significant contributions of this dissertation is its detailed analysis of nursing work of mouth care and the institutional relations of this activity. Special attention is paid to texts in order to uncover extended forms of social coordination – sequences of work connecting people across time and geographic space (Smith, 2006). Being seen as out of step with esteemed concepts such as safety and efficiency can label nurses as lacking knowledge and trustworthiness. Neglect of mouth care may be seen as a problem of individual accountability
within the Regulated Health Professions Act (CNO, 2008) in Ontario and nursing standards in Canada (CACCN, 2009; CNA, 2008). These texts may work against nurses when care problems are viewed at the individual level alone.

Making nursing realities accessible through rich, ethnographic description is important. An imbalance in research method has generated fragmented description of mouth care. In the case of this dissertation, contesting the constitution of valid evidence may be beneficial for nurses (Murray, Holmes & Rail, 2008) as well as those interested in the availability and distribution of equitable health care services. Judgment of nursing resourcefulness or neglect in these matters may fall into the hands of those who lack insight into the possibilities open to nurses (Nairn, 2009). George & McGuire (2004) speak to a modern conundrum in that intensified efforts to reach higher quality goals often take place in the context of resource conservation. Nursing education has been the primary intervention to correct deficiencies and sustain efficiencies (Nairn, 2009). This response is an unfortunate source of tension, as it continually shifts focus away from the setting in which nursing care is anchored. The opportunity that this dissertation holds is in its expansion of the terms of this conversation. Reconsidering experiential forms of data collection is important for critically ill patients, nurses and the health care system alike.
In this chapter I will describe how oral hygiene has been constituted as an object of concern. My reflexive reading of the health and social sciences literature, in addition to a focused review of the critical care nursing contribution notes a vexing problem of oral health neglect (Dale et al., 2012). This is important because the mouth is an index of social and physical integrity. As a highly visible feature, the mouth holds a strategic position in health and communication (Exley, 2009). Given its sensitive role, the mouth is also a space rendered vulnerable by social and economic forces (Nettleton, 1988; Sheiham, 2005). In the following sections, I will show how new language and accountabilities have entered the critical care nursing lexicon to realize a new discourse of oral hygiene.

My approach to the literature evolved through several phases between 2009 and 2012. The earliest entailed a broad review of the health and social sciences literatures using keywords and databases. This afforded the opportunity to read widely and reflect upon several interconnected concepts. As I undertook this project, I was attuned to the fact that those working in IE call for a “strong reflexivity” (DeVault, 2011, para. 8). This may be due to the fact that researchers often occupy a role within the institution they are actively investigating. For example, George Smith (1990) noted how his ongoing analysis of AIDS activism required special attention to his own location. Because he was immersed in the world he was investigating, he had to consider his allegiances and interests. Seeing ideals separate from activity becomes an ongoing challenge for the ethnographer.
As in other institutional ethnographies, I have reviewed the literature as data. Campbell and Gregor (2008, p. 51) suggest the IE literature review should extend beyond description. This means that it must detail more than the scope of scholarly work in one particular area. The identification of discourse and the construction of authorized accounts constitute a central feature. In this way, the literature may be viewed as a type of “ideological apparatus” (Smith, 1987, p. 17). For example, Smith (1987) might suggest that the nursing literature is ideologically active. It likely communicates an ideal professional image in addition to specialized knowledge. With this in mind, various disciplinary literatures on the mouth accomplish similar objectives. I will address dentistry, medicine and the social sciences. However, I will thread nursing throughout this discussion. This is important as oral care falls within the distinct responsibilities of nursing in the critical care unit (Vollman, 2009).

The follow section begins with my own reflexive thoughts on my position relative to the literatures’ overarching statements. I then proceed to discuss the problem of neglect that is foregrounded and the manner in which the critical care nursing literature aims to mitigate this issue. The argument I assert pertains to a shift in attention from patient comfort to infection control. As it relates to the range of oral problems nurses encounter, the literature has contracted over time. The emergence of an evaluative and increasing scientific discourse links up with managerial concerns and inhibits attention to active nursing practice.

A reflexive review

My pre-reflexive response to expert accounts of oral hygiene is to introduce my research topic within the dominant frames found in the extant literature. This often links me to the interpersonal and economic burdens of health problems originating in the mouth. However, this dual focus has its hazards. In her seminal paper “Nil by Mouth,” Hamilton Smith (1972, p. 6)
notes how medical policy has long categorized mouths as a dangerous boundary. In her investigation, policy promoting ‘nil’ (nothing) by mouth before surgery coordinates the requirement for patient surveillance. This is important as patient discomfort (e.g., hunger) can lead to transgressions involving food or drink during pre-operative fasting. Van Maanen (1979) points to the rise of nursing standards (e.g., policies or guidelines) as an effort to mediate risks such as patient vomiting or aspiration in the surgical theatre. However, Hamilton Smith (1972) asserts that a language of safety and efficiency often obscures the pitfalls and tensions that erupt in the encounter between patient and staff. In the case of pre-operative fasting, nurse–patient relations are inarguably reordered by texts as they confer new accountabilities.

My success in managing the risks posed by the mouth has been mixed, as revealed by my earlier exploration of personal experience. In the professional sphere, I have also found the space between concept and practice challenging. Oral care for intubated patients is often hindered as tubes and other paraphernalia central to critical care therapies obstruct full access to the mouth (Fitch et al., 1999; Grap et al., 2003; Jones, Newton & Bower, 2004). Moreover, it is often unpleasant work: saliva, sputum, blood, emesis, and their accompanying odours, are commonly encountered in patients’ mouths (Allen Furr et al., 2004; Kite, 1995). These fluids signify a duty; nurses must act promptly to remove these items as they may cause respiratory problems. As patients may resist oral care by clenching their mouths and teeth, I am reminded that fingers and instruments are crossing over a sensitive margin.

These dual conversations of clinical risk and social inversion create tension, as they propose different types of knowledge. My experience suggests pushing forward into a closed mouth can be harmful to the patient. Considering alternative approaches requires time and planning. However, these efforts can be complicated by other competing priorities. The
requirement to execute routine acts pushes up against unplanned events. I can attest to the fact that exigencies of the ICU frequently supersede attention to the mouth. This means that the expectations for care may be shaken when the completion of oral hygiene is threatened. The tensions that I have experienced in practice led me to read as much as possible about neglect of the oral space. The following sections summarize several interconnected themes that emerged in my reading.

**History of the mouth as a problem**

Hygiene is a science that supports a dominant rationale for mouth care. Hygiene is derived from germ theory and revolutionized medicine between 1850 and 1920 (Harvard University Library, 2008). However, concern about the oral space and systemic illness preceded the evolution of bacteriology. For example, Vieira and Caramelli (2009, p. 538) quote John Hunter, the surgeon to the King of England, in 1778. He discloses concern about the contents of the mouth including the teeth:

> The importance of the teeth is such that they deserve our utmost attention, as well with respect to the preservation of them when in a healthy state, as to the methods of curing them when diseased. They require this attention, not only for the preservation of themselves as instruments useful to the body, but also on account of other parts with which they are connected; for diseases of the teeth are apt to produce diseases in the neighboring parts, frequently of very serious consequences. One might at first imagine that the diseases of the teeth must be very simple and like those which take place everywhere else in the bony parts of our body, but experience shows the contrary. The teeth, being singular in their structure, have diseases peculiar to themselves. These diseases, considered abstractedly, are indeed very simple, but by the relations which the teeth bear to the body in general and to the parts with which they are immediately connected, they become extremely complicated.

Although this quote emerged 235 years ago, it still identifies a problem of abstraction. While oral health was far from a priority of the time, experience directed the physician to note how the mouth was conceptually separated from the body. Although suffering could be eliminated
through the extraction of teeth, the mouth’s contents posed issues for the body as a whole. Of concern was the tendency to oversimplify the mouth and its implications for the body, when they are considered separately.

Despite the significance of the aforementioned statement, attention to oral-systemic health remained limited for more than one hundred years (Vieira & Caramelli, 2009). Understanding the importance of oral health would require a fundamental shift in social consciousness. Up until the nineteenth century, a longstanding theory suggested that disease existed in noxious air, called miasma (Halliday, 2001). This meant that disease sprang from rotting organic matter (e.g., polluted water or waste) and therefore originated outside the body. In turn, the maintenance of clean air and removal of malodorous material was an important aspect of health work in the home and clinical setting (Nightingale, 1860). However, by the turn of the twentieth century, bacteriology reclassified the major source of disease as the individual: disease existed within the body. Surveillance of bodies and their points of physical and social contact became a crucial form of public hygiene (Nettleton, 1988).

Despite intensified interest in oral-systemic health, preventative care is noted to have lagged behind science. For example, the advent of intensive care units in the late 1950s was followed by reports of nosocomial pneumonia and an abnormal colonization of patient mouths with gram-negative bacteria (Greenfield, Teres, Bushnell, Hedley-White & Feingold, 1973; Stevens, Teres, Skillman & Feingold, 1974; Waldemar, Johanson, Pierce & Sanford, 1969). A shared characteristic of patients suffering from bacterial pneumonia was endotracheal tube intubation for respiratory support (Johanson, Pierce & Sanford, 1974). Despite advances in antimicrobial therapy, pneumonia treatment for mechanically ventilated patients frequently failed and prevention became a focal topic (Kerver et al., 1987; Podnos, Toews & Pierce, 1985; Van
Uffelen, Van Saene, Fidler & Lowenberg, 1984). Proof of concept studies subsequently broadened the scrutiny of pneumonia antecedents from high technology to ‘basic’ care; the oral space became a significant focus of inquiry.

Modern medicine has been able to name and categorize hundreds of species of bacteria associated with the oral space (Berry, Davidson, Masters & Rolls, 2007). Whereas some oral bacteria are considered helpful in maintaining health, others contribute to local and systemic problems (Vieira & Caramelli, 2009). Commonly referred to as biofilm (e.g., dental plaque), an adherent bacteria-rich film accumulates on teeth when oral hygiene is poor (Munro, Grap, Jablonski & Boyle, 2006; Scannapieco, Stewart & Mylotte, 1992). This can contribute to gingivitis, dental caries and a potentially chronic inflammation called periodontitis. Severe periodontitis (inflammatory related loss of supporting tissue, bone and teeth) affects 5% to 20% of most populations (Petersen, Bourgeois, Ogawa, Estupinan-Day & Ndiaye, 2005). Bacteria in the mouth have also been linked to several systemic diseases, with cardiovascular disease being the most prominent (Azarpazhooh & Leake, 2006; Friedewald et al., 2009; Scannapieco, 1999).

A discourse of neglect

A particularly important discovery about oral neglect is that it is not unique to nursing. The topic of oral neglect is identified in medicine (The Lancet, 2009), dentistry (Wilson, 1996) and the social sciences (Nettleton, 1988). These disciplines have studied the body and mouth within their own tradition and language. Accordingly, the separation of the mouth from the body as an object of knowledge is said to sustain inequities in matters of health (Nettleton, 1988; Sheiham, 2005). Low- to middle-income groups disproportionately experience oral disease (Bernal, 2005; Mignogna & Fedele, 2006; Nettleton, 1991), possibly because provision for mouth care is not included in most national health policies, as it is considered less important,
than more life-threatening illnesses (The Lancet, 2009). Yet poor oral health may be a precursor to or significant symptom of cardiovascular and respiratory disease, cancer, cognitive dysfunction, diabetes, pre-term and low birth weights (Vieira & Caramelli, 2009).

Despite this longstanding gap, biomedical views of the mouth as a significant factor in acute and chronic disease have advanced quickly in the past two decades (Azarpazhooh & Leake, 2006; Bader, 2007; Scannapieco, 1999). With shared interests in patient risk factors and outcomes, professional divisions over the mouth (dentistry) and body (medicine) show signs of reconciliation (Friedewald et al., 2009; Vieira & Caramelli, 2009). Discovering this history has been particularly informative as it speaks to a bifurcation of the body of which I have tacit knowledge but which I have not previously articulated. Despite mention of reconciliation, problematic omissions persist. Garcia (2005) and Feider, Mitchell and Bridges (2010) note that high-level organizations publishing oral care guides, such as the Centers for Disease Control and Prevention (Tablan et al., 2004) neglect to endorse twice-daily toothbrushing for ICU patients. This contradicts broad recommendations for oral health (for example, see the American Dental Association, 2013) and sustains a level of indeterminacy for oral work in the critical care unit.

With the aforementioned gaps in mind, it is not surprising that global compliance with oral care is considered poor, and moreover, that inequity between those with and without access to preventative dental services persists (Exley, 2009). Dentists assert that people do not brush or floss their teeth as instructed or attend to routine dental appointments (Wilson, 1996). Accordingly, the American Surgeon General (2000, p. vii) labels poor oral health a “silent epidemic.” Resultant gum disease, loss of teeth and oral pain affect nutrition, communication, general health and social wellbeing (Bernal, 2005; Emami & Feine, 2008; Malkin, 2009). Poor oral hygiene can promote negative assumptions about the individual; dirty or unhygienic
appearances can be taken as a lack of accountability (Exley, 2009). Inadequate mouth care for highly dependent populations, such as the critically ill, may be viewed similarly. What holds this silent epidemic in place is not well explained.

**Dentistry and medicine**

Oral health is often considered a window onto the health of the individual. However, recent biomedical views suggest that suboptimal public health has opened a window into professional accountabilities. For example, the World Health Organization (2002) notes the highest prevalence of hospital-acquired infection (HAI) occurs in intensive care units. Respiratory infection is the most common therein (Vincent et al., 2009). In mechanically ventilated patients, the presence of a breathing tube keeps the glottis open and offers an inadvertent yet direct pathway for oral secretions to enter the respiratory tract (Cason et al., 2007). Concurrent shifts in oral bacteria can contribute to aspiration of pathogenic bacteria and development of VAP (Scannapieco, Stewart & Mylotte, 1992). Those affected endure prolonged ventilation, increased use of health resources and a two-fold risk of dying in the critical care unit (Heyland, Cook, Griffith, Keenan & Brun-Buisson, 1999; Muscedere et al., 2008; Weinstein et al., 2004).

Whereas dental professionals do not routinely examine or treat ICU patients, they have contributed to the extant biomedical literature on the subject of oral care neglect. For example, Scannapieco and Binkley (2012) note that oral care practices vary substantially for patients in organized health care settings. Because the mouths of intubated patients become colonized by potential respiratory pathogens, these researchers argue that an effective oral care regime can have significant public health dividends. Paju and Scannapieco (2007) suggest that dentate patients may pose a particular risk for pneumonia as those with natural teeth develop aspiration.
pneumonia more often than edentulous subjects. They define nursing home residents and intubated ICU patients as high-risk groups. They caution that caregivers frequently neglect preventative oral care guidelines. Their analysis argues that scientific knowledge of oral health is lacking in the health professions.

**Moving biomedical discourse to nursing**

Mechanical ventilation (MV), as a priority therapy of intensive care (Coyer, 2006), most often depends upon the mouth for access to the respiratory tract. Canadian guidelines promote preferential use of the mouth over the nose for respiratory intubation because of a lower rate of infectious complications (Muscedere et al., 2008). However, a tenet of VAP is that infection of the lower respiratory tract is preceded by bacterial colonization or infection of the mouth (Garcia, 2005). This heightens focus on the care that patients receive during mechanical ventilation. The literature suggests that preventative oral care strategies may become even more critical. As demand for mechanical ventilation is expected to increase in Ontario (Needham et al., 2005), the issue of variable preventative oral care may intensify in proportion to the requirement for ICU services.

In response, a body of nursing and medical research has resulted, relying, however, on quantitative methods that have significantly focused on VAP. This has generated decontextualized descriptions of mouth care practices through nursing surveys (Binkley et al., 2004; DeKeyser et al., 2009; Feider et al., 2010; Fitch et al., 1999; Grap et al., 2003; Hanneman & Gusick, 2005; Jones, Newton & Bower, 2004; Blot, Claes, Labeau, Van Aken & Vandijck, 2007; Rello et al., 2007; Sole et al., 2003), descriptive reviews (Vollman, 2006; Grap & Munro, 2004; Berry & Davidson, 2006), randomized controlled trials of oral care products (DeRiso, Ladowski, Dillon, Justice & Peterson, 1996; Houston et al., 2002; Scannapieco et al., 2009) and
From comfort to bacterial control

Trenter Roth and Creason (1986) note historical emphasis in the nursing literature on the mouth’s comfort, cleanliness and hydration (Beck, 1979; DeWalt & Haines, 1969; Speedie, 1983). Maintaining an open mouth and a nothing by mouth (NPO) status following intubation is recognized as inviting a confluence of oral stressors that impair the protective role of saliva (DeWalt and Haines, 1969). The introduction of infection prevention (Nelsey, 1986; Trenter Roth & Creason, 1986; Watson, 1989) shifted emphasis away from comfort to a critical nursing intervention of bacterial control (Grap et al., 2003). Nursing effectively merged with the medical literature’s focus on the control of oropharyngeal bacteria and the prevention of VAP in mechanically ventilated patients (DeRiso et al., 1996; Garcia, 2005).

Dale and colleagues (2012) disclose how this shift is characterized by a proliferation of evaluative nursing research methods and articles between 1960 and 2011. In tracing keywords and themes in a systematic analysis of published papers, they confirm a discursive shift in the 1980s. In accounting for the focal concerns of authors, they note declining discussion of comfort, which includes the condition of the oral space (e.g., lesions or dryness). In contrast, papers increasingly mention infection through epidemiological terms (e.g., morbidity/mortality or prevention/control) that follow a new discursive entity called ventilator-associated pneumonia (VAP) (Table 1).

Taken together, they acknowledge several shifts in nursing language over time. Whereas the endotracheal tube and ventilator were possible conduits of infection transmission, this was
only a provisional focus in the early literature (e.g., 1960 – 1985). The later nursing literature (1986 – 2011) notes significant attention to socially organized modes of infection transmission: nursing neglect, and lack of guidelines and inadequate skill development for complex oral care. The literature sustains the economic implications of infection, implications that generate additional pressure for nurses to consider concepts such as safety and fiscal restraint (Dale et al., 2012).

Table 1. The decline of comfort. Dale et al., (2012)
Particularly informative of the aforementioned shift away from comfort in nursing is an analogous move in dentistry. Adams (2000) suggests pain is an important feature in the development of the dental profession. People often seek assistance when faced with a painful mouth. Dental intervention attended to this reality through the introduction and standardization of anesthetics (Nettleton, 1992). However, public health measures (e.g., fluoride in water and toothpaste) altered this urgent need and pain is not the only motivator for care today. As a new incentive for treatment, dentists have turned from anesthetics to esthetics (Vasseleu, 1998). Because tooth decay is no longer a major problem in developed countries, oral work has shifted from a painful “orality to morality” (Vasseleu, 1998, p. 75). This means that oral delinquency is assigned to a mouth that does not contain straight, white teeth.

A critical approach to the body

Nettleton (1991) shares an important sociological observation about women, discourse and the mouth. Using Foucault’s (1979) theory of governmentality, she describes how the nascent field of oral health in the mid-nineteenth century evolved into a discrete set of beliefs and practices. Significant to her thesis is the emergence of epidemiology and the ability to map population health. In the case of children, this positioned the dental clinic, school and home as sites of importance. Women, as mothers, became instruments of public health campaigns to improve oral health. Nettleton (1988, 1991) investigated a discourse of moral responsibility that permeated radio and print materials of the period to mobilize oral work in the home. As a highly productive and moral discourse, extralocal texts are instrumental, Nettleton (1991) notes, in normalizing and assigning cleaning work to women.

Witz (1990, 1992) follows this line of thought and claims that both health work and the health professions are fundamentally gendered. This means they are tacitly read as male or
female. Adams (2003) gives the example of medicine and dentistry being designated as male professions. In contrast, nursing and dental hygienists are identified as female. To maintain their distinctiveness, male professions have historically predicated their rational, expert status by assigning non-expert, caring work to women, Davies (1996) notes. Nettleton’s (1988) prior example suggests some of this work is unpaid. However, Witz (1992) and Adams (2003) explain that women have used this type of ‘care’ work to gain recognition and professional status. In turn, upholding a professional claim to hygienic work has sustained gender divisions and assumptions that women have an innate disposition to clean.

Notable in my reading of this evolving storyline is a disturbance of gender and professionalism. Within Adams’ (2003) discussion of female dominated professions is the managerial advantage of lower costs and increased service capacity. As one example, lower wages associated with nursing have encouraged governments to legislate and expand their roles given the promise of better care for the consumer. Thus, women are expected to carry out hygienic duties as one part of a larger social contract. This places the urgent calls for improved oral care in nursing (Binkley et al., 2004; Feider et al., 2010; Fitch et al., 1999; Grap et al., 2003; Hanneman & Gusick, 2005; Jones, Newton & Bower, 2004; Blot et al., 2007; Rello et al., 2007; Sole et al., 2003) in a particular light. Because respiratory infection increases healthcare costs, lack of preventative oral care contravenes deeply held assumptions about nursing work in hygiene. Not only does it unsettle professional claims, it disrupts broad gendered expectations for women and the health professions.

An assessment of my reflexive reading

My nursing interest in mouth care has always been informed by two distinct conversations. One is based in bodily experience and the other in words. However, these two
discussions are not independent of each other. Both are positioned in what Smith (2005, p. 185) calls an “intertextual” hierarchy, where scientific and evaluative ways of speaking and writing limit attention to mundane acts of care. Sandelowski (2002a) describes this as a Western tendency to elevate the mental over the corporeal. In this regard, I see what Nettleton (1991, p. 108) calls a “productive tension” circulating through journal articles I encountered in my review of the health sciences literature. The literature is productive in the sense that it pressures nurses to take up scientific information and enact particular forms of oral care.

With the notion of social organization in mind, one of the accomplishments of the health care literature is to call attention to a higher order of thinking. The ideals of preventative oral care foreground a powerful moral discourse to improve public health (Nettleton, 1991). Individuals who “overlook” mouth care (Shay, Scannapieco, Terpenning, Smith & Taylor, 2005, p. 184) are at risk on multiple levels. In other words, the clinician in close proximity to the mouth occupies a dangerous space. This means that nurses might be seen as recalcitrant health providers. Further, they may be seen as a source of contagion if they fail to alleviate oral problems (Vasseleu, 1998). Accordingly, it is not surprising that influential groups such as the Centers for Disease Control and Prevention publish a guide on oral care for hospitalized patients (Tablan et al., 2004). The presence of authoritative texts organizes an additional level of pressure for nurses to address the mouth as a threat to the larger social order.

A review of the literature has helped me better understand a bifurcation in my role as an agent of mouth care. Caring for critically ill people has always been embodied, context-bound learning largely backdropped to instructive texts. This means that descriptions of mouth care as an active practice are elusive. However, being a man working in a predominantly female occupation generates an additional bifurcation. I find myself in a liminal position performing
work that is socially classified as belonging to women. I wonder about neglect when noting the absence of dental and medical professionals looking at mouths. Moreover, tools, training and time to do this challenging work are ill considered by health researchers. The literature has made me more aware of these lines of fault and an awareness purposely directed.

**Summary**

Reflexive and systematic approaches to the literature on oral care draw attention to conceptual ways of understanding oral hygiene: the mouth, bacteria and nurses as categories requiring attention. Biomedical discourse has reorganized a nursing definition of mouth care away from comfort and a relational understanding of bodies in a social world. A new discourse of oral hygiene narrows the focus to infectious risk. It tells me that the mouth is a problem, how to correct it and who needs to do this work. Nurses are being asked to draw upon textual forms of knowledge in order to move oral hygiene to a higher priority of care.

A discourse of neglect or deprioritization threading through the literature extends Mykhalovskiy’s (2003) argument that certain groups (physicians in his study) are positioned as neglectful readers of biomedical science. These critical views note powerful social relations circulating recursively through medical texts. Similarly, the literature on mouth care by critical care nurses repeats a parallel message and strategy. As suggested by McCoy (2006), these projects become mired in an analysis of people instead of healthcare delivery. Social scientists of the mouth such as Exley (2009) and Nettleton (1988) aim to unpack assignment of norms and transgression in mouth care. Their analysis interrogates the ideals of science and a gendered assignment to bodywork. In extending this conversation, their work contrasts with the biomedical and nursing literature, which does not reflexively address the gendered nature of this work and the problem of transgression.
Although critical care nurses have direct and comprehensive experience in oral care, their knowledge of this work does not come forward through the literature. Instead, a new discourse of VAP prevention advances to organize nursing attention. In part, this may be due to a lack of context-sensitive inquiry. Limited qualitative research in oral care poses a serious gap. My own experience as a critical care nurse is informed by the fact that the mouths of intubated patients are difficult to access, secondary to the crowding of tubes. Moreover, it can be unnerving to force my way into closed spaces. My ability to open my own mouth regarding these problems is somewhat limited by a language privileging epidemiological terms and aggregate measures. An imbalance in experiential, proximal language to describe issues in care leaves bodies neglected and their context out of focus.

Published oral care protocols in descriptive and interventional studies report a decontextualized, linear sequence of work typically involving tooth brushing, hydrating dry mucous membranes, suctioning out excess secretions and applying antimicrobials to the hard and soft structures of the mouth. Commercially available products are often explicitly mentioned or presented (for example, see Garcia et al., 2009). However, the obligatory work of oral hygiene lacks reference to other obligations of care. As a result, I am offered an abbreviated guide to mouth care. The contingencies of bodies, ventilators and other forms of active treatment fall out of expert guidelines. Further, nurses such as myself are often written out of these accounts.

Twigg, Wolkowitz, Cohen and Nettleton (2011) argue that the low visibility of body care negatively impacts a beneficial understanding of hygiene and its practitioners. The assumption that this work is uncomplicated or always the same is primary in this regard. A rational approach to body care often presupposes a passive recipient and an intimate relationship between the nurse and patient (Allen, 2007). Diamond (1992) suggests that wider social and economic forces are
implicated in these misconceptions as they continually reorient attention away from the practice setting to managerial issues. Some researchers warn that these complex relations inhibit the ability to keep skilled nurses at the bedside as they undervalue the challenges and contributions of the nursing profession (Nelson, Gordon & McGillon, 2002). They argue that the ongoing concealment of ‘dirty work’ must be reversed through realistic appraisal. Moving beyond a “countable, accountable logic” requires an innovative approach (Diamond, 1992, p. 209).

Pilot interviews

Nursing-led mouth care and its low prioritization can be approached in two different ways. In a typical research study, a problem is identified within the literature. For example, an overarching epidemiological view to mouth care may demonstrate this as a problem of populations and exposures that increase risk of infection. An alternative way of approaching this topic is from the perspectives of those directly engaged in the work of preventative mouth care. IE takes up this stance by immersing the researcher within the study setting to reformulate the starting point to the perspective of those engaged in the work of interest. The problematic, as a starting point, is therefore identified amongst the work, texts and discourses found within the study setting. This strategy would engage nurses to show how work happens.

In the course of studying IE, I developed an interview guide and conducted a limited interview pilot study as a foundation for this study (Appendix A – Interview Guide). Quotes used in this chapter originated from 1-hour pilot IE interviews with four critical care nurses at Parkview Hospital in 2009. All participating nurses worked in a twenty-bed Level 3 critical care unit. Level 3 units in Canada are classified as offering the highest level of care and technological
support to meet the needs of patients requiring advanced or prolonged respiratory support, or support of more than one organ system (Ontario Critical Care LHIN Leadership Table, 2006).

During one-on-one interviews, nurses revealed what Smith (1987) calls a disjuncture in experience: loss of a directly experienced world within dominant professional language. Tension emerged when the prevailing language that governs practice left out essential knowledge of patient bodies, their ongoing needs and practical concerns for the completion of nursing care. Frequent reference was made to language and acronyms found in evidentiary guidelines and research reports originating outside the study setting. This knowledge was traced to local documents reviewed in tandem with participants. For example, Bob noted that an antimicrobial used for bacterial control in patients’ mouths was found in local physician orders and international research publications.

As the VAP study concluded with routine mouth hygiene [...] and chlorhexidine.12 percent as a part of it on a regular basis for intubated patients [...] significantly, I think it’s up to 30% or 40%, it decreases occurrence of VAP infection for the patient. (Bob, 2009, Pilot Interview)

This talk took Bob away from the direct experience of his work in mouth care. In its place were acronyms and statistical metrics that rendered a vague picture of how this work happens and the conditions under which it takes place. Moreover, it appears to credit an antimicrobial for accomplishing disease reduction without mention of how it is placed in patients’ mouths.

A contrasting level of talk emerged when nurses were asked to describe their earliest experiences of hygienic work. All of the participants spoke of the initial shock posed by ill bodies and the development of expertise from this proximal role. The work of developing tolerance or fortitude in the presence of ill bodies was important to Beatrice:
Biomedical knowledge offers a prominent order of reality with emphasis on cause and effect. In other words, a good understanding of epidemiology is considered essential to inform what the critical care nursing literature calls basic hygiene: oral care, bathing and incontinence management (Vollman, 2009). However, nursing work described by practitioners in this pilot study opens up different layers of reality. From a nursing perspective, the realities imposed by critically ill bodies do not support the literature’s authoritative assertion that keeping bodies clean is “basic” (Rello, 2007, p. 1066) or “simple” (Baxter et al., 2005, p. 535).

Mundane or routine acts are often assumed to be less skillful and therefore under-analyzed (Holman, 2000). In this line of thought, nursing work is often tied to domestic acts of care that may be underappreciated as intricate or highly technical practices (Lawler, 1991; Sandelowski, 1998). Several nurses talked about the complexity of cleaning dependent bodies, which was not apparent until it was undertaken in person:

If you’re not comfortable touching people, if you’re not comfortable moving people, and if you don’t know how to do it in a safe and relatively comfortable way, it’s almost impossible to do something as simple as washing someone’s back. (Frank, 2009, Pilot Interview)

In contrast to medical discourse, sociology directly addresses real, yet often unspoken, worlds of boundary work within the anus, womb and mouth (Graham, 2006). Nettleton (1988) asserts that bodies must be central to the study of knowledge, as they reflect a powerful symbolic
social reality. Few circumstances do not engender fear of dirt and contagion when these spaces are breached. As pilot interview participants indicated, critical care nurses open these spaces with hands and instruments to manage the threat of infection; therefore, their reality is worthy of investigation.

Sequences of work

Pilot nursing participants were asked to describe detailed, step-by-step activities within their working day-night worlds. This process follows IE’s ethnomethodological process of analyzing mundane tasks to better understand their content and complexity (Garfinkel, 1967). Nurses described periods of intensified cleaning activity that discloses insight into the connectivity of work from one person to the next:

Oh, most of the nurses before transferring the shift, we try to leave the patient in appropriate condition, which is a fine thing. ’Cause people know as the next shift will be starting with assessment – again, we’re talking about patient who is absolutely stable, who doesn’t need immediate intervention or something which is happening right away, which might be pushing the hygiene to the second or the third preference […] So in my eyes a good night- or day-shift nurse, before transferring his or her shift, she would be thinking about the next step. She might know that in the next hour or two the next shift nurse, if patient is complicated, might not have a time to concentrate per se on the hygiene issues. (Bob, 2009, Pilot Interview)

In the above quote, the unremitting activity of cleaning may hamper consideration of sequences of care that connect nurses across time and space. Bob was able to describe a rationale that integrated experiential knowledge of the unpredictable contingencies of critical care. These exigencies require a complex form of experiential knowledge, cooperation and planning.

The sequence of work disclosed in the preceding quote suggests considerable attention to patient safety and comfort. However, less apparent in this sequence is the ambiguous concept of
practice (Liaschenko & Peter, 2004). Nurses are necessarily measured against this term in abstract language found in professional legislation for registration (CNO, 2011) and critical care practice standards (CACCN, 2009). The core meaning of skilled practice and its attendant knowledge often relates a quantifiable measure of ability. A positivist approach to nursing practice often relies on abstract categories that may not accurately capture complex situational dexterity and knowledge as described by Bob. These other levels of knowledge and skill remain hidden in the real world.

Pilot nurses frequently reported performing ‘mouth care’, which sits in contrast to an evidentiary language of ‘oral hygiene’ and ‘oral decontamination’. How these two ways of speaking enter the care setting and coexist is unclear. Bakhtin (1984) calls this hybrid juxtaposition of coexisting speech patterns heteroglossia. His attention to social hierarchies might direct one to see ‘mouth care’ as less formal or scientific, and in potential conflict with the literature’s authoritative talk. Implied in all these terms is a social understanding of work necessary to keep things in their correct place (Nettleton, 1988). In other words, it should be undertaken regularly and deep inside the home or clinic, away from prying eyes.

In linking back to Frank’s earlier statement about the underestimation of “simple” bodywork, the exact activities associated with cleaning mouths can pose a challenge, as they remain ambiguous (Feider et al., 2010). These non-specific referents appear to discourage understanding of the setting, tools and people in motion.

**Categorical relations and an inversion of visibility**

Nursing research in the care of bodies frequently focuses on categorization. For instance, frequencies of mouth care (Grap et al., 2003) and listings of tools and resources are notable
(Berry & Davidson, 2006). Nettleton (1988) quotes Durkheim’s assertion that this tendency to classify objects is understandable as a social process. Foregrounded topics, such as oral hygiene, are therefore related to the logic and organization found in adjacent categories such as VAP. Thus, the mouth and its care gaps must be considered in relation to the surrounding context, people and foregrounded issues. As one example, the issue of hygiene is often linked to a foregrounded issue of hospital capacity, crowding and length of stay. Smith (1999) calls this intertextuality: the ability of one text or discourse to connect work to a larger scheme. For the pilot participants, gaps in care conditioned their reflections upon length of stay in ICU and hospital:

If you don’t wash their back, you might forget to turn them. And if you forget to turn them you might overlook something, and if you overlook something you might be prolonging their stay. (Rick, 2009, Pilot Interview)

In a similar line of thought, VAP reduction work is considered an important nursing category, as epidemiological data on hospital and health ministry websites promotes its presence. These texts act as a factual account of what happens to patients in reference to morbidity, mortality and hospital length of stay. Whereas some nursing authors suggest the work of reducing VAP is an interdisciplinary process (Grap, 2009), requisite hands-on care endorsed by guidelines is not. Nurses in pilot interviews note mouth care as a duty of nurses alone; other professions do not participate in this practice. In the quote that follows, Bob suggests certain accountabilities, such as oral care, are expectations of nurses. He notes how this happens even though regulatory documents do not preclude other professions from performing mouth care:

I believe legally-wise doctors can do [mouth care]; same thing for physiotherapy […] but I never saw one of them doing such a thing (Bob, 2009, Pilot Interview).
Particular to Bob’s concern is an inversion of visibility. Whereas most health professions can carry out mouth care, Bob notes that only nurses follow through. Women, in their historical roles as family caregivers and teachers, have been described as agents of authoritative dentistry knowledge. How they were recruited into these less visible roles is important to consider. Particular to a theory of social organization is a moral view to recalcitrant mothers who do not adequately attend to their children’s mouths (Nettleton, 1988). As members of a predominantly female profession, critical care nurses have not engaged in a parallel discussion of the problem of transgression. The relational tensions between critically ill patients, medical experts and women’s duty has not been brought forward for analysis.

**Summary of pilot interviews**

Pilot interviews with critical care nurses have further informed my understanding of mouth care by delineating tensions between the problem as identified in the literature and the problematic (work) as it is directly experienced. In simple terms, things are more complicated than they appear. Smith (2005) notes that identifying a problematic is a way of beginning inquiry by taking up the situated perspective of those directly engaged in the work under study. She argues that

The aim of an alternative sociology would be to explore and unfold the relations beyond our direct experience that shape and determine it. An alternative sociology would be a means to anyone of understanding how the world comes about for us and how it is organized so that it happens to us as it does in our experience (Smith, 1990, p. 27).

This proximal beginning begins to address the invisibility of work analyzed by Nettleton (1988, 1989). Critical care nurses such as Leslie (2009) have previously identified a disjuncture
in experience that would potentially encourage nurses to research this problem of divided consciousness. Leslie speaks to a disorienting problem where the work of cleaning bodies becomes unrecognizable; cleaning work is “relabelled and repackaged” in evidentiary terms (p. 149). Within a context of health resource conservation, hygienic work has been subject to intensifying scrutiny. This is because its importance moves beyond the interests of the individual patient. It now warrants attention in managerial and evidence-based categories. Despite this heightened attention, inquiry into the situated undertaking of oral hygiene lags behind a descriptive epidemiology of VAP.

I have found that an evidentiary way of speaking sustains a troubling distance; credit for nursing work can be misplaced. Campbell (2003) asserts that IE’s linguistic turn is important in redressing this problem. She notes that Smith’s use of Bakhtin (1984) turns inquiry towards an understanding of the local accomplishment of discourse. This is helpful in appreciating pilot participants’ ways of speaking to evidence, which further removes their presence. DeVault and McCoy (2004) note that to begin inside experience to listen and see offers the possibility of opening up the realities of practice by shifting thinking away from conceptual practices. Bob provided an example of the challenges often missing from evidentiary accounts of VAP reduction:

Using chlorhexidine mouthwash, which as I mentioned and I have said is just a visual part of the iceberg. […] Sometimes you barely can stick the yankauer [suction device] inside the patient’s mouth, just for basic oral suction. Technically […] it’s a very difficult thing (Bob, Pilot Interview, 2009).

Bob’s narrative above signals tacit or hidden knowledge below the surface of things. In this instance, the term ‘basic’ does not apply to all patients. Instead of being a benign activity, opening the mouth under particular conditions is a potent signifier. Worries of what might
happen are connected to previous work experiences that remain undisclosed. Hammersley & Atkinson (2007, p. 137) remind researchers to pay serious attention to the material objects and circumstances integral to everyday work. Inattention to tactic dimensions of practice can discourage a deeper understanding of reality. Inappropriately overstepping these experiences can remove essential variables without due discussion of their impact.

Following my review of the literature, pilot interviews and my own reflexive notes, I have come to a better understanding of the problematic. Reliance on prevailing taxonomies and conceptual groupings is a limited way of understanding nursing problems. The literature’s foremost accomplishment is the introduction of a discourse of oral hygiene that emphasizes a problem of infection and its necessary prevention. However, its language poses a paradox as it concurrently dissolves the activity it seeks to encourage. Important issues of coordination remain cloaked behind approved ways of thinking and speaking (New, 2005). An alternative ethnographic approach may help readers shift from context-free representations that keep practice problems as ideas “between the ears” (Lecompte, 2002, p. 284).

Many qualitative and ethnographic traditions meet a high burden of description when encountering individual and group practices. I will discuss some of their tenets in the forthcoming chapter. However, I will argue that IE can expand our understanding of mouth care by attending to aspects of the material world that purportedly defy measure. Smith’s (1987) concept of local work being coordinated by another set of extralocal social relations (originating beyond one’s situated location) is essential to this inquiry. Importantly, Smith notes that these intersecting social forces are not always immediately perceptible within the local setting; however, they are empirically discoverable.
Chapter 3
The Critical Foundations of Inquiry

Traditionally, this chapter addresses theory or the conceptual foundations linking method and analysis. However, Smith (1987, p. 167) argues that the problematic, not theory, is the “point d’appui” for an alternative path to understanding. What I need is a method that allows me to research a bifurcation in experience. In this chapter I will proceed to unpack this idea and how IE can offer something more by beginning inside experience (McCoy, 2006; Rankin, 2009).

What is institutional ethnography (IE)?

Developed by Canadian sociologist Dorothy Smith (1987, 1990a, 1990b, 2004, 2005), IE examines extended forms of social coordination as they unfold within the everyday activities of people. Implicit in this approach is an assumption that the routine character of everyday life holds together through particular forms of recursive activity, knowledge and power (Rankin, 2009). Smith (2006) notes that inquiry into social coordination is not intended to study individuals or individual organizations such as hospitals. Rather, it proposes a critical analysis of large-scale institutional complexes such as health, government, media or education. McCoy (2006) explains that these intersecting complexes are a fundamental, taken-for-granted feature of contemporary society. Despite the fact that they may be overlooked, DeVault and McCoy (2006) argue that a “vast complex of coordinated and intersecting work-processes” is discoverable in everyday or mundane aspects of life (p. 17).

IE has been successfully used to empirically investigate the social organization of nursing, medical and allied health work. Interview, observation and document analysis have been variously used in the examination of bed-flow technologies and health reform (Rankin &
Campbell, 2006), medical pathways (Mykhalovskiy, 2001), health work (Mykhalovskiy & McCoy, 2002), patient satisfaction (Rankin, 2003) and client-centered practice (Townsend, Langille & Ripley, 2003). These projects contribute to a larger picture of discursive practices embedded in healthcare settings. Further, these projects move underneath prominent concepts to open up “empirically empty” terms to fill them with everyday experiences (Mykhalovskiy & McCoy, 2002, p. 24). Moreover, they significantly underscore some of the unexpected and less visible work practices emanating from conceptually ordered routines (Devault & McCoy, 2004). Taken together, IE poses a rich opportunity in critical care settings, as routines, guidelines and protocols are ubiquitous features, which require explication.

**Gender and work**

Smith (1987) began her alternative sociology within a feminist tradition. Her experiences as a working mother and academic are characterized by an uncomfortable tension between professional and domestic spheres. She notes discernible shifts in subjectivity and language between home and work. Smith describes her embodied consciousness of active knowing and doing in two spaces: “moving from one to another was a real shift, involving a different organization of memory, attention, relevances and objectives, and indeed different presences” (p. 7). The first consciousness is located in a directly known world – the local, everyday setting with its material concerns and bodily needs, including those of her children. The second consciousness is an objectified form of knowledge and a predisposition to talk and behave with institutional (e.g., educational) imperatives in mind.

In beginning within a feminist framework, Smith (1987) is not referring to research in bifurcated consciousness as an essentialist view to one group, such as women. Rather, she suggests that certain groups are marginalized to a lower status in society and excluded from
generating intellectual, cultural and political knowledge. As an example, medicine as a male-dominated enterprise is considered to have historically dominated nurses, who are primarily women. I find this informative for nurses, whose work of cleaning and touching ill bodies is commonly considered an extension of domestic caring practices shifted to public institutions (Lawler, 1991). My experiences of opening mouths and inserting objects to suction and clean have been subsumed under a larger rhetoric of scientific evidence, a rhetoric that continually obscures these experiences.

The notion that scant space exists in which to understand the particular experiences of critical care nurses is not new. Benner (1994), who studied critical care nursing expertise, argues that body care has been marginalized. It is socially understood as a private or domestic practice. Because hygiene is typically concealed within the confines of the home, it lacks an adequate public language. Further, Benner suggests that the language of contemporary health care settings elides this effort. She explains that the ongoing commodification of health continually seeks to articulate and scientifically proceduralize all things linked to health. This hearkens back to Dorothy Smith’s assertion that objectification renders the everyday good knowledge that people generate in their work uninformative to larger social imperatives.

Rankin (2009) takes up this emphasis on proceduralism and commodification influencing nursing work within IE. She notes that the contemporary emphasis on data to support efficient and effective health services has revolutionized language in the nursing setting. She observes an “epistemic privilege” accorded to health services information that further distances bodies and activity from expert knowledge (para. 14). In particular, the contemporary emphasis on the economics of care makes nursing ever more difficult to locate. She argues that the language of health services metrics now preoccupies nursing interests. Campbell and Gregor (2008, p. 58)
echo this assertion by noting that nursing work is now “crystallized” within a larger textual schema. In other words, it is abstract and difficult to access when healthcare is prioritized through an economic lens.

**People as experts**

IE’s situated beginning in the activities of people offers a commitment to understanding their day-night lives and them as experts in their own world. The initial investigation generates a first-hand account of everyday experience. This commonly occurs through interviewing. However, observation and document collection may also be utilized. Smith (2006, p. 3) logically notes that IE “begins where people are and proceeds from there” in an outward direction. This outward direction of research is significant. Smith points to an important paradox in our inability to fully explain how large-scale organization is put together from one location. This limit to a fully knowable world at the local level demands a method to trace strands of coordination at the material level. As data is gathered, the researcher refrains from interpreting individual motives for activity. Instead, concepts or speech genres empirically linked to texts circulating through the work setting become a focus for analysis. Finding their sources and relationships to others outside the care setting is an important second step of data collection.

**Texts as coordinating media**

Smith (1990b) describes large-scale organization and work being primarily coordinated by texts (words, numbers, images). There are many examples in critical care of clinicians working in chains of activity linked by documents. Talking to a nurse about turning and repositioning bodies to prevent skin breakdown draws attention to various sources of text in the work environment. Found within these texts is taken-for-granted ‘factual’ information that
functions on the authority of experts situated outside the local environment. In pilot interviews, nurses frequently made reference to practice being coordinated by studies from outside the work setting. These messages were found in documents at the ICU bedside. Smith (2005) likens human relations with text to a two-way conversation. The intention of the authoritative text stays the same while the people and context can shift. As a result, uncertainties can prevail:

There’s sort of a laminated folder of [...] expected standards of care. And it’s included in that, that patients are turned and repositioned [every] two [hours]. So I mean, that’s come down through best practice guidelines, and I’m assuming there’s research that supports the, you know, two hours is something like optimal repositioning based on manpower and patients’ skin condition. But I’ll be honest – I’ve never actually read the study. Somebody with more education than me told me that that’s what I should be doing, so I have accepted for now that that’s what I should be doing (Rick, Pilot Interview, 2009).

Inherent in the prior quote is a sense of tension as Rick is being told how to think and act. In this case, evidence-informed texts penetrate the nursing context and assert an authoritative viewpoint. Accompanying these texts is a sense of pressure to enact a higher level of care. Despite Rick’s awareness that nursing resources are variable, research-informed policy and guidelines sidestep these concerns. In doing so, texts appear confident in their assertions about patient care accountabilities. In this case, both research and policy interact to build an authoritative account that generates nursing uncertainties.

A word on accountability

The term accountability is a significant focus amongst critical health researchers (Armstrong et al., 2000) and those working in IE (Mykhalovskiy et al., 2008; Rankin, 2009). I have been repeatedly invited to consider its meaning. Choiniere (2011) notes that the
contemporary use of this term extends beyond minimum care expectations published in professional nursing standards. Historically, nurses have been expected to conform to standards, guidelines and legislated requirements for practice (for example, see CNO, 2011). Although this still holds true, Rankin and Campbell (2006, p. 21) explain that accountability is much more complex today as it is also a “textual product”. Present-day management of clinicians and organizations relies upon quality control technologies that produce objective (statistical) data on patient care outcomes. This permits opportunities to evaluate care and download responsibility to clinicians through amendments to practice.

Whereas textual technologies provide a view into the care encounter, Rankin and Campbell (2006) argue that the data abstracted is demonstrably different from what is actually happening. Despite the importance of evaluation, they argue that the material and social world of nursing is a hitherto neglected subject of accountability. Through IEs materialist lens, they show how managerial audit reveals a decontextualized and partial view. If one relies upon this limited frame, Walton (1986) contends that it is all too easy to see nurses as wanting. Similarly, Latimer (1995) notes how attempts to evaluate nursing practice, at a distance, risk misinterpretation. Rather than faithfully translating events and practices, a managerial view permits a reverse reading; it takes up a retrospective or outside-in perspective on performance that leaves out important detail.

In aligning my use of accountability with the complex interplay noted above, I focus on sharing an intimate picture of what this is like for nurses. For example, nurses participating in pilot interviews demonstrate how intersecting social expectations generate tension and pressure to accomplish many things at once. Balancing the boundaries of intimate patient care with system-level interests draws upon an understanding of feminist and Marxist contradictions to
consider nursing accountability (Bisaillon and Rankin, 2013). This would mean that poor oral hygiene in intubated patients is experienced as more than a pressure to maintain norms of bodily propriety (Douglas, 1966). In addition, it refracts a larger set of concerns about infection and the need to mitigate threats to regional critical care resources.

Disjunctures of experience

Institutional Ethnographers (Campbell, 2003; Smith, 1987) point out that professional and organizational texts, such as the one referenced by the pilot participant above, have taken-for-granted properties. Their ubiquitous nature may disguise their powers of organization. Texts are not inert; they exert a type of force by calling people into particular kinds of recurring, important work. Omnipresent in health care settings, texts include, but are not limited to, forms, instructions, rules, email, policy statements, procedure manuals, statistical analyses and computerized data. Their ability to move and reproduce “detaches [text] from the historicity of living and activity” to orchestrate recurring forms of work (Smith, 1999, p. 135). This movement also enables the ongoing and simultaneous appearances of text across geographic boundaries and time.

Based on my own reflexive review of the literature, I have noted how texts can incite a disjuncture between experience and reality. Not having authentic representations of one’s work can position experience within a liminal space. The flat, factual rendering of information in authoritative journal articles, books or practice guidelines may inadvertently erase undocumented, non-legitimized experience. Moreover, backgrounded experiences can have unintended social consequences. For example, an ICU nurse named Bob found a lack of social value for nursing care difficult to reconcile. This positioned his nursing role beneath scientific and medical activity. Further, this set of arrangements made it difficult to discuss his work
touching critically ill patients publicly. Poor social understanding of his nursing work in the critical care unit made it difficult to move conversation beyond the requirement to clean incontinent bodies.

How this experience of social devaluation is sustained is important to consider. In some manner, the complexity of bodily care is elusive to those who have not participated in its delivery. Certainly, critical care nurses directly engage offensive bodily states. In carrying out mouth care, they are in contact with a space that often contains sputum, saliva, emesis, blood and many foul odours. However, the skill required to proceed is not always apparent. By removing excess detail, words are capable of sustaining misconceptions. Smith (1990) points to two principal devices in language that perpetuate the legitimacy of the conceptual over experience. Firstly, the use of metaphors such as ‘hygiene’ ascribes powers to discursive entities, effectively bypassing individuals. Secondly, the conversion of verbs such as ‘care’ into nominals further eliminates the presence of people and expertise. In combination, these rhetorical procedures make skilled activity difficult to locate. In contrast, the revulsions of illness step forward.

In IE, the standardizing nature of texts is considered the machinery of institutional coordination. This has empirical dividends for research as texts generously offer themselves up for investigation. The following sections open up the opportunities and challenges to locate and describe the interface of people and texts in practice.

**Ontological shift**

Opening up space for new realities is a common goal in research. IE as method can add to this effort by explicating how a particular set of relations penetrates the nursing space to organize particular kinds of recurring work and experiences. Important scientific concepts typically form
one lens through which nursing activity is measured. This is often the starting point for research that may seek to understand how nursing efforts demonstrate concordance or agreement with esteemed scientific ideals. For example, many research studies have collected data that would show whether a certain group of nurses practice oral care in a manner that aligns with a published practice guideline. Although a source of rich, patterned information, efforts to demonstrate measures of nursing knowledge leave out a central lived experience of bodies within a wider social and institutional order. This omission has been characterized as ontological and analytical superficiality (Porter & Ryan, 1996).

The raw experience of work with critically ill bodies and their nursing needs is another level of reality. When this everyday reality is left out, social or contextual influences can be ignored or alternatively conflated with individual attitudes, behaviours and clinical competencies (Nairn, 2009; Porter & Ryan, 1996). An ensuing educational reflex commonly repositions nurses as lacking knowledge (Paley, 2007). In pilot interviews, a highly experienced nurse suggested agreement when she shared, “I’ve been educated, educated and educated” (Beatrice, Pilot Interview, 2009). When care outcomes are deemed suboptimal, this suggests that nurses are frequently positioned as both the problem and the solution. In attempting to repair this oversimplified or knee-jerk way of approaching social issues, Hussey (2012) argues that IE offers one way to collapse the presumed separation between the local and institutional realities. Moreover, it offers a way forward in interrogating the organization of social problems.

Much of the interventional and evaluative research I reviewed in my literature review focused on educating nurses with valued scientific concepts concerning infection prevention and control. Hygienic intervention is frequently emphasized as a means to reduce oral bacteria and a related risk of VAP. These cognitive processes require a move to the abstract or conceptual
realm to understand the theoretical antecedents of VAP and its epidemiological description. IE’s distinctive epistemological and ontological features offer a unique opportunity to move in another direction. IE would have us see mouth care’s on-the-ground realities.

Qualitative and ethnographic convergences and divergences

In this section I will discuss similarities and differences between various qualitative and ethnographic methods and their goals. I will purposely focus on a select group of research approaches including classical ethnography, phenomenology, grounded theory, actor network theory and multi-sited ethnography. These methods are often pulled into opposition to the hegemonic status of positivism and statistical ways of knowing in health matters. Further, all of these methods can produce compelling description of human activity and experience. However, I will describe some of the tensions that can be generated between participant and analytic perspectives. By delineating specific limitations of each method, I will argue that IE beneficially enters the research conversation on mouth care “on its own terms” (McCoy, 2007, p. 701).

According space to account for one’s research approach is important, as it is not a simple choice. As a doctoral student, I can attest to the dilemmas that accompany the determination of an appropriate research approach. In part, this is because the historical “blurring of genres” renders the boundaries of each approach difficult to parse (Denzin & Lincoln, 1994, p. 9). Contemporary qualitative and critical social inquiry now crosses paradigms and historical movements that may not be initially obvious. For example, ethnography is one of several approaches to social research. Unfortunately, it lacks a consensus definition and method
because of its complex historical development with varied theoretical and disciplinary influences (Atkinson et al., 2009; Hammersley & Atkinson, 2007). Thus, I aim to briefly unpack a few important differences, and the manner in which they informed my move to IE.

**Classical ethnography**

The central research aim in classical ethnography has been noted simply as “describing culture” (Spradley, 1980, p. 3). However, culture is arguably complex, patterned and in some cases contested. Hammersley & Atkinson (2007) suggest that an account of one group’s everyday patterns, language and artifacts can be made a focus of descriptive study rather than a universal analysis of culture. The goal therein is to make explicit what is not initially obvious about the activities and roles encountered (Germain, 2001). Angus (2005) notes that uncovering knowledge behind everyday activity is a challenging yet common goal of ethnographic fieldwork. This is because informants may not be able to explain a rationale behind every tacit activity or behaviour. In order to begin seeing activity with an eye to behind-the-scenes cultural understanding, the ethnographer commits to extended fieldwork to see a full range of activity.

Speziale (2007) notes that a preconceived theoretical lens often directs ethnographers to attend to cultural domains of conflict, social control, interpersonal relations, social status and problem solving. This a priori perspective, whether driven by theory or researcher interest, is one criticism in common with many descriptive methods. A high level of conceptualization, or sense-making, may begin upon entry to the research setting. Unfortunately, this may create tension as it can abruptly shift the direction of inquiry away from everyday realities of participants to the researcher’s project of analysis. Therefore, an a priori lens can prevent direct learning from the social setting where implicit meaning is hidden. This maneuver moves away from discovering practical know-how to constructing generalizations (Hammersley & Atkinson, 2007).
Porter (2002) describes ethnography’s long-term focus on individuals or small groups as a problem. This is because the dynamic nature of social institutions may be poorly acknowledged. Central to this problem is a lack of inquiry into social relations beyond the local or particular. For example, the additional costs of hospital-acquired infection represent a social burden in which nursing care is implicated. How this concern reaches nurses requires thought. Although large social institutions such as gender, health and the economy would be present within the boundaries of the ethnographic study, the researcher would not have a particular technique to follow them. Instead, ethnographic interview and observation stay focused on the individual or local culture. As a result, intersecting social institutions remain somewhat entangled in individual narratives.

Regardless of the limitations of classical ethnography, local description of mouth care activity, as well as an analysis of its texts and tools is important. Ethnography’s efforts in rich description would be particularly helpful because this is missing from the nursing literature. However, rich description may not explicitly support tracing of social institutions and their imperatives. Moreover, it may lack a ‘critical’ drive that would question the organization of social problems that nurses are implicated in resolving. Thus classic ethnography as an intact method will not suffice for this study.

**Grounded theory**

The very purpose of grounded theory (GT) is to explore social processes with the main goal of theory development (Sandelowski, 1993). The researcher inductively constructs theory from data including interview, observation and documents concerning a particular phenomenon of interest. Charmaz (2000) notes that Glaser and Strauss created GT as a reaction to mid-twentieth-century positivist dominance in science. They aimed to create a rigorous method of
qualitative data generation in which theory was grounded in the data. Their innovation functioned to create what Denzin and Lincoln (1994) call a qualitative revolution.

Significant to GT data collection methods is the researcher’s presence and implicit role in conceptualizing a theory of the social from first exposure to the field (Charmaz, 2000, 2006; Guba and Lincoln, 1994). With this ongoing analysis in mind, themes emerge recursively throughout data collection. Patterns therein are observed and described as codes. GT culminates in a highly analytic “basic social process” that may be tested through verification research (Speziale, 2007, p. 134). For those interested in how knowledge drives work processes in health, these types of conceptualizations can mask on-the-ground realities. A degree of objectification would accompany this effort as the distance between the participant and researcher expands during the analysis. Seeing people as experts can be overshadowed by the role of the researcher, whose overarching analytic process reduces their presence in order to describe a general theory.

Danemark, Ekstom, Jakobsen and Karlsson (1997) states that inferences from GT are subject to serious limitations based on potentially unobserved or non-communicated experiences. Therefore, codes can be “short-sighted, shallow and naïve” (p. 136). Language used by participants may be strongly influenced by conceptual tools readily spoken in the setting. These approved ways of speaking thus reproduce what Smith (1990, p. 155) calls “ideological narrative” and conceal real activity. Specialized language may obscure the manner in which work is socially organized. Moreover, a reliance on narratives alone may preclude access to knowledge or processes of which participants are not aware, or do not fully disclose. Although participant narratives are highly valued in GT, the project of theory development relies upon the researcher’s subjective appraisal. If this study is to be helpful to nurses, it must move away from theory development to stay grounded in the activities of people. Theory development is not my
Phenomenology

Phenomenology is the study and description of consciousness as experienced from the first-person point of view. Phenomenology emerged from the philosophical tradition launched in the first half of the twentieth century by Edmund Husserl, Martin Heidegger, Maurice Merleau-Ponty and Jean-Paul Sartre (Smith, 2008). In phenomenology, human consciousness is characterized by its intentionality. People are always conscious of something. However, phenomenologists assume that people do not routinely attend to characterization of their experiences as they actively live them. This may be more aptly considered through retrospection. Thus, phenomenologists factor out notable features of experience for elaboration, including types of experiences, objects and the conditions enabling them.

Phenomenology develops a complex account of temporal awareness, including the self in different roles, embodied action, awareness of others, language, social interaction and everyday activity. The researcher taking up a phenomenological approach is often critically interested in the social encounter (Porter, 2002). This situates a theoretical lens of exploration within the subjectivist tradition, stressing the importance of true meaning. These truths are expressed as essences of the lived experience that form units of shared understanding (Speziale, 2007).

Phenomenological description can provide compelling accounts of human experience. However, it operates at the conceptual level to do so. Moreover, it concentrates exclusively on the emic, or insider perspectives of reality. Porter and Ryan (1996, p. 415) call this the Achilles heel of phenomenological research. Large-scale social issues and their influence are removed or alternatively reduced to the level of the individual. Making the empirical leap to social structures
is blocked in part due to phenomenology’s narrow focus on personal meaning. The larger material world and a host of conditions that people engage become difficult to grasp. This renders a phenomenological approach not useful when my goal is to see links between activity and social organization. My intent is to depart from a focus on the individual.

**Actor network theory**

Newer forms of theory and ethnographic writing have recently emerged that take great interest in science and work processes. Actor network theory (ANT) takes its focus as a sociology of associations where people and technologies are linked in stable or unstable networks. With a keen interest in medicine, ANT is credited to the work of Bruno Latour, John Law and the post-ANT feminist work of Annemarie Mol. Bypassing the sociological interest in agency and structure, ANT sees micro- and macro-level networks functioning similarly where the latter are more extensive and stabilized. ANT focuses on how networks of textual, conceptual, social and technical actors become linked in overlapping and often surprising work processes. As networks grow and stretch out over multiple sites, their abilities to enlist others, establish roles and scripts are studied.

Criticism of ANT is aimed at its causally equivalent treatment of human and non-human actors who appear to reproduce or transform each other’s activity without reference to social structures. For example, people and technology may be examined and discussed in similar ways. This effectively dissolves issues such as gender, socioeconomic status and professional hierarchies. This may situate ANT in opposition to materialist as well as critical realist views (Elder-Vass, 2008). Further, these differences may disable an interrogation of social organization. Here, action and knowledge are somewhat outside the actors, rendering the body a lesser form of knowledge informing how things happen. This employs a necessary abstraction of
the human experience that can be a limitation for those engaged in the drama of healthcare delivery.

Despite the above-mentioned shortcomings, ANT’s technique of tracing process connections at the level of the individual, to others elsewhere, may be helpful. Nurses work within complex networks of professional roles, texts and technologies. In everyday terms, this often relies up individual innovation or what Mol (2002, p. 177) calls “tinkering” to get things done. As work is processed and exchanged in textual form, it can be followed in detail. Of particular importance is the interplay of technologies and the demands they place on caregivers or patients. However, ANT is limiting given its lack of emphasis on the nature of ill bodies and the social organization of caring work. Analysis of networks and their patterns emphasizes a rational approach and minimizes the presence of people and bodies that are central to my interests.

**Multi-sited ethnography**

Multi-sited ethnography is described as an emergent methodological move away from what Michael Burawoy (2000, p. 4) calls the “solitary confinement” of ethnography. By tracing nurses across geographic boundaries and time, George (2000) engaged this method to trace the evolution of meaning, objects and identity amongst a group of Indian nurses and their communities in two international sites. As a strategy of tracing connections and associations within and between sites, multi-sited ethnography picks up on the ethos of globalization to consider larger flows of resources such as discourse, expertise and money.

As a novel method of ethnography, multi-sited study seeks to overcome limitations of classic ethnography, in which the complexity of modernity dissolves into one site. At its core is
the assumption that people are mobile; they occupy multiple spaces and realities. A complex interplay of powers crosscuts these spaces and is empirically discoverable through comparison. Extended participatory observation and interview aims to look at behind-the-scenes effects of movement, whether the focus is people, resources or technology (Marcus, 1995). Special attention is paid to emergent and often unexpected social reconfigurations.

As a novel form of ethnography, multi-sited research holds great appeal, as it engages the complexity of fragmented modern life without being encumbered by time and space. This suggests dividends for researchers as it can aim to understand and contrast experiences of work across diverse geographic settings. However, the study of global connections shifts analysis to a theory of associations that relies on a degree of abstraction. This form of ethnography does not link everyday experiences with the organizational properties of texts. Accordingly, multi-sited ethnography may produce very ‘thin’ empirical associations (Marcus, 1998). Given my aim to stay away from theorizing people and activity, this method does not fulfill my needs.

**Review of qualitative and ethnographic methods**

In reviewing a variety of research approaches, I find much to admire within the qualitative and ethnographic traditions. Consideration given to people within what Grahame (1998, p. 352) calls “natural surroundings” particularly interests me. Moreover, an empathetic account of experiences with a group of participants is common. This proposes the possibility of emancipatory and transformative outcomes from the research process. However, methods such as classic ethnography, phenomenology and GT are criticized for ill-defined terminology that lacks paradigmatic consensus (Smith, 2005). Newer traditions that employ ethnographic approaches, such as ANT and multi-sited ethnography, join their predecessors in abstracting and theorizing human experience and actions. Ways of speaking and acting might inadvertently be
assigned to individuals without due reference to powerful social institutions and the material conditions that influence these observables. These limitations pose distinct barriers that I need to overcome.

In this study I require a two-step approach. Firstly, I need to begin within the nursing setting. I need to see and describe bodies moving in response to the demands of real patients and other active constituents such as technology, texts and interdisciplinary actors. This will allow me to write nurses back into the story, using their own terms, in order to move beyond the descriptive limits of categorical, scientific language. Secondly, I need to go beyond empirical observation in the critical care unit in order to trace extended forms of organization that affect what is happening in mouth care. More specifically, I will need to shift inquiry to the extralocal level to see how nursing work is connected to a larger social framework.

The limitations noted in the above approaches speak to problems of analytic abstraction where the material world is displaced by generalization and theory. The approaches I have discussed commonly explain activity from the researcher’s point of view and analyze particular groups of people. My personal and professional reflection observes nurses being criticized for their work omissions, and this is overdone. In clinging to a theory of deficit, nursing research in mouth care has tended to disembody and disenfranchise the larger social world. It has done so by beginning and ending inquiry in conceptual categories such as nursing attitudes, knowledge and practices. Most of this research has been generated through surveys and statistical reporting, resulting in a fragmented, decontextualized description of mouth care.

Given the significance of bodies and their many needs in critical illness, it makes sense to find a method of inquiry that encourages a rich ethnographic description of mouth care. Moreover, this method needs to be able to open a view to embodied forms of knowledge that
exist outside textually based media such as practice guidelines (Lecompte, 2002). Pilot interviews were helpful in showing different ways that nurses speak about mouth care in addition to other forms of hygiene. A method that would help map these forms of knowing and speaking, through material forms such as texts, may reveal how this work happens.

**IE as a critical theory of the social**

IE is most often described as an approach to sociological inquiry rather than a theory of the social (Quinlan, 2009). IE began as an extended critique of social theory and the tensions it generates, as people can get lost in conceptual categories that do not resemble their everyday experiences. However, this does not make IE atheoretical. It is underpinned by diverse social theories regarding the dichotomies of structure and activity in modern life. An interest in social interaction draws on Garfinkel’s (1967) ethnomethodology, with its interest in taken-for-granted everyday activities and reasoning of people (Campbell, 2003). A commitment to beginning in the actualities of people’s lives also leverages Marx and Engels’ (1976) materialist ontology to understand how people are drawn into practices and particular forms of recurring work by powerful institutions such as the economy.

Because language entails an essential medium in this project, it is not surprising that assumptions are drawn from symbolic interactionist theory of shared meaning and perspectives. Considered to be an originator of symbolic interactionism and social psychology, Mead (1964) was interested in knowing how people continuously create the social world through their everyday behaviours, interpretations and responses to one another. This draws upon a materialist understanding of the body and mind being part of one whole. In other words, Mead opposed the view that the mind occupies a transcendent reality. Similarly, IE draws upon Bakhtin’s (1984) theory of communication. Therein, language is inherently social and active. It comes with layers
of meaning, ideology and the predetermined intentions of others. Importantly, language can invert social propriety and turn our gaze to the (high-low) manner in which we address the social, scientific and corporeal worlds we occupy.

Despite the appeal of the above-mentioned philosophical and theoretical approaches to the complexities of social life, IE departs from all of these social science projects. It does so in its materialist commitment to tracing social relations through text “from [their] place nested in the world of the subject” (Campbell, 2003, p. 12). Smith (2005) notes that IE directly opposes traditional forms of sociological inquiry that perpetuate indistinct meaning in metaphor and abstraction. More specifically, traditional social inquiry is problematized by its inability to empirically trace social structures at the level of everyday activity. Smith (2005) quotes Hubert Blalock’s assertion that convention or style in writing the social perpetuates conceptual distances and vague meaning. This may be an important consideration for nurses whose work is arguably anchored in the physical realm, but is frequently reported and critiqued in ways that obscure its material nature.

**Nurses and tensions in work**

In contrast to classical ethnography, IE has aimed not for an essentialist interpretation of human experiences and motivation but for explication of *how* things happen. This differs from classical ethnography in not intending to explain events solely through a lens of theory (Campbell, 2003). DeVault and McCoy (2004) describe IE as a counterpoint to established ethnographic methods or outsider accounts of groups and cultures. IE distinctively attempts to refrain from objectification at the level of the individual. The analytic process therefore focuses on the institutions and social structures affecting the work under study.
To begin the work of empirically understanding how things happen in oral care, I start from the problems that nursing pilot participants have foregrounded. Discourses and practices they have shared delineate tensions in the everyday work processes of bodily care. However, it is clear that the words and concepts they employ often originate beyond the immediacy of the work setting and travel into it in material form such as texts. IE describes these as conceptual practices as the centre of institutional governance. Nurses often encounter practice ideas in taken-for-granted forms such as charting documents, physician orders or policy. Tension in nursing often occurs when local knowledge and concerns brush up against expert concepts and language. Lost in the space between are the conditions and contingencies in which nursing work plays out.

The nature of dominant evidentiary discourse in healthcare undeniably links nurses into institutional action originating outside their everyday worlds (Campbell, 2003). Whereas the traditional ethnographer can observe and describe local activity, he or she cannot generate a social cartography that links people and activity across time and space. Dorothy Smith (2005) notes that the social coordination of our day-night worlds cannot be wholly understood from observation alone. Moving beyond a truncated ethnographic account requires additional method. IE’s mapping of texts can trace knowledge back to authors in other locations where they can be interviewed about their work. Text generated by nurses in the local work setting is likely to move as data to other sites. How this work of inscription in flowsheets and databases connects with work undertaken at other locations poses important questions about nursing visibility.

Seeing new forms of work emanating from discursive practices can uncover powerful forms of influence and responses at the local level. IE’s ability to find and link these helps uncover tensions or problems that circulate in external appraisal. Further, IE may uncover issues that remain unresolved in relation to their importance to patients and the health care system. As a
result IE can act as counter-discourse to interrogate medico-managerial ways of knowing what critical care nurses do.

**Locating nurses in evidentiary texts**

Sources of text in contemporary critical care nursing practice have expanded through the use of technology, evidence-based literatures and systems of managerial audit. This expansive process calls for a method of inquiry closely attuned to the impact of texts in nursing. Texts often appear in the form of guidelines, checklists, reminders and audit tools. Increasingly, these items are aimed at nurses to ensure particular aspects of care are completed. However, texts as methods of accountability are not limited to paper-based formats. IE would attend to images, screens and artifacts from technologies that transmit ways of knowing and organizing work. In pilot interviews it became apparent that influential texts routinely enter nursing settings in unexpected ways:

Craig: OK. I was interested when you said about cleaning the mouth and you mentioned the solution called chlorhexidine. Can you tell me a little bit about that and where that came from, what that’s about?

Bob: Oh, the best of my understanding, it’s coming out of the recent VAP studies.

Craig: A study? OK.

Bob: Which was recently posted everywhere. Uh, as a bedside in-service, as an online update through the hospital email, posters, posters in a library, or everywhere, wherever it’s accessible for – mostly, I believe we’re mostly targeting nursing. (Bob, Pilot Interview, 2009)

Smith’s (2001) understanding of text as a foundational coordinating medium explains how texts move clinicians to speak and think about work in particular ways. “Texts frame issues, establish
terms [and] serve as resources” in the accomplishment of day-to-day activities (Smith, 2005, p. 45). In the above quote, Bob explains how texts arrive in the practice setting to mediate important ideas. Moreover, how nurses are targeted to activate the imperatives therein.

An important distinction in IE’s theorizing of text is that it does not centre on explanation and prediction. Instead, it opens up our understanding of texts being more than simple tools of activity coordination. IE notes that texts are politically active, as they can position people relative to hierarchical social structures and concepts. For example, ideas like ‘basic’ nursing can be articulated up against hierarchies of care found within ‘advanced’ life-support algorithms. These intertextual relations are complex and undoubtedly require careful explication as they affect interpretation of nursing resourcefulness and trustworthiness. As an example, one nurse described how hygiene could be deprioritized in response to these texts:

I think that hygiene, while it’s important, it’s never really the highest priority. [...] I think it’s appropriately placed. It’s not the least important thing that we do. It’s absolutely important, ’cause you can’t have good ALS [advanced life support] without good BLS [basic life support]. But during a crisis it’s not your number-one priority. (Rick, Pilot Interview, 2009)

The preceding quote suggests that ambiguity in practice poses particular problems for nurses. Well-defined priorities are helpful in an emergency. However, these same events may also cause problems when interpreting care, because omissions are thought to reside at the level of the individual (Deveau, 2008). An oversimplified analysis removes the unfolding context in which deviation from routine takes place. In turn, it may also remove any adjacent texts and accountabilities for enacting particular interventions. As suggested by the nurse named Rick, oral care may not occur during periods of patient instability. In the setting of retrospective oral
hygiene appraisal, the presence of the interdisciplinary team, advanced life support texts, and the activities of patient resuscitation may fall from view.

The grounding for institutional ethnography can be attributed, in part, to Karl Marx’s materialist work in which he was committed to begin inquiry not from concepts, but from actual people, their work and the unfolding circumstances of their lives (Smith, 2004). Smith integrated this way of entering into social relations within institutional ethnography. In making a commitment to “the actual activities of actual individuals and the material conditions of those activities” (Smith, 1990, p. 6), IE affords the opportunity to see how people take on particular tasks, what they know about doing them, and what helps or inhibits those activities.

In considering the aforementioned logic of advanced life support, Campbell and Gregor (2008) might add that the activation of texts requires special knowledge and skill. Actively maneuvering the intricate hierarchy of texts that exist in any workplace, in addition to a competing sequence of important priorities, requires a type of competence that may not be visible to those outside the work setting. In the same instance, this specialized effort may not be visible to the naïve observer. Explicating how things happen requires great care. With this in mind, Smith’s IE extends Marx’s framework to consider how particular forms of textual knowledge call upon the body of the participant as well as the researcher. Disregard for who is doing the work under study, and the varying conditions therein, may reproduce misconceptions and social inequities. Taken-for-granted may be the context and resources that naturally vary over time and place.

As an important example of clinical ideals, The Canadian Clinical Practice Guideline on the Prevention of Ventilator Associated Pneumonia (Muscedere et al., 2008) emphasizes preventative care within three clinical strategies: physical (advanced airway management),
positional (care of the body), and pharmacological. All three categories represent ideas or concepts of patient care that rely on a decontextualized, abstract format. Nurses are implied rather than explicitly mentioned. This necessarily pulls essential bodies out of view as they manage airways, position bodies and deliver medications that prevent serious respiratory infection. Mouth care is implied within the pharmacological category that arguably dissociates it from the embodied work of ‘doing mouth care’. Therefore, it could be argued that this form of communication gives preferential powers to antimicrobials to prevent deadly pneumonia rather than people. Smith (2004, p. 448) notes that this type of textual conversation “represents ideas and concepts as if they were powers in of themselves.” Hence, concepts are conceived as independent agents capable of preventing illness in their own right.

Purkis & Bjornsdottir (2006) encourage nurses to pursue practice inquiry with the active context in mind. This is because the “medically defined” outcome takes for granted the context-sensitive work of nursing (p. 252). Historically, terms such as triage and surveillance are named as the cardinal features of critical care nursing. However, the activities they infer are ambiguous. On the one hand, they blur the lines between people and bedside monitoring technology (West, Mays, Rafferty, Rowan & Sanderson 2009). On the other hand, they appear to overstep physical care needs such as bathing and oral care that take place in the same context. Monitoring is often tied less to physical tasks and more to cognitive processes. Not surprisingly, representational technologies have long troubled nursing for their turn away from physical bodies to screens (Sandelowski, 1997). Similarly, the medical outcome assumes all things are equal in matters of care delivery. This generates what Purkis (1996) calls the paradox of thinking about practice at a distance. A nurse named Rick exemplifies this:

You don’t need to listen to a patient’s chest, you’ve got an x-ray, you’ve got a machine telling you all of the parameters on their breathing, you’ve got a CAT
scan, you’ve got all of their lab results. Why would I need to listen to their chest? I know exactly what they’re doing. And it [is] very tongue in cheek, but ICU pulls you so far in that direction that [you need to] catch yourself… (Rick, Pilot Interview, 2009)

With Rick’s experience in mind, understanding the location of the nurse and the patient amongst the machinery and the data is a challenge. Less obvious is the ongoing work of lifting, pulling, positioning and cleaning dependent bodies (Sandelowski, 1997). Given the problems disclosed in pilot study narratives, it is clear that nurses are reporting that cleaning bodies is technically difficult in its active accomplishment. However, instead of opening up these material experiences, conceptualizations of behavioural and cognitive nursing deficits have been addressed in quantitative terms (for example, see Allen Furr et al., 2004). The reality of oral care being an active practice, undertaken in a temporal and material location, has been not similarly investigated in the nursing literature. The following chapter takes up this opportunity and sets forth a plan to begin inquiry in the active nursing context.
In this chapter I provide a detailed account of the study’s methods and analytic strategies. Many of the data collection methods discussed here were purposefully employed during fieldwork to better understand the experiences and activities that entail oral care in the critical care unit. To begin, I explain how the study setting is located within a large urban teaching hospital, a particular clinical and managerial framework, as well as an acuity classification system of critical care services in Ontario. Gaining entry and reciprocity is described as a process that began in pilot interviews and continued throughout the study. I discuss two levels of data collection, the characteristics of participants included, and comment on the referral strategy that assisted me to see connections across time and space. Finally, I discuss some of the challenges I experienced in the field, how I responded, and how those encounters assisted the analysis.

Institutional ethnography as a method of inquiry employs a range of data collection methods that align with what is commonly described as qualitative inquiry. This includes observation, interview and document analysis. However, it diverges from other qualitative methods, as it does not pose a hypothesis in advance of data collection. As an emergent process, it seeks to understand how work actually happens. Smith (2006, P. 3) confirms the need to begin in activity rather than a priori concepts:

The idea is to reorganize sociology as a knowledge of society so that inquiry begins where people are and proceed from there to discoveries that are for them, four us, of the workings of a social that extends beyond any one of us, brining our local activities into coordination with those of others. The project is to extend people’s ordinary good knowledge of how things are put together in our every lives to dimensions of the social that transcend the local and are all the more powerful and significant in it for that reason.
With Smith’s direction in mind, it would be natural to enter the field with a question. This study is guided by the overarching question: how do translocal, text-mediated relations organize nurses’ mouth care work in the critical care unit? A classic approach in IE is to begin within the experience of everyday work practice of people (DeVault & McCoy, 2004). In this case, it is important to join nurses in the critical care unit, where mouth care of mechanically ventilated patients occurs.

The reflexive challenge for the institutional ethnographer is to move beyond a generalizing and unrelated account. Ayres, Kavanaugh and Knafl (2003) note that this is a common challenge in many areas of inquiry that attempt to understand multiple accounts of experience. They quote Richard’s (1998) description of a “garden path analysis” (p. 324) in which inquiry ends in a meandering list of themes. Ayres and colleagues (2003) assert that this is often the researcher instantiating a theme prematurely. They contend the themes are often unrelated to the larger social context and hold little value in explaining how things happen.

The institutional ethnographer is therefore guided to pay attention to these truncated accounts. As a way of managing the tendency to isolate an observation or interview account, they are cautioned to pay special attention to language. “Institutional capture”, in which accounts can be inadvertently converted into dominant discourses, provide a warning sign (Smith, 2005, p. 119). Approved ways of speaking may not afford a view to actual work and who is doing it. Thus, efforts are aimed at getting underneath language to avoid rendering people as objects of professional knowledge (McCoy, 2006).
The study setting

This study began in a twenty-bed critical care unit within a large, urban university-affiliated hospital in Ontario, Canada. With over one thousand acute and long-term beds combined, the hospital provides services to approximately ten thousand patients annually and over twelve hundred of those individuals pass through the study unit annually. As a designated Level 3 critical care setting, the MOHLTC requires the unit to provide advanced and prolonged respiratory support to patients with multi-organ system failure (Bell & Robinson, 2005). Patients typically originate from the hospital’s emergency department, operating theatre or ward settings. However, they may also transfer from a distant jurisdiction because of the hospital’s ability to provide a diverse range of medical services. Each of the critical care unit’s twenty beds is complemented with a range of technologies to provide a comprehensive repertoire of monitoring and life support interventions for a mix of medical, surgical and trauma patients.

Patient care is provided 24 hours a day, 7 days a week in the critical care unit. Nurses are physically on the unit at all times, with their work organized into day and night shifts. The organization of a full-time schedule of 12-hour shifts often means that one nurse may be present for 2 consecutive days followed by 2 consecutive nights. In sequence, the nurse may have three to four days off duty. A part-time nurse might work more or less frequently in a similar manner. Physician and respiratory therapist coverage is also available 24-hours a day, but they are fewer in number and may not be physically on the unit at all times. Physiotherapists, pharmacists and some of the other regulated health professionals (e.g., social work) typically work on a Monday through Friday basis, with occasional weekend duties. In addition to the regulated health professionals, 2 to 4 non-regulated staff is always present in the unit to assist with patient mobilization (e.g., turning in bed) and the retrieval of required equipment. Further, personnel
from other medical departments (e.g., neurology) and supportive services (e.g., diagnostic imaging) move through the unit on a regular basis.

Significant routines in the unit include a change-of-shift report whereby a patient status report is passed on verbally between the outgoing and oncoming nurse. Patient documentation during each 24-hour period is hand-written by nurses in one large document called a flowsheet. It serves as a central focus during the status report. In completing this form, nurses inscribe information from their physical assessments, ongoing observation, technologic devices and screens including a bedside computer that relays patient information on an hourly basis – or more frequently. The interdisciplinary team gathers and reviews the flowsheet as part of patient rounds twice a day – mid-morning and late afternoon or evening. Short unit staff meetings may occur once or twice a week during the daytime as a team ‘huddle’ around the nursing station. However, these are primarily attended by nursing staff and are led by the patient care manager (PCM). During the night, physician, interdisciplinary and managerial staff are reduced. However, nursing routines remain relatively similar to the daytime, despite occasional fluctuations in available nurses.

At the provider level, the critical care unit is managed in a ‘closed’ model, which is also known as the intensivist-led model. Intensivists are physicians who have completed at least six months of specialty training in a critical care setting. In the closed model, the intensivist is responsible for all patient admission and discharge decisions. Nurses are normally assigned to one mechanically ventilated patient, which is also described as a 1:1 nurse-to-patient ratio. However, their assignment may be increased to a 1:2 ratio if two patients are deemed similarly stable or ready for transfer to a lower acuity setting. The unit has a full-time PCM, who is accountable for more than one hundred full-time, part-time and casual nursing staff. The
management of other professional staff (e.g., respiratory therapists) and non-licensed staff (e.g., cleaners) is coordinated with another manager.

At the hospital level, the critical care unit is governed within a “program management” model (Heslop & Francis, 2005, p. 2). As a method of improving coordination and controlling costs, the study unit is grouped with other ICUs under the administration of one program director. As a modification of the discipline-specific hospital management of the early 1990s, the critical care program espouses a multidisciplinary team approach to care delivery. This means that managers at the unit level may be more aptly identified as interdisciplinary leaders and need not be nurses. Therein, they typically seek to balance the “effective and efficient use of resources” (Heslop & Francis, 2005, p. 5). With a view to efficiency, strategies such as benchmarking against other organizations, charting-by-exception and care pathways are routinely employed (Heslop & Francis, 2005).

At the regional level, the unit is located in an urban catchment area that is managed by a Local Health Integrated Network (LHIN). Created in 2006 under the Local Health Integrated Network Act of Ontario, 14 LHINs now function as non-profit corporations responsible for the planning, integration and distribution of health services within each region. This means that each LHIN board oversees the funds allocated to hospitals in its area. As it pertains to the critical care units in each LHIN, both the hospital and the LHIN board report to the Ontario Ministry of Health and Long-Term Care (MOHLTC) under the auspices of an office called the Critical Care Secretariat (CCS). Established in 2004, the Secretariat works with medical leaders and hospital executives to improve access, quality and overall coordination of critical care services across the province of Ontario (MOHLTC, 2012).
Gaining entry and reciprocity

The nature of this research depended on nurses’ participation within the critical care unit. Entry to the research site was previously negotiated during pilot interviews with the hospital’s critical care program director and patient care managers, who also happen to be nurses. They expressed interest in encouraging nursing research and gaining insight into the complexity of hygiene. For the larger study reported here, the same individuals were approached for their input prior to ethics review. I spent time elaborating on the study question and the data collection methods. In particular, I detailed the amount of time I would spend on the unit in observation, follow-up interviews and collection of blank documents. I emphasized my focus on nursing work and that I would not be collecting any patient identifiers. Importantly, I shared my non-evaluative approach to mouth care as I was keen on tracing discourses and extralocal social relations originating outside the critical care unit.

The assistance of the study unit PCM was helpful in notifying staff about the study and opportunities for nursing and interdisciplinary participation. I provided the PCM with a copy of the approval letters from the University of Toronto and the local hospital research ethics board (REB). The PCM then notified nursing staff about the study in weekly staff meetings and authorized the email distribution of a study information sheet (Appendix B – Nursing Staff Study Announcement) and a poster for family awareness of an observational study (Appendix C – Family Notice of Nursing Study). Prospective nursing participants contacted me by email to learn more about study participation.

Timeline

Data collection took place over a period of approximately 1 year and 3 months: June 2011 through September 2012. Nursing work observation and interviews were completed in
seven months. However, interdisciplinary interviews required an additional eight months to complete.

**Data collection levels one and two**

This study proceeded with data collection in two parts. First-level data generated first-hand accounts of the work of mouth care. Second-level data aimed to generate links to larger organizational details and the extralocal (Campbell & Gregor, 2008). This involved a move outside the critical care unit to interview multidisciplinary informants (second-level data) who provided other views or explanations of mouth care.

**Level-one inclusion criteria**

Up to sixteen critical care staff nurses working in a Level 3 critical care unit at a University of Toronto affiliated hospital were to be included. The following inclusion/exclusion criteria were to apply:

- Nurses employed full- or part-time in a Level 3 critical care setting
- Experience performing mouth care in intubated and mechanically ventilated patients
- Willing to participate in a 4-hour observation period (day or night) during concurrent assignment to an orally intubated/ventilated patient and/or participate in a 1-hour interview
- Willing to discuss key forms, policies and influential texts (computer or paper-based) relevant to mouth care
- Willing to suggest experts I may approach to know more about mouth care

**Exclusion criteria**

- Non-critical care nursing staff and/or medical and allied health professionals
Participants

Because sample size requirements do not apply to qualitative inquiry, the minimum number of participants had not been preset at the time of study recruitment. Nursing participants (Figure 1) were purposively recruited for direct experience in the provision of care for intubated and mechanically ventilated patients. Rather than aiming for a representative sample, this method of recruitment was used to achieve diversity in experience (Barbour & Barbour, 2003). In the combined sample of pilot and main study participants, eight were female (67%) and four were male (33%). Their years of experience in the ICU ranged from 1 to 30 years.

Level-one data: Nursing observation and interview

The first four nurses were recruited in pilot interviews to help develop a semi-structured interview guide. Subsequently, I partnered with eight critical care nurses in order to observe their assignment to an intubated and mechanically ventilated adult patient. Each observation was a 4-hour interval during a shift of their choice. Because nurses consented ahead of time, I relied upon them to contact me in advance with potential dates. With some negotiation, I was able to rotate my time in the unit, alongside each nurse’s preference, in order to observe care around the 24-hour care period. As an experienced ICU nurse, I offered support analogous to a nursing student (e.g., obtaining items for the nurse, assisting with simple nursing tasks such as bed-making and tidying). This enabled me to remain near the nurse and ask questions as close as possible to direct care processes.

I actively negotiated the best method for bedside participant observation with each nurse in order that they not feel distracted from their patient’s needs nor obligated to provide explanations in front of the patient. Moreover, I revisited this agreement as each 4-hour
observation period progressed. In practice, this meant that I asked questions during or shortly after periods of direct patient care activity. The questions I most commonly asked during observation included: “How did you know to do that?” and “How did you know what to do next?” Field notes describing the nursing work I observed, the conditions under which it took place and the language spoken were generated during breaks from active nursing intervention or breaks outside the critical care unit. Though I anticipated several instances where I would need to remove myself from observation, these did not occur. These included periods of patient instability (including code blue) and private family discussions. Regardless, I introduced myself to families and visitors and provided an informational sheet during my observation periods. In turn, I extended the option to decline my presence at the bedside.

After each participant observation session, I followed up with a nursing interview (the same individual) within a 1-month period. This semi-structured 1-hour interview took place in a private hospital meeting room and was digitally recorded. I used the set of interview questions generated in the pilot study (Appendix A); however, the interests and focus of the participants often guided the conversation. I used techniques formally encouraged by other institutional ethnographers. For example, Devault and McCoy (2004) recommend conversation focus on observable activity or routine. In this way, empirical patterns of actual work can be built up. Further, I inquired about the ways in which people use texts at work. As one example, I asked how people used texts or technology to stay organized. This was very helpful in focusing talk on sequences of work and important accountabilities that may be unique to their role.

Follow-up interviews also supported my expanding understanding of nursing skill, accountability and a larger social map. The interview acted as an opportunity to ensure I adequately understood mouth care work based on explanations provided during observation. To
the interview I brought blank copies of the charting forms that participants had showed me during fieldwork. I asked for a detailed tour and discussion of these forms. At the end of each interview, I inquired about any influential topics or texts that we had not previously discussed. Moreover, I asked participants if there were significant persons of interest I should talk to in order to know more about mouth care in the critical care unit. This helped me to understand the social setting and consider how to move from level-one to level-two data.

**Moving from level-one to level-two data**

Level-one data yielded detailed descriptions of routines, techniques and experiences in mouth care. Interviews in IE have been described as an open-ended inquiry in that they are an informal, non-evaluative conversation aimed at understanding sequences of work (DeVault & McCoy, 2006). Campbell and Gregor (2008) point out that when people describe their work, they typically speak in professional jargon and might omit items because they take for granted a baseline understanding by the interviewer. One method to overcome this is to ask for a temporal account of things and read it back to participants. I used questions such as “*What am I missing here?*” in order to open up important contextual detail and experiences.

As anticipated within the descriptions provided, I became aware of what DeVault and McCoy (2004, p. 757) call “discursive processes.” I built up an understanding of the variety of ways people talk about their work as important. This offered me a way to hear the social relations in nursing work. One of the questions I used in this line of interviewing was to ask nursing participants about potential interdisciplinary informants (e.g., extralocal informants or experts) who they believed would provide interesting views about mouth care or related topics. The move to extralocal informants as level-two data allowed me to understand similarities or differences in the ways people spoke inside and outside the critical care unit that connect them in particular ways of knowing oral care.
Because level-one observation and interview provided clues to level-two informants, the sequence of data collection often overlapped. Nurses often recommended the same person or professional group. As personal introductions were provided, simultaneous data-collection processes began to unfold. In other words, levels one and two data collection occurred during the same periods. This was helpful in expanding my understanding of mouth care work from different levels or vantages.

**Level-two data: Interdisciplinary participant interviews**

The exact identity and locale of interdisciplinary informants for level-two interview data collection could not be pre-identified because of the emergent nature of the study. I anticipated that important people or documents identified by the nurses in level one data generation would provide clues to level-two participants. Therefore, I predicted that some of these people would include document authors or experts such as local hospital educators, managers and physicians. However, I also foresaw a possibility that stakeholders outside the hospital might be approached, including researchers and policy-makers. At study inception, there was no restriction on the number of interdisciplinary informants in level two data collection; however, this eventually matched the number of nursing participants, at twelve people each. Nine interdisciplinary participants were female (75%) and three were male (25%).

**Level-two inclusion criteria**

The following inclusion/exclusion criteria were to apply:

- Identified by a critical care nurse in observation or interview as an important informant
- Willing to talk with a researcher for 1 hour regarding their work responsibilities and knowledge of mouth care in the critical care unit
• Willing to discuss and/or share key forms, policies and influential texts (computer- or paper-based) relevant to their everyday work

• Willing to suggest other experts I might approach to know more about mouth care

**Exclusion criteria**

• Not willing to participate in an interview

**Mapping participant referral**

It was possible to map the process of participant referral between levels one and two data. From each sequential participant, I requested the name of a potential informant of interest. With reference to the person or professional group indicated, I have drawn arrows to visualize how this unfolded. On the one hand, this provided the opportunity to understand how certain people were identified as experts. However, it also functions to show how the network of social influence extends far beyond the bedside (Figure 1).

The participant map shows an observation, interview and referral sequence by which people are linked. From the nurses’ referrals (solid arrows) it is possible to see a group of professionals that work in close proximity to one another. This group included, a nursing educator, PCM, intensivists, advanced practice nurse, speech language pathologist, physiotherapist and respiratory therapist. Because of their proximity to patients, the people they referred might have had the opportunity to observe oral care or look into a patient’s oral space on occasion. In contrast, interdisciplinary participants referred in two directions (dashed arrows). The first direction involved people who either worked outside the immediate care environment or were in positions of authority (e.g., hospital executive). However, interdisciplinary participants also requested confirmation that I had spoken to nurses regarding oral care. They
often shared that they had not had the opportunity to perform oral hygiene or closely examine its execution in their everyday work. This second referral direction returned me to the nursing group.

<table>
<thead>
<tr>
<th>ICU Nursing Participants (pseudonyms)</th>
<th>Work Observation Interview</th>
<th>Interdisciplinary Participants (Pseudonyms)</th>
<th>Title/Profession Interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bob (pilot)</td>
<td></td>
<td>1</td>
<td>Greta</td>
</tr>
<tr>
<td>Sara (pilot)</td>
<td></td>
<td>2</td>
<td>Anna</td>
</tr>
<tr>
<td>Rick (pilot)</td>
<td></td>
<td>3</td>
<td>John</td>
</tr>
<tr>
<td>Beatrice (pilot)</td>
<td></td>
<td>4</td>
<td>Laure</td>
</tr>
<tr>
<td>Pat</td>
<td></td>
<td>5</td>
<td>Danielle</td>
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<tr>
<td>Ally</td>
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<td>6</td>
<td>Sue</td>
</tr>
<tr>
<td>Amy</td>
<td></td>
<td>7</td>
<td>Peter</td>
</tr>
<tr>
<td>Sally</td>
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<td>8</td>
<td>Sheila</td>
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<tr>
<td>Frank</td>
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<td>9</td>
<td>Monique</td>
</tr>
<tr>
<td>Nicky</td>
<td></td>
<td>10</td>
<td>Bruce</td>
</tr>
<tr>
<td>Bill</td>
<td></td>
<td>11</td>
<td>Barb</td>
</tr>
<tr>
<td>Lucy</td>
<td></td>
<td>12</td>
<td>Carrie</td>
</tr>
</tbody>
</table>

**Figure 1. Level one to level two participant referral map**

The lack of interdisciplinary familiarity with oral care, and its active dilemmas, repeatedly offered itself up for my consideration. Despite its relative importance to patient and system level interests, many participants had not watched oral care. In some cases, this included clinicians who had worked in the ICU for many years. The elusive nature of this work served to direct my attention and questioning as data collection proceeded.
Data analysis procedures

Analysis of data in IE is often called explication. McCoy (2006) suggests that this has two interrelated parts. The first is to understand and appreciate the embodied experiences of people at work – what it is like to do their work. The second is to use those accounts to bring institutional fields into view. Campbell and Gregor (2008) suggest that discursively organized social relations infuse participants’ ways of speaking at work. Thus institutional ethnographers must analyze how these discursive resources arrive in the local setting and must link up work descriptions that foreground a larger set of relations.

Interview narratives were transcribed verbatim to maintain an accurate account of the participant-researcher conversation. As suggested by DeVault (1990), special attention was paid during transcription and subsequent audio checks to pauses, humour or emotional responses. IE researchers suggest that these points may indicate disjunctures in experience and gaps within linguistic convention. In addition to interview transcripts, data included reflexive field and interview notes, blank text documents and oral care tools collected in the study setting. Data analysis was concurrent to observation and interview, and I moved back and forth iteratively between these data sources to understand the links between the local and extralocal ways of knowing mouth care.

Sections of transcribed interviews were stored in qualitative coding software (NVivo9®) for organization and retrieval. However, data was not organized into traditional thematic codes as in GT. The intent is not to produce a theory or an account “of or from those insiders perspectives” (Campbell & Gregor, 2008, p. 89). Instead, data organization initially focused on
four areas: sequential work processes; experiences and concerns of nurses; discursive practices; and texts.

Experiences and problems that nurses emphasized during field observation were written up as short illustrations. In reviewing these events, I considered how people do and do not participate in institutional talk. In reflecting upon these write-ups, I was also on the lookout for points of disjuncture, where expert language fails to disclose the full extent of nursing effort and skill. These experiences were used not to define typologies of experience but to consider how resources position people differently to act, and how they are targeted in the local setting to coordinate their work with those outside their work setting. Short exemplars were shared with my supervisor and PhD committee as points of developing analysis.

Throughout the analysis, I retained a key concept of work as an activity and encounter shaped by institutional processes (McCoy, 2006). In this instance my interest in work extended beyond mouth care to understand how relevant texts and their discourses arrived in the work setting. In directing the analysis away from the objectification of people, two methods are suggested. The first is to maintain reflexive awareness of a tendency to drift into a typology of people. Thematic categorization is not considered productive as it stalls the developing analysis in moving away from activity. I relied on my own reflexive notes throughout the study to capture this natural tendency. The second method is to limit disclosure of participants in the institutional work process of which they speak (DeVault & McCoy, 2004). De-emphasizing personal characteristics such as age and educational preparation reduced the tendency to insert an individualized line of analysis.

The final analysis in IE maps the local experience to the textually mediated influences that shape and coordinate nursing-led mouth care. An example of how to map the local to the
extralocal was identified in a pilot interview. A nurse named Bob made me aware of improved patient outcomes from a randomized controlled trial using a new method of mouth care that employed a special antimicrobial oral rinse. He spoke of an associated reduction in VAP rates and patient mortality. This is an important example, as he pointed to material traces of this information in a variety of texts found in the critical care unit: emails, posters and research reports. Not only did these texts offer a socially approved way of knowing and speaking to mouth care – they spoke to recent changes in the materials and routines for nursing work. His interview suggests a local activation of texts and conceptual categories redefining ‘oral hygiene’ as in the nursing literature.

**Validity of the research**

One of the essential aims of this study is to amplify the experiences and conditions of nurses that are frequently left out of dominant accounts of mouth care and its problems. Smith (2005, p. 125) is emphatic in her assertion that “institutional ethnographers are not using people’s experiences as a basis for making statements about them, about populations of individuals, or about events or states of affairs.” Rather, IE is about recognizing the diversity of perspectives concerning work and its coordination. Representation of insider accounts approaches advocacy. Therefore, the research is guided to preserve any particular account from the work context as an exemplar. Rather than deconstruction and generalization, fieldnotes and narrative accounts foreground what is typically removed in official versions of local events.

With preservation in mind, I kept a trail of sequential steps including the participant referral processes. This offered a temporal frame to the study and a way of understanding how issues move forward in the care setting. For example, nurses described how they might ask an intensivists to look into a patient’s oral space if they were particularly concerned about its
condition. This permitted the opportunity to inquire about these events and their documentation across participants. Member checking is often employed in qualitative research to confirm the researchers’ grasp of the participants’ narratives. In this study, interviews following observation functioned to confirm or challenge my understanding of what I learned through observation and concurrent questioning. Moreover, it assisted in confirming actual language spoken and a sense of variation across participants.

Hammersley & Atkinson (2007) emphasize understanding an account and the relationship to its context. They add that ethnographic narratives are more than a construction of reality. In this regard, I have treated accounts of experience as both a resource and topic. Narratives function to tell us about the knowledge and resources drawn upon in any context (Hammersley & Atkinson, 2007, p. 98). Because narratives form a point of entry to social relations, they are not an end point unto themselves, and my analysis moves beyond participants’ descriptions of their immediate circumstances and activities.

Sandelowski (1993) suggests that validity in qualitative research often is conflated with truth and its reduction to a set of procedures more consistent with a positivist tradition. Lincoln & Guba (1985) agree with this assertion and point to the irony of procedural validation methods when qualitative researchers often assume reality to be multiple and constructed rather than singular and tangible. As an alternative, IE approaches narratives as unique phenomena rather than a contested variant of reality. In line with IE’s goal of mapping social relations, narratives are used as resources to trace the experience of social organization.

While the tenets of IE engage constructivist notions endorsed by various qualitative researchers, they rely on an ontological presupposition that a real world of ongoing, concerted activity exists. Moreover, this world can be interrogated. Within the statements of any particular
participant is an understanding of embodied experience in temporally ordered spaces. While this knowledge is sometimes tacit, it can be opened up through observation and questioning. IE’s ontological shift works against what Smith (1990, p. 107) calls “nominalization” – academic ways of speaking that remove people, activity and the many pressures that exist in social spaces. A materialist analysis thus makes social relations visible within the local setting – and pulls it in line with what people know, to offer an alternative explanation of how things happen.

Ethics

Ethical approval
Ethical approval was obtained from the REB at Parkview Hospital and the University of Toronto prior to study inception. These applications addressed concerns of informed consent, protection of privacy, protection of vulnerable populations, and the risks and benefits of the study.

Participant consent
Participants received a copy of the information and consent form prior to study participation. They had several days to consider participation and an opportunity to have all their questions answered (Appendices D, E and F).

Confidentiality
No patient or participant identifiers were collected for the purposes of this study. Participants were asked to create a pseudonym (fictitious name) to be used in transcripts and future reference to their narratives. Because roles may be unique amongst key informants, the hospital or organization was also assigned a pseudonym: Parkview Hospital. Items that could identify the participant in transcripts or notes were changed – for example, the name of the hospital, date, unit name, patient and colleagues. All field notes and interview transcripts were
kept in a locked cabinet in a secure office. Further, audiotaped interviews and transcribed narratives were stored on a password-protected computer.

**Power and research**

Campbell & Gregor (2003) speak to the issue of power inherent in the research enterprise. They suggest that research is a problem for nurses and their work because they have frequently been the object of research inquiry. With the issue of objectification in mind, nurses have had limited control over the conduct and statements of researchers. Methods to reduce the distance between researcher and participant, such as participatory research, have not solved the issue of uneven power distribution in research. For example, “control” of study timelines and the analytic trajectory typically falls onto a select few, including the primary investigator (p. 118). Because the production of knowledge is essential to power, it was important to explain to participants the radical potential of IE to redress the exclusion of nursing expertise. I addressed this throughout both phases of data collection through reflexivity and disclosure.

**Reflexivity and disclosure**

Because I have worked in the study setting as a staff nurse, research coordinator and Advanced Practice Nurse, I have been variously positioned in regard to institutional imperatives and nursing role status. Given this history, it was important to explain the non-evaluative role of my research. I did this verbally, within the study announcement (Appendix B) and in the Informed Consent Documents (Appendices D, E and F). In order to reduce the distance between participants and myself, I disclosed my personal challenges with mouth care in addition to my experiences as a nurse in the critical care unit.

**Participant compensation**
Given the complexity of shift work, nursing and interdisciplinary interviews needed to be held at a time convenient to each participant. In some instances, this required travel outside regular work hours. For example, some participants planned their participation by remaining in hospital after work or arriving an hour before the start of their shift. Accordingly, I compensated each participant $40 for their 60-minute interview. This was intended to counterbalance any inconveniences in work routines or any expenses incurred during the interview including transportation, meals and childcare.

**Patient and family inclusion**

Because of the observational component of this study, I was frequently near critically ill patients and their families. Due to the abrupt nature of critical illness, frequent decisional incapacitation and communication barriers with mechanical ventilation (Rose, Haslam, Dale, Knechtel & McGillion, 2013), I was unable to fully explain my presence to each patient. Although I was not collecting patient identifiers or demographics for the purposes of this study, I anticipated overhearing patient information during the course of care. This required a particular plan to clarify my data collection and privacy considerations with surrogate decision-makers.

Because nursing assignments are often made just prior to the beginning of each shift, or concurrent to the arrival of newly intubated and ventilated patients, it was difficult to notify families about my pending presence in a timely manner. In consultation with the Parkview Hospital REB, I was directed to introduce two processes to increase family awareness of the study:
a) **Study Notice:** I placed a notice (Appendix C) in the family-wait area when I was present for observation. This notice explained the nursing focus of my research. The entry to the critical care unit for this study also had a white board listing active or enrolling research. This was visible to all families and staff, and I added my study to this list.

b) **Researcher Introduction:** When family was present for the patient to whom the participating nurse was assigned, I proactively introduced myself and provided a copy of the research notice. I then offered an opportunity for them to review the informational sheet and ask questions. Consent to or refusal of my presence at the patient’s bedside for one shift was recorded in the patient care record (patient progress notes). If the same patient was assigned to another participating nurse on a future date, a new approach was made to the family.

**Challenges in data collection**

Prior to enter the field, I was aware that observation would entail practical challenges. Some of these challenges would unfold within the relations of a busy and unpredictable critical care environment. The example of family inclusion, as noted above, was one such issue that required a pre-specified response. However, I learned that the decisions I had to make in the field related to clinicians were more difficult than anticipated. More specifically, issues of time, consent and interview location were interwoven in more than one way. As a result, I learned that IE did not exclude the emergent challenges that face the ethnographer (Murphy & Dingwall, 2007). In this case, elements combined to shape the data beyond the study participant and my observational capacities (Goodwin, Pope, Mort & Smith, 2003).
Similar to researchers such as Mesman (2007), I often found myself observing the unanticipated presence and actions of additional clinicians, as well as their conversations with nurses. Decisions about recording these encounters and their content became paramount. Therein, a tension ensued as the hurried presence of new actors inarguably contributed to the challenge of disclosure. With these events in mind, Murphy and Dingwall (2007) contend that the ethical obligation for research consent is driven by the biomedical practice of clinical trials. They argue that the anticipatory contract (e.g., informed consent) concerning interventions, effects and risks is simply not applicable to observational methods. Atkinson (2009) concurs and suggests that it is not possible to separate the participant from the social setting. He states that even one dissenter amongst an expansive collective would invariable tip the balance away from the many contributions of ethnographic research.

To contend with this problem, I made efforts to anonymize my field notes. Preserving the types of people, problems at hand and sequences of work appeared to be a suitable balance. Another reason to proceed in this manner was the rapid pace of clinical work. Unfolding events frequently inhibited my ability to interrupt clinicians and announce the purpose of my presence. In many circumstances this would have been counter to the interest of the patient. In studying my field notes, I became aware how time was an unrelenting element in this experience. As one example, I came late to the realization that I instinctively recorded time down the left-hand column of my field notes (Appendix G). My tacit attention to temporality posed an opportunity to reflect on the social relations of the setting. Learning from my own situated experience as a nurse helped me to understand a deeply embedded knowledge of “efficiency [and] effectiveness” conditioning health services (Murphy & Dingwall, 2007, p. 2223).

Double agency
Although I will return to the topic of time in my results, I must acknowledge that the emergent and conditional nature of observational research posed other analytic dividends. On occasion, I found myself in the position where I was required to shift roles from researcher to nurse. One pertinent example related to an intubated patient who could not control his oral secretions following a stroke. When the nurse participant stepped away from the bedside briefly, a family member asked me to suction the patient’s mouth as he was drooling. Because I had introduced myself to the family member as a nurse and researcher, it was apparent to her that I could intervene. In this instance, leaving the patient in this state was not acceptable to the family member. A larger social understanding of the nursing role informed this request and my timely response became important in the absence of the primary nurse. The interwoven issues of time, professional expectation, oral hygiene and social norms assisted my understanding of the nature of this work and the interwoven demands placed on nurses.

Edwards and Chalmers (2002) speak of the tensions and dilemmas that follow the shift from researcher to nurse when conducting investigations in clinical settings. They describe this experience as double agency: the fulfillment of two concurrent roles. Similarly, Allen (2004, p. 15) speaks of this as the “dual practitioner-researcher” problem. In Allen’s case, she abandoned her well-intentioned plan to remain an objective observer in her ethnographic nursing study. In these accounts, nurses note how a larger set of relations can pull them from research observation into active patient care duties. I can attest that this is an important consideration for those planning a nursing study. This is because there will be situational pressure to depart from the research enterprise as patient needs arise. In my experience, the reciprocal nature of the participant-researcher relationship moves alongside the expectation for clinicians to assist one another. Not doing so may inhibit the development of trust and the utilitarian ends of the research project.
Certainly, nurses may choose to take up a non-participant role in fieldwork. However, not intervening in the immediate needs of any patient may be perceived as a transgression of professional standards and obligations (Edwards & Chalmers, 2002). Values embedded in the Canadian Nurses Association Code of Ethics (2008) emphasize ethical standards, values and accountabilities to provide timely patient ‘care’. At the same time, experts offer that the principal ethical obligation of the qualitative nurse researcher is to faithfully describe the experiences of others (Munhall, 2012). The rupture that I experienced between these different obligations suggests that nurses require a pragmatic plan. In this instance, I clarified my ability and interest to assist as needed. The opportunity to remain close to active nursing work was key. Moreover, I could then use my own body as a form of experiential data.

As it pertains to doing ethnographic fieldwork, I would be disinclined to recommend one specific nursing approach when conducting observational research. Although authors have described the relative advantages and disadvantages of conducting research in one’s “own back yard” (Borbasi, Jackson & Wilkes, 2005, p. 496), there is no happy middle ground as it relates to the appropriate level of patient care participation. Instead, I would agree with prior assertions that fieldwork is indeed “dirty work” (Wellin & Fine, 2001, p. 324). The dual membership roles encountered in the field push nurses up against well-established institutional role expectations. In taking up a participant observer role, I frequently came into physical contact with the oral space of which I am studying. These experiences have informed one another in addition to the findings that follow.

On home turf

In moving from nursing work observation to interview, I also found that time conditioned this effort. With follow-up nursing interviews, it became clear that nurses wanted to be
interviewed on what Herzog (2005, p. 25) calls “home turf”. By this I mean that nurses preferred interviews to take place in the hospital and as close as possible to the ICU. Further, interdisciplinary participants preferred interviews to take place in their offices. In both cases, I had to accommodate these requests in aligning research time and institutional time. This meant that participants had to schedule the interview around their clinical duties. As one example, I often had to wait long periods for nurses to negotiate a break from their patient assignment. During the interview, this meant that they had to watch the clock. This imposed a palpable tension due to the threat of overextending their time away from the unit. In an institutional ethnography of neonatal ICU nurses’ stress, McGibbon, Peter and Gallop (2010, p. 1360) describe this phenomenon as nurses being “tethered to their patients”. In this instance, they disclose how a bodily awareness of time and space connect the nurse to the larger system and its accountabilities.

I discovered that the spaces available for nursing interviews in the hospital were not designed for this purpose. Thus, they were not always easy to find, suitably private, or convenient to the ICU. In contrast, most interdisciplinary participants had a private office in which we conducted their interview. There, I found myself sitting across from a desk as a visitor. Displays of awards, academic designation, books and papers endorsed their roles and expertise. However, ringing phones, pagers and unanticipated visitors punctuated the interview. Elwood and Martin (2002) describe these varying locations as an entry-point to a social geography of “spatial relations and meaning” (p. 649). Similar to Herzog (2005), they note that there is no real neutral or egalitarian space for the conduct of an interview. In this way of thinking, the interview space may emphasize or constrain ones status or authority in the workplace.
With the above points taken together, data collection, participant referral and the interview location served to remind me of the hierarchical structures embedded in the hospital. In this line of thinking, what people do and do not know about oral care delivery is informative. Moreover, the observation and interview space is more than a physical location. It is a site of intersecting social institutions including gender, health and the economy. Therein, these spaces reflected and magnified a set of extended social relations that I am interested in following. The time allotted to speak with people about their work was often constrained by the factors noted above. What I have learned about this process is that the space for nurses to conduct and participate in research is not well defined or explored. Instead, it is a liminal or uncertain site. These conditions may contribute to the limited volume of qualitative and observational methods in nursing inquiry.

My awareness of the temporal, social and spatial dilemmas encountered in ethnographic data collection enhanced the analysis that unfolds in the following chapters. Paying attention to the way in which people and time are compressed in the work of critical care provided clues to the way in which the setting is organized. I was consistently attuned to the manner in which the institution of health influenced data collection as well as the thinking and bodily activities of participants.
Chapter 5
A Regulated Work Space

Introduction and background

The chapter attends to nursing work of oral care. In keeping with IE’s materialist ontology, excerpts from nursing observations and interviews form the basis of my analysis. In foregrounding what it is like to do this work, the accounts that follow offer a sense of complexity and action that is missing in the literature. The varied circumstances in which nurses undertake oral care provide a detailed entry point. Rankin (2009) describes this as a careful process of substantiating actualities from the “inside” (p. 275). In this instance, being inside the critical care unit opens up a sense of dissonance between the ideals of oral care and the realities nurses face. In examining what nurses are actually doing, I pay attention to the skill, dexterity and expertise required. The second layer examines the different ways in which oral care is obscured.

Central to this chapter is the importance of experiential knowledge. Despite an established scientific theory of oral bacteria translocating to the lungs of intubated patients, critical care nurses do not receive special training in complex oral hygiene. A paradoxical gap emerges where the prevention of the most common infection in ICU rests, in part, upon an informal nursing curriculum whereby tips are passed from nurse to nurse. This means that patients and the institution of health depend upon the good knowledge that nurses import from their own personal and professional experiences. In doing so, nurses safeguard patients in using their own bodies in particular ways that involve careful timing, innovation, and the requirement to work upon or inside the body of the patient. Here, I identify a disjuncture between the ideals of the literature and nursing realities. I argue that the actualities of nursing are firmly located in a
setting that is subject to a complex set of accountabilities. I focus on particular contexts or sites of activity that are inadequately examined elsewhere. These include the time, tools and formal nursing education.

In the first ethnographic field note, I offer insight into the breadth of work that nurses do in the oral space. In identifying the oral space as nurses encounter it in everyday practice, I am departing from the literature with its established frames and categories. The insertion of time, people and a busy context anchor this work in the material setting in which it belongs. In the second ethnographic field note, which I provide toward the end of the chapter, I bring forward the unpredictable context of care. In this instance, my analysis questions the lack of consensus regarding the very work involved in oral care. Nurses explore the gendered nature of nursing training and education in hygiene. In addition, I consider the general cleaning that is required in practice. Although this furthers the work of the institution, it makes oral care an exceedingly complex practice.

**Oral care: intensively social work**

*On an early morning visit to the critical care unit, I sat with a nurse named Lucy outside her patient’s bedspace. Sitting at a desk outside the glass walls, we could see the patient and the monitor. Given the calm scene before us, Lucy took the time to elaborate upon her patient’s illness trajectory. Succinctly linking his past and present health status, she referred to him as being “chronic”. Despite several weeks in the ICU, he had not been weaned from the ventilator. In fact, he was “getting worse”. In hope that a change of scenery would help, he was recently moved from the buzzing centre of the critical care unit to this quiet corner. Several nurses explained that this peripheral area had the dubious distinction of being labeled “the trailer*
park”. Whereas uninterrupted rest sometimes assists ventilator weaning, I also learned that this geographic reassignment is a metaphor for a prolonged ICU residency.

After donning yellow disposable gowns and plastic gloves, we entered the bedspace and closed the curtains. Immediately, we were greeted by the acrid smell of perspiration entwined with hospital cleaning solutions. Lucy acknowledged that her patient, J., had been febrile overnight. She suggested he was likely battling a respiratory infection. Despite the desire to freshen him up, she explained that she would like to conserve his energy and let him sleep a few extra minutes. This meant her first order of business was to check equipment, medications and safety alarms. She explained that this regimented safety sequence was taught in her training course. In the ICU, being ready for anything requires preparation. Lucy opened drawers on the bedside trolley, examined expiry dates on emergency medications and looked for articles she might require during the next 12 hours. She indicated that several items, including oral toothettes were in low supply. I offered to go and retrieve them from the stock room. However, she declined and explained that management had just circulated an email cautioning against the accumulation of excess bedside supplies. Infection control standards meant that unused care items would be discarded upon patient discharge. Overstocking the bedside was increasing operational costs.

After moving through various screens and alarm settings on the overbed monitor, Lucy pressed a button and a strip of paper emerged from a miniature printer below the screen. It contained a “tracing” of all the data that were displayed on the monitor. The numbers and lines mapped out the patient’s current hemodynamic state and needed to be transcribed by hand into the nursing flowsheet. However, to do so now would be inefficient. Much more information was required before leaving the room. Accordingly, she set the paper strip aside in order to continue
her patient assessment. To begin, Lucy raised the bed height and pushed her own body up against its edge. As she leaned in to bring her face close to the patient’s, she shouted, “open your eyes, J….open your eyes”. Keeping her gaze trained on the patient, she repeated the request with increasing volume. As J. began to stir, the ventilator announced its disapproval. Over the din of its honking alarm, Lucy explained that testing the patient’s response to verbal commands is part of the neurological assessment; it is the “head” of the “head-to-toe assessment”.

![Assessment as below & according to Flow sheet at _______ time by _______ (initial)](image)

**Figure 2. Neurological assessment documentation (Flowsheet page 2/12)**

Because J. was flickering his eyes open in response to her request, Lucy described how she would proceed to check his cough and gag reflexes. Whereas these were brainstem reflexes, their absence would preclude the removal of the breathing tube. Because patients could not be discharged from ICU with a breathing tube, this was important data. And as Lucy would later point out, these reflexes were also requisite tick boxes on the neurological component of the nursing flowsheet (Figure 2).
She prepared J. verbally and then her gloved hand extended the clear plastic Yankauer device into the dark recesses of his mouth. In response, he began to grimace, turn red and cough. His tremulous hands began to reach toward the device in his mouth. However, the wrist restraints prevented this movement. Lucy removed the Yankauer and clasped his right hand. She frowned as she observed the intensity of his experience. The ventilator spoke for J. as it continued to honk in dismay. In fact, a series of alarms was tripped and the entire room and adjacent hallway was now alarming. Flashing lights on the ceiling joined in to give a heightened sense of distress.

Not surprisingly the patient now appeared more alert. Further, the gagging and coughing stirred up the congestion in his lungs. Several pockets of beige-brown mucoid sputum rumbled inside the clear plastic endotracheal tube that emerged from his mouth. Lucy explained that she had to clear the sputum to facilitate his ventilation. However, this was not straightforward. As she advanced the suction catheter into his breathing tube, J. clenched his jaw and teeth onto the device. This effectively trapped the suction catheter inside the breathing tube and the secretions could not be removed. As I was standing on the same side of the bed as the ventilator, Lucy asked me to press the “alarm silence” and “100% oxygen” buttons on its display panel. From her side of the bed, she pressed additional buttons on the overbed monitor to quell the various room alarms. Meanwhile, she explained that the patient was “biting down” on the breathing tube and “this is a common problem”. Looking up at the monitor’s numbers and then down at the patient, she gauged her response.

Given the normal parameters displayed, she slowed down her approach and pace. Keeping her body next to J.’s, she spoke to him in a calm and assured voice about the need to clear his breathing tube. She then asked permission to suction down the tube and awaited his
reply. Although J. had much to say, the endotracheal tube prevented verbalization. Regardless, his lips moved quickly as he attempted to assert his needs. Lucy asked him to slow his words or over-enunciate as he attempted to communicate around the tube in his mouth. Whereas it was difficult to understand his message, he appeared to calm over the next few minutes. However, the energy expended in this effort appeared to tire him rapidly, as his eyes began to close. Lucy kept talking to J. as she successfully passed the suction catheter down the breathing tube. The rattle of sputum being withdrawn suggested her approach was worth the effort.

As other nurses do here, Lucy proceeded to perform mouth care after suctioning down the endotracheal tube. The need for this was not instantly obvious. However, she explained that oral secretions almost always build up in the patient’s posterior oral cavity with coughing. In her experience, this was especially true with any sort of bodily movement of intubated patients. Lucy described how she planned to evacuate the oral secretions and clean at the same time. In terms of cleaning options, it was not time to use the antimicrobial oral rinse as prescribed in the standardized physician orders (Figure 6). As a point of clarification, she noted that “chlorhexidine” is a “timed medication”. This meant it was due on a schedule and would be given later. Instead, she prepared several other items on the surface of her bedside trolley. First, three blue-tip sponge toothettes were gathered. She then retrieved one paper cup and diluted some green mouthwash with sterile water. She dipped the three swabs into the solution and tapped off the excess fluid. After she explained what she was going to do to the patient, she readied the Yankauer in her left hand and the swabs in her right.

In a similar response to the prior suctioning intervention, J. bit down hard on the blue toothette as soon as it entered his mouth. Again, Lucy had to curtail her activity to solve a problem. She explained that toothettes could come apart when a patient bites down. This meant
that the sponge tip could be trapped in J.’s mouth or aspirated into his lungs. Over the next few minutes, she coached the patient to open his jaw just enough for her to remove the toothette. After examining the tip to ensure it was intact, she proceeded to try something different. Instead of attempting to gain access between the teeth, she was able to insert another toothette at the corner of his mouth to clean the space between the teeth and lips. After twirling the toothette over the exterior teeth and gums, she removed the tool to examine the foul-smelling brownish secretions adhering to its tip.

Despite the patient’s reluctance to let her access the central part of his mouth, Lucy explained, “there’s a trick” that sometimes works. She then proceeded to show me how to get behind the patient’s back molars and into the oral space using the Yankauer. She deftly inserted the Yankauer through the corner of his mouth and proceeded posteriorly down one side of his jaw. With a small turn of her wrist, the patient opened his mouth. Like an exaggerated yawn, the patient’s oral space was suddenly in view. However, its contents were a surprise. Whereas mucous membranes are typically pink and shiny, his were brown and dry. His teeth were not white and glistening. Instead, they were small and yellowed. Finally, long strands of thick, tenacious secretions crisscrossed the posterior space. In an adroit move, Lucy suctioned out the dangling material before J. resumed his guard.

As we moved on to other parts of her morning assessment, I asked Lucy how she learned to do oral care in the setting of patient resistance. She replied that she learned by watching other ICU nurses. This involved an informal apprenticeship whereby nursing techniques were directly observed during her role transition from another department to the critical care unit. She noted how tools used throughout the hospital were altered or employed somewhat differently in a mouth crowded with tubes. In sequence, we discussed how the rationale for mouth care had
evolved. Apart from the norms of cleanliness, she noted how evidence-based VAP prevention had redefined her work. Lucy found this personally and professionally challenging. “Really, I would rather do peri-care”, she related. “There is something about the mouth….if the patient gags then I feel sick too”. Being close to the patient’s face rendered mouth care an intensively social act.

Although Lucy had not completed her patient assessment, the physiotherapist (PT) joined us at the bedside. Lucy explained that the patient had not been weaned from the ventilator and therefore could not leave the ICU. Because respiratory congestion would impair this goal, physiotherapy was prescribed to advance this process. However, before the PT began, Lucy asked for assistance to check the patient’s skin. Taking care not to dislodge the tubes and wires, the three of us rolled his body to one side. While we held him in this position, Lucy inspected a small dressing on his back. However, she had to abort this effort. Turning the patient had stimulated more coughing and alarms. Despite this awkward position, we reached for buttons to silence the alarms and Lucy proceeded to suction him. Concurrent to this commotion, several doctors gathered outside the bedspace to examine the nursing flowsheet. Despite our active positions, they shouted questions into the room over the din of the ventilator alarm. The data they were seeking was not yet in the flowsheet or chart. Shortly after they left, one more doctor arrived to do the same.

After repositioning the patient for the PT’s treatment, we placed a clean white sheet over the patient’s lower body. Sensing we were not quite finished, I asked Lucy what needed to happen next. She looked up at the clock on the wall and then out towards the hallway where the clinicians had been gathering. She explained that she needed to catch up with her documentation; the nursing flowsheet had to be completed for medical rounds.
Analyzing the social in motion

In the preceding ethnographic field note it is possible to understand a sense of organization or routine that facilitates a larger set of processes. However, it is also possible to see how mundane activity is conditioned by tension as many things are happening at once. Patient assessment is a form of recurring and recognizable activity. Lucy was able to orient me to two conflicting lines of nursing accountability: the physical act of mouth care and its documentation.

In the ICU, a “head-to-toe” examination is a multifaceted assessment nurses perform every twelve hours. The routine execution of this standardized activity includes careful intervention within the oral space. However, the appearance of several clinicians seeking information highlights the importance of timely documentation. The flowsheet acts as a binding instrument in overlapping processes; it acts as a juncture in the time-sensitive work of many people.

When I later sat down with Lucy to review her oral care documentation in detail, she explained how she moves information from the bedside into a voluminous document called the “flowsheet” (Figure 4). She noted how the document continually recalibrates her awareness of the temporal structure of the day:

I think it’s one of the routines that you know these things are written down on paper. And I do recall you know when initially coming to this unit, being overwhelmed by looking, even looking at the flowsheet for the first time, having that urgency of writing things down and putting it on paper early because of the other nurses, because of the round times, because of the doctors, because of the teams. [...] Especially since time doesn’t wait for anybody, it flies on its own. And so like you can maybe be 8:00 one minute and you look at the clock it’s, you know, time for lunch. So you definitely want to try and get those things on paper especially when they’re fresh in your mind. But also, there are a lot of teams that are looking for that information specifically on that nurses’ flowsheet. And so if you don’t get it on there, it’s probably more work for you because everybody comes and asks you those things specifically.
The complex structure of recurring routines and activities described by Lucy follows a 24-hour work cycle. This was organized around two main nursing shifts: 0730 to 1930 and 1930 to 0730. As a form of “time work” (McCoy, 2009, p. 130), nurses followed additional temporal markers set for each shift including morning rounds, the medication schedule, meal breaks and end-of-shift report. Nurses used the flowsheet to identify these markers and remind themselves if they were “behind”.

Similar to the temporal organization of “the medication day” (McCoy, 2009, p. 128), nurses guided me to consider the overwhelming sense of time that is immanent in critical care. Within the unfolding patient assessment, ICU time is constantly moving forward. As a participant in the above scenario, I too had the feeling that time was actively fleeting. In part, the mandated neurological assessment required a set of complex interventions in the mouth. Much of this demanded additional time, thought and creativity because of the patient’s response. As Lucy curtailed her activities to communicate with the patient, the appearance of other clinicians at the doorway interrupted this effort. In this instance, impending patient rounds and a larger set of communicational needs required Lucy to leave the patient in order to complete her documentation.

As a textual constituent of the work setting, the above referenced flowsheet will be considered in more detail within the next chapter. However, I want first to unpack this experience as an encounter that involved my own body. In considering how it felt to be present, I was reminded of Diamond’s (2006) institutional ethnography of nursing assistant work in a nursing home. He suggests that there is a special invitation for the researcher in IE to place “one’s body on the line” (p. 59). This statement suggests that data collection is experiential and embodied. In this manner, he infers that the body is a resource. But, it may also allude to the
cumulative social and physical risks of the work under investigation. Diamond indicates that his experience in the nursing setting was not as a passive observer. He actively experienced emotions and frustrations associated with the rules and regulations of an organized care setting. In his case, these experiences form the “grist for analysis and critique” (p. 59).

As a route into social relations, Diamond (2006) explains that a researcher’s physicality can “open up the analytic aperture” (p. 61). He shares how participant observation forms a concrete beginning from which the social may be traced. On the one hand, this can be accomplished by watching how people interact with texts. The very nature of texts calibrates the action in many ways. However, he also asserts that the researcher’s bodily experience may be under-analyzed in this process. I concur that the sheer physicality of action is important data. I too carry a memory of the smells, sights, sounds and words exchanged. For example, the visual and audible alarms arising from bedside technology provoked anxiety. Moreover, the appearance of the patient’s mouth was troubling. Indeed, my own experience of ‘routine’ was anything but ordinary.

In reflection of this experience, other important elements come forth for my consideration. The physical tension associated with sustained proximity to an intubated and ventilated patient is certainly one. My presence cued me to consider the nature of a febrile and exudative body. I registered the unpleasant appearance and odour emanating from the patient’s mouth and skin. Though Lucy felt “sick” while working in the patient’s mouth, she maintained her position. Instead of retreating, she pressed forward. Each step of the routine assessment required her to interpret or read the patient’s body. Although poking, lifting and turning yielded essential clinical data, this work was more than a tick mark on a standardized form. It also required me to put my own body on the line in order to help lift, hold and turn the patient.
Because neither the patient nor the environment was passive, I was obliged to place my body in an uncomfortable position to fulfill the standard routine.

In responding to my own discomforts in the preceding encounter, I began to think of the amount of work that needed to happen within a distinct space. Diamond’s (2006, p. 60) term “the social in motion” may apply in this matter. The ongoing concerting of work activities takes place inside the restrictions of real time and space. Several clinicians took pains to explain that the preceding scene would not be visible to outsiders. For example, the unit was itself was locked. Passage inside required special access. Once one was inside, temporary partitions and curtains limited views to patient hygiene. In addition to these boundaries, one could see red lines painted on the floor around each bedspace. The nurses explained that the red line delineated a region of nursing responsibility: people and objects inside were possible vectors of infection. The intensity of this institutional cue served as a reminder of clinical accountability and the ordering of risk.

Being on the inside of these boundaries put me in contact with a number of active constituents, in addition to the patient, that were in conversation with the nurse. In this instance, monitors, ventilators and other technologic devices oblige nurses to respond. These machines flash and alarm when numbers and lines cross over a boundary of risk. Nurses explained how they are expected to watch for and monitor these changes. This task frequently required them to maintain a type of sustained conversation with technology. Nurses physically read and replied to machines as they would the patient. For example, Lucy demonstrated how she had to use her body to observe and intervene when the ventilator alarmed. Because this occurred when she entered the oral space, this entailed additional complexity. Troubleshooting alarms took time and altered the tempo of practice.
In linking up technology to temporality, I turn my attention to a forward-moving enterprise in the above scenario. Lucy’s work in her patient’s mouth hooked into a larger social undertaking. The risk of being ill prepared to meet the informational needs of others generated tension. Both Lucy and the information-seeking clinicians appeared to be working against the clock. My own sense of unease in this scenario may be what some ethnographers call the ideological pushing up against the actual (Townsend et al., 2003). Diamond (2006, p. 205) calls this the “industrialized model of productivity” that infuses the nursing setting. In this scheme, nurses disclose that there is often more work to be done than can be accomplished with the resources at hand. Therein, a busy context conflicts with the flow of emotional and comfort needs of the patient (West, Barron & Reeves, 2005).

Summary

In this introductory encounter to nursing work, oral care is not simply about cleaning. The preceding scene and my analysis acknowledge that nurses enter patients’ mouths for reasons other than hygiene. The challenges that unfold when they proceed offer insights into what has fallen from view in the nursing literature. Both the patient and the environment respond in unpredictable ways, in turn, posing a high degree of difficulty. Oral care requires time and skill in the setting of an intubated and mechanically ventilated patient. As a counterpoint to foregrounded statements about the neglect of the oral space, this preliminary encounter shows something else. Specifically, it relates an intricate set of relations regarding the mouth.

Beginning on the inside of the ICU highlights a lack of attention to the scope of nursing practice in the oral space. It also elides the material nature of this effort. The erasure of bodily work in the literature is certainly one disappearance. The requirement for nurses to be conscious of time may be another. Both of these forms of work lack recognition. According to my direct
observation, these are not ambiguous concepts to nurses. Stocking supplies, tending machines, filling in forms and entering mouths are all done in a highly regulated environment. With the restriction of time and resources in mind, nurses cautioned me that many people do not register these aspects of their work. In response, Smith (1987) might argue that these actualities are tidied up in the literature. However, this poses problems as nursing knowledge “is obliterated as it was experienced” (p. 84). This means that embodied nursing knowledge does not inform the larger project of health services delivery.

In this encounter, Lucy was able to demonstrate how keeping the work of the ICU moving forward is a key nursing accountability. It shapes and organizes what happens and how it feels to be present. However, Diamond (2006) argues that much of what occurs in bodily care cannot be named. The tension underlying this work falls out of the official account. This would include the unusual appearance of the patient’s mouth and the odour emanating from it. In moving forward, the following sections highlight more of what nurses know. Their experiences in mouth care and the complex decision-making they perform uncover an exquisitely developed knowledge for the safeguarding of patients. Moreover, the gendered nature of this work becomes an important finding and a distinct area of knowledge for both male and female nurses.

“The C of ABCs is not cleaning”

In speaking of oral care, all of the nursing participants who were observed and interviewed described entering patients’ mouths at the beginning of their 12-hour shifts. In this instance, structured assessments that unit guidelines mandate require nurses to access the mouth and use an instrument to initiate a cough and gag reflex. However, the context for this assessment required a “stable” patient. Nurses argued that the fluctuating nature of the patient’s
blood pressure, heart rate or breathing interfered with the delivery of this routine work in the oral space.

As part of what nurses called the “ABCs” of assessment, the generation of a gag reflex conveyed essential information about the patient’s airway and its protective structures. The absence or presence of this reflex was then inscribed in a standardized assessment checklist (Figure 2). This highly specialized abbreviation of ABCs is one way of saying that ‘Airway, Breathing and Circulation’ are the principal concerns that expert ICU nurses prioritize. In reference to an assessment of the oral space, Beatrice explained that oral care would proceed with the ABCs in mind:

Beatrice: Well it’s structured, I mean, I guess you have to decide very quickly whether you’re looking after a very unstable patient or a stable patient. That changes the direction of what you’re doing. And you always have to keep in consideration the ABCs. You have to check your monitor, make sure your monitor’s telling you the truth. You have to check your drug pumps, make sure they’re giving what they’re saying and check the amounts, make sure that drug is programmed properly. Then start with your head to toe assessment. I mean, of course, as I say, ABCs, the first thing you do is look at the vent and see that that’s all working properly. And I mean the monitor and the ABCs are part of the whole thing.

Craig: Right, so that’s the technology?

Beatrice: Make sure the technology and you are all on the same line. And your head to toe stuff. Listening to their chest and turning them to see what their skin looks like. It’s usually time to do your first turn of the day anyway.

In explaining how the mouth becomes a part of this sequence, a nurse named Nicky explained how the ABCs placed the mouth within the “head-to-toe” shift assessment:

Nicky: Part of my assessment in the beginning is determining if they’ve got a gag. So I tend to do that by doing oral care and that’s the way to do it. And you know, suction in the back of their mouth. So that’s one of my first jobs.
My ‘head to toe’, it literally is going from the head down. So the mouth is usually the second thing.

Craig: All right so you’re right in [the mouth] at the start of your shift?
Nicky: Right at the very beginning.

Bypassing the ABC abbreviation briefly allowed nurses to explain how oral care was embedded in more than one routine. Rather than seeing it as a discrete act, it was firmly connected to an ongoing repertoire of seamless activity. For example, neurological assessment of the airway entailed observation of a gag reflex. This initial test would mobilize secretions as it invoked coughing or other bodily movements. Similarly, Beatrice noted that turning the patient would also mobilize secretions and require her to enter the oral space. Both Beatrice and Nicky emphasized that seemingly menial acts of care generated the requirement for oral intervention.

In following this idea, Rick explained that formal classroom teaching about critical care nursing assessment did not convey all of the knowledge he required to proceed. He noted how classroom instruction is oriented to a theoretical understanding of the ABCs. In reality, execution of oral care intersected with a curriculum set by senior nursing colleagues. During his initiation into ICU nursing, these colleagues provided valuable knowledge about proceeding into the oral space without harming the patient:

Rick: The older nurses had their way of doing things, and very informally we were told what it was. And that’s what was expected and thou shalt not argue, regardless of best practice and current research. So you kind of do the best you can, again with the equipment available and the resources available to you. And most of the education was, you already know how to brush somebody’s teeth, you already know how to clean somebody’s mouth. Here’s how you do it without dislodging an endotracheal tube.

Craig: And the endotracheal tube being…
Rick: It’s the breathing tube that attaches to the ventilator.

Craig: So that’s a major concern with doing mouth care? And was that something that was communicated to you when you came to the ICU?

Rick: In your formal education, sort of, the three most important things that you worry about, the ABCs of critical care and emergency medicine: airway, breathing, and circulation. You dislodge an endotracheal tube and you’ve screwed up A and B.

Here Rick suggests that the abbreviation ABC sustains extralocal knowledge about the main priorities of care. Although the mouth is significant in sustaining airway, breathing and circulation, it is not acknowledged by the abbreviation. Instead, senior nurses used their experience to warn mentees about the importance of the oral space to this concept. In other words, oral care should be gentle, as the loss of a breathing tube is a significant emergency and a social failure for any clinician. “Dislodging the breathing tube” would urgently require the efforts of medical doctors and respiratory therapists to replace the tube. Difficulties in doing so could lead to patient injury or death. Not surprisingly, Rick clarified that “the C of ABCs is not cleaning”.

Many nurses shared their initial shock concerning the accountabilities of ICU as care drew upon their past experiences. The requirement to prevent patient harm, as noted above, was initially overwhelming. This was complicated by the responsibility to enter into private orifices with hands and tools to maintain social norms of cleanliness. Knowing how to do both required a special form of knowledge. Many nurses shared how their own idiosyncratic habits and sense of propriety was made over. For example, Pat spoke of her first student experience giving an enema to a man as “a very bad experience” because she was overwhelmed by her awareness of a powerful social boundary existing around the anus. In retrospect, she noted that “you learn it in a book and when you’re actually doing it on someone awake, alert and young, [it] is totally
different”. Similarly, a nurse named Beatrice said she had gotten over this initial “shock” during a summer of work in a nursing home where cleaning dentures and changing diapers were ongoing requirements.

Although nurses were alarmed by the initial experience of touching or entering the mouth and anus, they were directed by their course instructors to attend to the concepts and processes in their textbooks. Getting it right meant subduing their feelings in order to accomplish the technical task at hand. However, text and practice often deviate. As an example, Beatrice shared that what was “described in the textbook” did not accurately represent what was being asked of her in “the real world”. The practice context, in this case, was cleaned up and oversimplified. This often left her feeling “inadequate” and without an acceptable language, beyond the ABCs, in which to express these experiences.

Two positions

In recollecting his first year of nursing education, Bob noted that he was often worried about other people’s bodies. Similar to the initial experiences of Pat and Beatrice, the requirement to assist patients with the elimination of bodily wastes loomed especially large. In referring to the use of bedpans and urinals, he said that it was “a general stigma in my mind”. Though his training eventually brought forth other challenges and practices, he related that he is still faced with a powerful social reaction to his nursing role. I asked Bob to expand on the experience of stigma:

Sure. In many people’s minds, even now, many years after, I can hear on the street or from people who are [either] far away from the medical field or even visiting maybe the family doctor once in a while, you can hear something like “Oh you’re a nurse? So basically you’re cleaning somebody’s butt?” So this is one of the stigmas people usually throw at nursing.
In this instance, thoughts about bodies and their effluvia convey a powerful message about the people who do the intimate work of nursing. Being in contact with wastes is potentially dirty and degrading. However, Bob acknowledged that he does occasionally receive “some [positive] credit” for the work he does in the ICU. Regardless, the fact that one of these stigmatizing exchanges occurred in a physician’s office is informative. The notion of acceptable masculine and feminine gender roles is often taken up through adherence to traditional professional occupations. Although greater numbers of women have entered the medical profession in recent decades, a similar expansion of men into roles traditionally held by women has not occurred (Adams, 2003). This suggests that a particular tension endures around gender and nursing.

Another male nurse named Bill expanded on the experience of gender tension through a discussion of his training led by female nursing instructors:

Bill: Certainly I got a very big lesson in some of the basic functions, specifically with the female body. You know, I know men’s bodies pretty well. I’m male, you know, I have those parts. Bit of an eye-opening experience because you think you know. And then you go through class and you still think you know. And then you’re actually dealing with real-live human beings and there’s anxiety issues that come into play, both for you and for the patient. There’s comfort and consent issues that come into play sometimes, depending on what exactly it is that you’re going to do or you’re planning on doing. […] And I think it was perhaps overemphasized to me as a male, as a student, and underemphasized to the women, that maybe a male would be uncomfortable with them touching, being touched. I think there was a sort of double standard.

Craig: So do you think that being a man in the nursing program was different in the sense that your experience was a bit unique? The way you felt you were treated?

Bill: I don’t know that it was unique, but I think that male nurses, male student nurses, are treated differently than female nurses and female student nurses. I don’t know that my experience was any different than any other male going through the program at about the same time. I can’t speak to what’s happening now and I can’t speak to what happened before me. But in my group, I think there were
about 70 in my graduating class, and of that I think there were 7 guys. And I would say that all 7 of us were treated more or less equally. But it was different than the way the 63 women were treated.

Craig: So there was some pause about the male student doing some things…

Bill: Yup. And in different phases of learning through the nursing program, it came up more or less frequently. For instance, when I did the rotation in [obstetrics] and pediatrics, there were some significant differences in what I as a male was allowed to do by the staff on the floor. There were certainly some very long discussions with my instructors about [this restriction]. So I had to do a little bit more learning, but I also had to fight for my right to do that.

Craig: So in one way, maybe other people’s discomforts were imposed on you?

Bill: Oddly never the patient. Never the patient. Occasionally the patient’s partner: husband, boyfriend, in one instance a patient’s female partner […]. And I think it was perhaps overemphasized to me as a male, as a student, and underemphasized to the women […]. I think there was a sort of double standard in the consent and the comfort that was presupposed. Even as early as year 1, semester 1. And it’s carried through….

In relating a similar vulnerability, Kathy described her surprise as a female student being confronted with the responsibility to touch or enter a man’s body. Her notions of propriety and comfort did not always align with those of the other gender:

An older gentleman had no problem unveiling or exposing himself to me where I was this young innocent nurse. So I had to get used to that, being alone as a young person, alone with an older person, performing hygiene. And that was another angle of it.

Whereas men could create a disturbing experience for female nurses, male nurses could also be uncomfortably positioned in other ways. Frank related being questioned “on a daily basis [as to] why I didn’t become a doctor”. In turn, he relates a pervasive problem of gender in nursing work. “And I think that really until you experience it, you don’t really know”. He suggested that patients and families (both women and men) are particularly surprised by the repertoire of activities he undertakes as a “male” nurse:
One thing I do notice is, though, that the families and patients won’t ask me for [hygienic] care. […] they’ll ask more of the technical, medical treatment type questions, for me to do those types of things. But I don’t necessarily, I don’t know if it’s assumed that a male won’t take on that role, but I really don’t have families coming and say, “Oh, can you bathe her, or can you wash her hair for me?” And you know, if I do that, they’re almost surprised that, that a male nurse is doing it. It’s almost like the role that they expect the male ICU nurse to do is different than the role that they expect of the female.

Interestingly, female nursing instructors were thought to be actively perpetuating a gendered division in nursing. In this case, female nursing instructors sought to mediate the tensions posed by the male gender in intimate nursing work. In turn, one aspect of hygienic work was reducing the tensions posed by male nurses in the active nursing setting. In the section above, Bill noted that some nursing educators sustain hygiene’s feminine designation by curtailing men’s training experiences. Potentially in line with this experience, Pat shared how she was admonished, as a female nursing student, for not producing a suitably groomed patient. A highly specified reading of her work directed her to understand what a more experienced female nurse could see. When confronted, Pat offered that she had attempted to clean up her patient too “quickly”. The production of a tidy patient was considered a skill that should be inherent in Pat’s make-up. She was made to feel embarrassed by her inadequate female performance. However, she received remedial training by a female mentor. In sequence, Pat noted that she became “better” and “faster” at producing a neat patient, “like a more seasoned nurse”.

These initial experiences often culminated in what Kathy described as nursing “shock”. Discomforts emerged from the confluence of gender expectations, stigma, naked bodies and the requirement to do this work within a restricted time frame. Kathy emphasized that this meant that nurses must become proficient at getting “past it”. For her, being “educated” in these matters translated into a transcendent state. Getting beyond social discomforts meant she would be an efficient nurse. She felt this entailed the ability to multi-task; she could wash and talk
“empathetically” at the same time. This transcendent position may align with Allan’s’ (2007) assertion that nursing’s identity is conceptually located in emotionally intimate care. She argues that nursing agency is entangled with the efficient functioning of the health system. In Kathy’s case, this required her to bypass her own discomforts to take up the perspectives or concerns of others.

A work of innovation

Learning how to do hygienic care as a timely and sensitive intervention suggests a complex social awareness of gendered and professional expectations. However, this required self-direction and innovation as efficiency was encouraged above and beyond technical content. For example, Kathy and Pat were guided to be empathic in the provision of bodily care. However, they also recalled that it was more important to be fast. The limited manner in which time was allotted for hygiene inferred a sense of economy; one was expected to be doing more than one thing at a time. For example, nurses were expected to clean patients and gather data simultaneously. However, this complex set of relations posed problems for nurses such as Frank and Bob, who expressed a devaluation of care given a feminine designation. Cleaning tasks did not infuse their nursing roles with a sense of status. They felt an expectation that they should be attending to other, more technical, matters.

Notwithstanding the broad contribution of hygiene to the patient, family and health care system, its devaluation created a conflict between scientific knowledge and the accountabilities of practice. Nurses explained how a powerful social expectation to prevent lethal infection through ‘basic’ care ran up against a sustained gap in nursing education. For example, the formal training these nurses received in bathing sat in stark contrast to oral hygiene. For most this meant they got one hour of instruction in mouth care, if at all. Moreover, it often took place within their
undergraduate training years or decades prior. Nicola, like many others, noted that she can “barely remember” it at all. This meant that she did not receive influential or memorable training in theory, technique and tool choice. Retrospectively, she acknowledged that this positioned her poorly to treat a range of oral problems. As a result of this gap, nurses felt inadequately prepared for practice.

Nurses also described how this educational gap persisted in the critical care unit. They argued that the health system was dependent on their own personal knowledge of oral care, merged with professional experience accrued in practice. Nurses described their hire and transfer to the critical care unit, following several years of general practice, as devoid of theoretical and expert training in advanced oral care. The added complexity of the intubated patient’s oral state did not merit an equally complex discussion of theory and techniques for comfort and bacterial control. Frank noted that this discrepancy between expectation and training required everyone to learn the “tricks of the trade” from one another. This reliance on an informal curriculum was extended to evidence-based practices such as VAP prevention. This left Nicola wondering how best to proceed:

And you […] soon you pick up some tricks of the trade, but I think oral care is probably something that is on the back burner when it comes to, you know, training, with formally training […]. They’ll say that we should do this chlorhexidine, which is ordered [every] 6 hours. But how much chlorhexidine do you use? Like, how much should be on the swab, you know, and where exactly should you be focusing your cleaning?

For nurses, the aforementioned lack of pragmatic description sustained uncertainties regarding technique. Lack of detailed solutions to these concerns sustained a sense of mixed messages regarding the critical nature of oral care.
With technique in mind, many nurses spoke to an enduring debate about the role and frequency of toothbrushing in intubated patients. Frank noted that there can be “a hesitancy to use toothbrushes” given a complex array of problems including oral crowding, patient resistance, pain, ulceration and the risk of inadvertent extubation. Nicola suggested that this might be a problem based in the conventions of health care reporting. Evidence-based language in VAP prevention studies did not report on oral care technique. This left her questioning whether improved patient outcomes might be possible “because of the way we do [oral care]”. In this case, standardized health services’ reporting attends to broad outcome measures. Active interventions like oral care are not fully reported and therefore the “evidence” for evidence-based practices remains vague (Leeman & Sandelowski, 2012, p. 171).

This lack of realistic description and attention to nursing concerns suggests that nurses must innovate on the job. The neglect of pragmatic detail left nurses without a repertoire of expertly endorsed actions. In addressing real problems, they expressed the need to devise tools to solve a range of problems that might not be apparent to others. For example, Nicola suggested that her patient was “producing a lot of saliva and some patients produce tons of saliva from their mouth just from having an ET tube in. And you could stand there and suction constantly, but we also know how irritated patients are by doing that constantly as well. So you’ve got to get that balance right”. However, foregrounded concerns of infection in the ICU left her even more worried. Introducing additional equipment into the oral space increased her concerns regarding infection transmission. This gave her the sense that current practice just “feels wrong”.

In sharing a similar patient scenario, Sally offered that nurses had to work around these uncertainties. In this case, nurses shared techniques amongst each other that adapted to the unique circumstances of the patient:
Sally: Well, the patient I have today has lots of oral secretions that they’re just pouring out of her mouth. So she needs more attention to the mouth more often than every 2 hours. In this situation because she can’t control her head, it flops over, the secretions are draining out onto her gown. So I’ve got a towel around her neck to sort of catch those secretions so she doesn’t create, you know, too much moisture on her neck. So the Yankauer is used a lot more. There is a technique using a 10-French [nasal oxygen] catheter to have a continuous suction in her mouth [Figure 3]. If it’s placed properly, then you won’t create a sore in her mouth. But I’ve never really seen […] a sore, […] as a result of a 10-French. But that, that works very well for some nurses and it can be taped to the mouth too.

Craig: Is that something that you learned through a guideline or a book?

Sally: No, in this situation, no it was kind of techniques picked up by the nurses.

Similarly, Pat described fashioning an oral irrigation device by combining a syringe and the tip of a soft rubber urinary catheter (Figure 3):

Pat: Some are trauma patients so you have a lot of blood and a lot of lacerations or broken teeth and broken bones, so all that is a bit different too. Um, it’s easier to syringe the fluid in and suck it out with a little baby catheter.

Craig: So, you learnt all of these really creative techniques by being in the environment and watching other people?

Pat: Yeah, sometimes […] I remember definitely, um, the little rubber, rubber catheter on a syringe I think I just saw somebody doing it and I said that’s an awesome idea and I did it.

Though the creation of tools, nurses explained that patients were assisted to maintain a dignified appearance. Moreover, these efforts supported the goal to reduce the burden of serious respiratory infection. However, Amy suggested that the direct application of these innovative techniques required a sense of confidence. As a recent graduate and hire in the ICU, she was still able to recall her shock relative to the experience of “sticking something” into another person’s mouth:
[I learned mouth care] just watching other people. My preceptor when I got here she’s very, very organized, gets everything done. Not that people here are like slackers or anything but she is very on the ball and very to the ‘t’: every rule followed so, we did our mouth care every 2 hours on the patients that were tubed or trached and she made sure they were very clean and tidy. I just kind of learned how to do it from her. But I remember just sticking something in somebody’s mouth and it was just like ‘really’?

As a new grad, Amy was also reliant on an informal unit curriculum. In attempting to follow local policy, she was attuned to recommendations to complete mouth care every 2 to 4 hours. However, her novice efforts informed her of the requirement to employ more than a set of technical tools. Simply “sticking” something into a patient’s oral space was not enough. Considering what worked and how patients responded required experience, confidence and the ability to think on one’s feet. In the following section, bodily techniques and tools are explored in more detail.

**Tools of the trade**

With the aforementioned knowledge of innovation in mind, nurses spoke to me about the range of instruments required to care for intubated patients. The most obvious amongst these was their own body. Being close to the face and oral cavity of a critically ill patient is an intensively social experience; one cannot avoid the fullness of the person in this intimate encounter. Nurses explained that they were required to use their bodies as an instrument of communication. As Lucy demonstrated in the initial field note, nurses were frequently required to lean in and lip-read patient concerns and preferences. Happ (2012) suggests that up to 48% of mechanically ventilated patients express the need to communicate with their caregivers. This acknowledges that nurses must optimize communication with the patient to garner their cooperation.

Despite the requirement to assist non-verbal patients, nurses offered that lip-reading was not a skill they were taught in their formal critical care education. Radtke, Tate and Happ (2012)
confirm similar findings and suggest this can lead to multiple problems. They argue that attempts to lip-read are valuable in understanding symptoms and negotiating multiple care needs with an alert patient. Unfortunately, a lack of skill can frustrate the patient and nurse. In the field, Lucy and other nurses explained that multiple tubes frequently inhibit lip-reading; patients’ lips may not move naturally in the presence of medical devices. In turn, requests for the patient to “say it again” or over-enunciate required the nurse to hold his or her body in a static position. For Lucy, maintaining a proximal position was necessary to understand that her patient had a sore, dry mouth.

Interestingly, not all clinicians required patient cooperation to enter the oral space. An intensivist named Danielle knew that the mouths of critically ill patients were frequently guarded. She had repeatedly experienced this when intubating patients in emergent states of respiratory failure. In describing how this is managed, she explained:

Well, around intubation time [oral resistance is] less of an issue because most of our patients are sedated if not anaesthetized, and [chemically] paralyzed, so it’s not so much at the time of intubation, although some people do not get as much sedation as we would like to because of their hemodynamic instability so therefore there is some discomfort around that.

In our discussion, Danielle related how the method of “rapid sequence intubation” was an established mode of resuscitation during respiratory failure. In this case, physicians use intravenous sedation, analgesia or paralytic agents to stop the patient from moving. This allowed the opportunity to access the oropharyngeal structures when placing the endotracheal tube. In contrast, the practice of sedating or anaesthetizing patients was not condoned for oral care. In fact, the APN named Laura shared that “evidence-based practice” was moving away from excessive or continuous sedation; clinicians were encouraged to keep patients awake and alert as it assisted weaning from the ventilator.
Different tools were also employed to visualize the oral space. During mouth care, nurses explained that they could not see all of the oral structures because of poor lighting and oral crowding. To compensate, nurses might place a short curved tube called an oral airway or bite block to keep the lips and teeth apart (see Figure 3). However, this often compounded the original problem of limited visibility as the added device simply took up additional space. In contrast, Danielle explained that intensivists access the oral space with a unique set of tools that help to open and visualize oral structures. Prepared in sterile kits and stored in the ICU for oral intubation, these include a laryngoscope. In explaining how the laryngoscope functions, she highlighted how it lifts the mouth open and temporarily displaces the tongue to make the posterior oral space accessible. Further, its integrated fibre-optic light permits “a view to insert the endotracheal tube”.

Despite similar needs for access and lighting, nurses did not have specially designed tools to open and visualize the oral space of intubated patients. What was made available for nurses across the hospital, including the general wards, was incorporated into ICU care. Importantly, the manner in which these tools were made available differed. For example, when an ICU patient required emergent or planned intubation, the nurse or RT would retrieve an intubation kit and bring it to the bedside for physician use. Once opened, the kit would facilitate intubation, as it would contain of the necessary devices such as an endotracheal tube, laryngoscope and other supportive tools. As is evident in the field note describing Lucy’s patient assessment, nurses are required to retrieve discreet oral care supplies on an ad hoc basis. This meant that they would need to leave the patient bedside to ‘hunt and gather’ oral hygiene tools (Hassmiller & Cozine, 2006; IOM, 2011).
Figure 3. Nursing tools in the literature versus experience
During my time in the field, I considered the sophisticated tools made available to physicians and the low-tech, frequently improvised tools used by nurses for the purposes of oral hygiene. Volosinov (1973) and Sandelowski (1997) argue that tools are important to analyze as they sustain a symbolic dividing line. For example, the specialized design of the physician’s laryngoscope signifies more than ‘basic’ care. The tool’s refined metal composition, articulated blades and fibre-optic light speak of specialization. The laryngoscope’s preparation in a sterilized tray, and a facilitated path to the patient bedside, further designate its status in a hierarchy of technical products. Whereas specially manufactured oral hygiene kits for intubated patients were available for the hospital to purchase, they were not made accessible to nurses in the study setting. An ICU manager named Anna said, “you just can’t afford to spend, you know [...] thirty or forty dollars a day [for oral care kits]. How do you justify that when you already have so many competing pressures for [infection prevention] and cost … you know?”

In the study setting, nurses describe limited influence over the quality of products employed in direct practice. This exacerbated their sensitivity to a debate in the nursing literature regarding an overreliance on inexpensive oral sponge toothettes for cleaning the oral space (Binkley, Allen Furr, Carrico & McCurren, 2004). This specific deliberation centres on the fact that toothbrushes are considered superior in the removal of bacteria-rich plaque found on patients’ teeth (Blot, Vandijck & Labeau, 2008; Dale et al., 2012). However, some nurses were worried about the low quality of supplied toothbrushes. While the ICU Manager had commented that efficiencies were a top priority, oral care tools did not offer much in the way of savings. For example, Anna revealed that the cost of each toothbrush and oral swab to be approximately $0.06 each. The total cost for rudimentary oral care supplies per patient was on average less than $10.00 each day (Table 2):
Table 2. Oral care equipment costs

The low investment in oral care equipment for nursing use is placed in perspective when compared to the physician’s laryngoscope. Although it is a reusable item once re-sterilized, the initial investment is upwards of $500 (Appendix H). This would not include batteries, additional blades, fibre-optic light bulbs and their ongoing re-sterilization and packaging in an “intubation tray”. In this case, several laryngoscopes are purchased for the unit to be placed within these kits.

Sandelowski (1997) argues that some tools in nursing are culturally resonant in that they are identified with the profession. She distinguishes the stethoscope, sphygmomanometer (blood pressure cuff) and hospital bed as such tools. However, she also argues that these are considered less scientific when compared to the devices used by physicians. Thus, the nursing literature might be suggesting that sponge toothettes should not be symbolic of nursing; they constitute a negative nursing image, as they are not considered a scientific or evidence-based ‘technology’.

Given that the efficacy of plaque removal with toothettes is considered poor, the assumption might be that they are an inadequate choice for VAP prevention. Due to the lack of control over the supply of local products, nurses indicated that they were caught in an untenable situation. Supplies were purchased through special committees and departments. Despite this arrangement,
nurses frequently expressed an interest in having a greater selection of high quality oral care tools.

An important finding in the field was the manner in which nurses employed or fashioned alternative mouth care tools. With respect to a narrow focus on toothettes and toothbrushes, they showed me how the literature contrasts with direct experience (Figure 3). Through on-the-spot creativity and innovation, nurses had learned to create tools that are not commonly acknowledged in the literature. For example, Pat described learning how nurses irrigated chlorhexidine into a swollen or traumatized mouth by combining a syringe with a special rubber catheter tip. Moreover, Sally explained how she evacuated excess oral secretions through a tiny, clear oxygen catheter that could sit unobtrusively in the mouth. In all of these cases, nurse employed a high level of dexterity, as they commonly had to accommodate two or more tools in their hands when employing these devices. Taken together, the expansive range of tools, and the learning that accompanies their use, offers insight into a dynamic practice. The range of problems that stimulated this work of innovation is further explored in the following section.

A proximal knowledge

By virtue of their close spatial proximity to intubated patients, nurses were able to identify problems and questions that the critical care nursing literature does not sufficiently address. These include the regular occurrence of halitosis (“neuro breath”) and inadequate solutions for drooling, xerostomia, ulcers, pain, and oral resistance (“biting”). In relating her situated knowledge about patients’ painful responses to oral care above, Amy described how these issues are more the norm rather than the exception:

A lot of dry lips, […], neuro patients always have stinky breath so they probably get a little more mouth care than other people. Um, I want to say that a lot of people have really dry mouths but some don’t, some are just drooling, and drooling, drooling,
drooling, some are really dry, like it just depends what their population is. Some have sores, some don’t, but in general they’re not, in general they’re not nice clean mouths, there’s always something like dry, flaky, drooly, globbery sores, there’s always something kind of not so nice.

In exploring these issues in detail, nurses noted how their proximal assignment made it important for them to respond to patients in the moment. Mitigating these problems before they escalated was ideal. However, intervening was never straightforward. For example, Aly learned that there were essentially two types of patients: those that “opened their mouths and cooperated” and those who are “difficult”. In explaining how she dealt with a patient who resists oral intervention, Amy explained:

When a patient clamps their jaw down it’s very hard to get in to do mouth care. So sometimes what you will do is you will try to maybe brush around the outside of the teeth, but it’s very difficult to get inside to take a look at the tongue and to do/see the roof of the mouth and to do the insides of the teeth when they’re resistant and they’re biting down. Um, you just, you, you can’t get into those areas.

Frank noted that different solutions to this problem might be employed. For example, when biting prevented access to the central part of the mouth, an oral airway could be placed to keep the lips and teeth apart. In effect, the oral airway acted as a type of “bite-block”. Frank explained that this might sound simple enough on paper, but it did not resolve the problem of access and visibility:

Well I think, I think a lot of time you’re almost going [in] blind when you’re doing mouth care. The sicker patients, I think they become very difficult to do because not only do you have an ETT [endotracheal tube] but you’ll have an OG [orogastric tube], you’ll have an oral temperature probe in there. So you get limited space inside there. And then there’s also an E-Vac Tube that’s coming beside the ETT. Sometimes these patients are biting down. So they have an oral airway in there. So I think from that standpoint it gets really hard, like, I find that a lot of patients that went through that course where they came in quite ill and had all these things in their mouth, a lot of them will have thrush and a lot of build-up inside of their mouth. It’s easy to get around the teeth but to really get inside the
mouth, around the tongue, around, you know, the back of the molars and stuff, I think it’s very, it is difficult.

With oral access being a persistent issue, Frank suggested that patients with particularly high acuity potentially suffered a greater risk of VAP. The inability to properly clean their oral space meant that the nursing team could not adequately protect them from infection. In explaining how patient groups have different baseline risks for infection, Frank noted how older medical patients often arrived with advanced oral hygiene problems such as periodontal disease and plaque build-up. He suggested that prior to their arrival in the ICU, they might have been too ill to care for their own mouths. In his mind, this could translate to a high proportion of disease causing oral bacteria and a particular vulnerability to respiratory infection.

The obvious need to actively correct these different risk states was emphasized by Nicola. She described how oral malodour often caught her attention first. In her experience, this signified the presence of bacteria and the risk of pneumonia. However, she also described how unresolved halitosis unsettled the patient care environment. Although she had successfully tolerated malodorous mouths herself, she was aware that odour presents difficulties for other constituents of the ICU:

Sometimes a family member will [notice the odour]. There’s some patient’s families who are very brave and they will put their heads next to the patient and other people are very reluctant to go anywhere near the patient. So it depends on the family because occasionally they’ll say something. But no, I think generally it’s the RT or us that notice, yeah.

Nicola understood that malodour or the unpleasant appearance of the mouth might inhibit beneficial social contact with the patient. In consideration of the importance of family presence for patient support, she took halitosis as an important signifier. For her, malodour indicated that her efforts in oral care needed to be more frequent and intensive. Frank agreed but related that
intensified efforts were not always successful. The unrelenting nature of “neuro breath” meant that intensified nursing effort might not be visible to others or acknowledged by them. Moreover, this may result in a sense of professional failure.

Sometimes you’ll have [other professions] comment or ask about it and then not really. […] Sometimes I feel as though people see it as it’s “the nurse’s role”. So they don’t want to step on anyone’s toes to say, “Oh, isn’t mouth care being done?” In fear that people will become defensive and say, “Well I’m doing my job.” You know?

In describing the persistence of halitosis in the context of head-injured patients, all of the nurses defined this problem as “neuro breath”. Sally noted how intubated head-injured patients typically develop an extreme case of this problem within 24 hours of ICU admission. She shared that supplementary techniques were required beyond oral care. For example, she would place peppermint oil on a washcloth and leave it at the foot of the bed. In this case, “families are a concern” and the scented oil made the patient and bedside a bit more tolerable.

Failure to achieve a decent hygienic state, as noted by Frank’s prior quote, presented a dilemma. Despite time spent controlling its impact, nurses explained that neuro breath was resistant to intervention. In contrast to their success in other areas of hygiene, neuro breath betrayed their efforts. In explaining this phenomenon, Suchman (1998) posits that routine forms of work are typically taken for granted. This means that ongoing efforts in oral care most often go unnoticed. As a result, nursing becomes an issue only when a disruption or violation in routines occurs (Wikstrom & Larson, 2004). The inability to resolve neuro breath left nurses feeling vulnerable to accusations of neglect. This suggested that an inverse relationship was at play: the greater the intensity of neuro breath, the less visible nursing work became.
In speaking to nurses about their ongoing work in oral hygiene, I realized that they were unaccustomed to being asked about it. Bringing it out into the open was not typical. They disclosed that hygiene had a tendency to dematerialize as it took place behind curtains or during periods when families and consultants were absent. Hence, I asked about the work required to produce the appearance of one of Pat’s patients. Although the woman was in a coma and would not have been able to participate in her care, Pat was able to generate a particularly tidy patient and bedside. Several days after I spent time with her in the ICU, we met to discuss what she described as a proactive approach to hygiene:

Craig: I am curious about some of the things you talked about when we spoke of hygiene […] that nurses can tell when somebody has had good hygiene. I am wondering what that is. How do you develop that awareness?

Pat: It’s just the look about them and the smell; they smell good and they don’t smell sweaty. If they’ve had old blood on them, it gets washed off. Sometimes you have to wash their hair because they’ve been in accidents. Their bed linen is clean, fresh, the gown is clean and they’re neat and tidy.

Craig: So, they’re, they’re ‘neat and tidy’. Can you tell me a little bit about what you’re thinking about in the sense of how that will impact events or other people?

Pat: Well, the goal usually of a day is to keep your, get your patient neat and tidy, organized so if you come [on shift] it’s already done. That saves you a lot of time. It’s important to keep the patient clean, it’s less risk for infection and um, sometimes the more you can visualize things in a neat tidy way, the easier it is to pick up on something that’s abnormal.

Here Pat conveyed a context-sensitive view of hygiene. Importantly, she describes using her body to keep abreast of various threats. If the smells and secretions of the body are less apparent, then they do not pose a clinical distraction. This follows Parker’s (1997) assertion that hygiene clears a space for the cognitive work of critical care. The overall clinical picture comes into focus as nurses remove instinctive aversion to what Isaksen (2002, p. 137) calls the grotesque
body: “open mouths, unsavory secretions [and] gaping throats”. In this sense, dirt can shift routines and practices off course.

A painful reality

With an understanding that oral hygiene has multiple purposes and benefits, I sought to explore in greater detail how patients respond to this work. Patient reactions to nursing care often appeared to communicate oral discomfort or resistance. For example, Amy explained that many patients “hate” oral care. Even though the literature asserts that nurses over-prioritize comfort (Berry & Davidson, 2006; Ross & Crumpler, 2007), nurses shared knowledge that oral activities were not always comforting to patients. In fact, they felt that the requirement to perform frequent oral care was traumatizing certain patients. Whether nurses were entering mouths to perform neurological assessments or general oral care, patient resistance registered as trauma, they disclosed.

Both nurses and physicians suggested their knowledge of oral sensitivity was embedded in highly personal experiences. For example, the intensivist Danielle shared, “we’ve all had ulcers in our mouth, like, we know it can be quite painful and the fact that you have to go and suction things or, you know, put products that might be irritating for sure there’s the sense that it must not be comfortable”. Particularly informative for some nurses was their personal experience as dental patients. Nicola explained that her knowledge of this resided in her own body:

Nicola: Gosh yeah, I tried the chlorhexidine. Because I had to have my wisdom teeth out this year, and now I know how chlorhexidine feels on a mouth that’s sore. It’s painful. So I have a lot more empathy for the patients when I’m putting chlorhexidine into their mouths. And I actually do explain to them that I know how that feels. And that I’ll be as quick as possible and do what we can.

Craig Okay, so that was, do you think, was that the same chlorhexidine that is used here, 0.12%?
Nicola: Uh-huh, it was.

Craig: That was stinging your mouth?

Nicola: Yes it was. [...] it hurt the wounds in the back.

With a similar dental experience in mind, Frank explained that coaching patients through mouth care is especially important nursing work. Because oral interventions might be required at any time, he shared that this necessitated a particular attentiveness and dexterity in practice. His discovery that patients recall their ICU experiences enhanced his attention to oral discomfort:

Frank: One nurse told me a story that there was a patient, I think it was in some literature that she had read, and basically a patient who was thought to be comatose, woke up from their coma and wrote about their experience. And like, I always remember it because in my practice I try to talk them through it, explain what’s happening, you know, give them a timeline of how long is this going to be. “Okay, one more second”, etc. So that they understand it’s not going to be forever and in their mind they feel like, you know they know what’s happening. And one of the things that they wrote about was they were always afraid of these hands with red nail polish because they knew that every time that hand would come near their mouth that the tube was going to be going down and they were doing to be suctioned and they didn’t know how long and it hurt. And so in my practice that’s one of the stories that always sticks in my mind of, you know, of that experience, the patient’s experience.

Although a loss of bodily control is central to Frank’s concern, Bill noted that the provision of oral care could also augment a sense of normalcy in illness. In fact, he felt that it might reconstitute a feeling of equilibrium in an otherwise chaotic experience. Again, personal experience was helpful. He said that he always “brings it back to [himself]”, in order to understand how mouth care can do more than remove bacteria. As a hospital patient in the past, he recalled how the fog of illness lifted when he received assistance with oral care. Likewise, Nicola sensed that mimicking patterns of hygiene undertaken at home could restore a sense of integrity. “I think it provides normalization. When you’re brushing a patient’s teeth, it’s part of a
normal life. That’s what we do every day, twice a day. You know? You want to create some normalcy for them too.”

With these different attendances and insights in mind, nurses continually returned to the problems of organization. As the ABCs could reorder this work and place hygiene in a lower status, it was important to bring one of these experiences forward. In the following field note, a nurse named Sally alerts me to the variable conditions in which oral care occurs. The field note begins with the investigation of a possible VAP case and follows nursing work behind the red line.

**Pulling back the screen**

*I know something is wrong when I arrive at the bedside to find the curtains drawn and a figure in green scrubs preventing access to passersby. Apart from brief intervals for hygiene, bedsides are routinely on display in the critical care unit so technologies can be read from afar. When curtains are closed, they are rarely guarded. Accordingly, I am curious what must be hidden from view here. Following a series of probing questions and sideways looks, the curtains part and I am granted entry. Although six masked people surround the bed, my eyes immediately clamp onto the long black snake-like device being guided down the patient’s breathing tube. The patient’s mouth hangs slack, and his chin tilts to the ceiling to accommodate access. The physician at the head of the bed requests “more saline”. The respiratory therapist (RT) to his left connects an enormous syringe full of clear fluid to the black apparatus in a seamless gesture. Their synchronized movements tell me they have done this before and their gestures speak for them. Of course, this is no snake. It is a bronchoscope and this is a bronchoalveolar lavage (BAL). As a critical care nurse, I know this device well, as it is commonly used to visualize and***
‘wash out’ the troubled lungs of critically ill patients. Like many tubes here, it enters the mouth as a portal to the body. However, in this case, it slips down the breathing tube already in place.

The RT injects the clear liquid into an opening on the scope and a few seconds later it magically reappears in a transparent plastic container, albeit somewhat murkier with the addition of greyish lung secretions. Throughout, the physician keeps one eye to the scope’s viewfinder as he navigates the bronchoscope’s distal tip into the lobes and crevices of the patient’s lungs. We do not share his interior view of the patient; only he can see what is undoubtedly a troubled landscape. Once full, the plastic container is disconnected from the bronchoscope by the RT and it joins two others patiently waiting on the sidelines for delivery to the laboratory. Someone amongst the masked group says, “OK, we have enough”. A few moments later, the long rubbery bronchoscope is withdrawn, and the patient is left with one less tube penetrating his mouth and body. Rubber gloves snap off hands, facemasks take flight and yellow protective gowns fall from bodies. The curtains surrounding the bed flutter briefly as the assembled team and one bronchoscope exit. Sally, who is the assigned nurse, and I are now alone with the patient behind the curtains. I survey the chaos and ask myself, “Where might one start?” The patient is lost in a twisted sea of sheets. Devices and discarded packaging float languidly about two tables in addition to the bed.

Sally’s voice sounds exasperated in the face of the cleanup before us. “I knew this would happen”, she says emphatically. As we begin to pick up the debris and place it in a garbage container, she explains that her patient had been struggling over the last three hours; his lungs were filling with secretions and he had been breathing at an accelerated pace. Moreover, he had a fever and was sweating profusely. Taken together, these are possible symptoms of ventilator-associated pneumonia (VAP), one of the most common and lethal of infections in critical illness.
For her this meant a recursive pattern of trouble-shooting ventilator alarms, changing oxygen settings, sending blood gas samples to the laboratory, suctioning the patient’s mouth and endotracheal tube in addition to calling for assistance from the RT. Some nurses here call this “spiraling”. This suggests a feeling of being pulled in multiple directions – a vortex of work, if you will. Significant to the experience of “spiraling” is the sense of getting nowhere.

After washing the patient and changing the bed linens, we carefully place the patient in a right side-lying position. There, he begins to cough; the silent spasms of an intubated patient’s cough manifest themselves as jerking and a red face. In lieu of human sounds, the ventilator alarms as it is sensing something is wrong. Greyish sputum emerges and rattles in the clear plastic breathing tube where it leaves the patient’s mouth. “This often happens when we turn the patient”, Sally explains. In sequence, she suctions down the breathing tube to remove the greyish sputum, and the ventilator alarm stops honking. She then proceeds to tell me, “this is how I do mouth care”. She opens a small packet of chlorhexidine 0.12% antimicrobial rinse and saturates three blue foam-tipped swabs. She asks the patient to open his mouth and inserts the Yankauer and with her left hand. With her right, she cleans his mouth, one swab at a time. Her hand deftly twirls and twists the swabs in his mouth in order to coat all surfaces including his teeth, gums and tongue. “Afterward, you have to deep suction the back of the throat”. Sally proceeds to place a Yankauer far into her patient’s mouth to remove a growing pool of oral secretions that I cannot see. Somehow, she knows the secretions will be hiding at the back of his mouth. She proceeds to move the Yankauer deeper into the patient’s mouth until she hears the rattling sound of fluid and suction meeting. The overbed monitor suddenly alarms as the patient’s heart rate hits 120 beats per minute. “Some patients hate mouth care”, she relates. He is now trying to communicate his discomfort by mouthing words. Sally patiently tries to read his lips, which is difficult given the number of tubes in his mouth. “Are you gagging? Nauseated?” she asks. With
lightning speed, she turns off the feeding pump and places his stomach tube to suction. We stand still and watch. In a few minutes he acknowledges that he is feeling better; the nausea has subsided and his heart rate is back to normal. Clearly, mouth care has attendant risks and discomforts as patients may gag and vomit. I ask Sally how she knows to respond as she did in this instance. She says, “I don’t know….but decompressing the stomach helps”. Experience suggests she has avoided potential aspiration of stomach contents into the lungs.

The inversion of social norms

This second field note offers important insights into an organized response to a possible case of VAP. Respiratory infection in intubated patients is thought to originate in the oral space. At this juncture, diagnosis is key, as appropriate antibiotic treatment requires the identification of specific bacteria. Respect for convention in bacterial control is evident in the presence of closed curtains, yellow disposable gowns, masks, eye-shields and gloves. The seamless movements of those guarding the bed space and handling the scope suggest an understanding that some of this activity will look threatening to the uninitiated. Further, it may be dangerous. The potential to distribute pathogens into the air is understood. The preceding scene serves to notify how accountability is socially distributed.

Interestingly, the actions of the clinicians in this scene convey several important messages regarding the social assignment of nurses. After the bronchoscopy is completed, the curtain is left closed. Those departing the bed space know not to open it. This discloses an awareness of the unseemly appearance of the patient and environment. Roles are clearly delineated and there is no ambivalence regarding the correction of this scene: the nurse must rectify it. However, the time and physical effort required for the nurse to proceed are not witnessed, whereas the audience was present for the bronchoscopy. This inattention to nursing
activity would include the completion of associated documents. The paper requisitions to accompany the sputum samples to the laboratory remain unfinished. Further, the entire procedure needs to be reformulated within a few checkboxes and lines within the nursing flowsheet. In this instance, tidying up happens in several ways.

Nursing work is intensively social in its care and attention to people. However, it may also be accompanied by intense bodily experiences that may register as unpleasant or painful. Thorogood (2000) defines the mouth as the most highly guarded sensory opening to the body. This means that any move to inserting fingers, tools or solutions may be met with prompt resistance. For example, many people would recoil at the thought of using a stranger’s toothbrush in their own mouth. This suggests a form of knowledge that is shared. Thorogood (2000, p. 165) situates this wisdom in a set of “mouthrules”: important social knowledge of which objects are clean or contaminated relative to their placement in the mouth. Mouth rules infer that the incipient dangers of contamination are therefore lurking both inside and outside the body. Further, this knowledge defines groups that may enter this sensitive space. For example this might include sexual partners, mothers, and health professionals.

The preceding field note offers one example of a nurse traversing a margin around social norms. In this case, I would argue that critical care nurses must invert social norms. Understandably, entering into the bodies of strangers is within the set of regulated activities to which nurses are accountable. However, nurses may not be commonly associated with pain or discomfort. In this preceding scene, oral comfort does not appear to be a significant dividend for the patient. Although he allowed the nurse to enter his mouth it precipitated an unpleasant experience in gagging and nausea. In recalling Lucy’s experience in the first field note, we find this process can be discomforting for the nurse as well. The sight and smell of bodily secretions
can be experienced as abjection: an unsettling or traumatic event (Kristeva, 1980). In Lucy’s case, seeing the patient gag elicited a similar response in her own body. In proceeding to correct bodily “matter out of place” (Douglas, 1966, p. 44), nurses must invert their own feelings and preferences to correct a problem.

Rectifying unclean states in the mouth requires nurses to set aside their own sense of privacy and propriety around the bodies of strangers. In describing the accrual of skill and knowledge in oral care, Beatrice shared that this required direct experience touching bodies. Over time, this experience enabled her to accrue a sense of tolerance so she could competently perform nursing duties without disarming herself and the patient. In overcoming her initial sense of inadequacy, Beatrice was allowed to cross over sensitive lines and offer something to patients, she also shared. While the effects might be mixed, she was able to rectify a problem that critically ill patients could not accommodate on their own.

Chapter summary

As an entry point to the critical care unit and nursing work, the field notes and quotes in this chapter offer novel views of oral hygiene’s social, temporal and material relations. Situated in a locked unit, behind curtains, and submerged in mundane routines, multiple factors are complicit in the ongoing disappearance of oral care. While the work of VAP prevention is often concerned with the theory of bacterial “translocation” (Grap et al., 2011, p. E115), I have sought to locate and describe the material practice of mouth care. Though the course of observation and interview, I have shown how nurses use their bodies to address a diverse set of oral problems and circumstances. A contemporary understanding of oral hygiene betrays a very intricate practice.

In taking up a recurring position as a participant observer in the critical care unit I have noted several disappearances. Perhaps the most important of these is that the institution depends
on the good knowledge of mouth care that nurses import from their personal life experience. In merging this with professional exposures and informal mentoring, they take up a task to which no other profession consistently attends. This means that experienced nurses need to be present to safeguard patients from poor oral health. Despite a scientific theory of oral bacteria translocating to the lungs, training to mitigate this complex problem does not exist. In its place is an informal curriculum that depends on senior nurses to orient trainees to the pragmatic details of mouth care, thereby uncovering a paradoxical gap in addressing VAP, which is identified as the most common infection in critical care.

In the first field note, the temporal dimensions of work pose concern, as nurses must attend to many issues at once. The complexity of their assignment suggests that the routines and practices of other clinicians pose barriers to oral hygiene. For example, the dependence of the interdisciplinary team on nursing inscription may limit the time available to complete mouth care. Feider and colleagues (2010) share that less than 50% of nurses report having adequate time to conduct oral hygiene. Findings in this chapter move beyond the identification of time barriers to describe the material and social context of this problem. The manner in which oral care can produce resistant patient responses suggests that it is not a simple task. Understanding how curtailing and coaching is involved in oral care identifies time an important resource. Communicational incapacities associated with intubated and ventilated patients mean that nurses also require time to sort patient concerns through methods such as lip reading.

By beginning inside nursing work, I was able to see how nurses transform a wide range of events and practices concerning the mouth. The work of “tidying” involves the correction of disturbing appearances. The unsettling manifestations of ill bodies such as odours and leaking secretions are cleaned up so the cognitive work of clinicians can proceed. Further, oral care
addresses the needs of families so that the patient and environment are tolerable. This observation aligns with Davies’ (1996) assertion that the everyday/night diagnostic work that takes place in hospitals relies upon the work of others who are often women. The process of sifting textual data as part of a diagnostic model also supports Smith’s (1987) discussion of men’s conceptual (thinking) practices being made logistically possible by the work of women. However, nursing statements here challenge claims that it is women’s natural disposition to perform intimate acts of hygiene. Both male and female nurses shared highly gendered experiences in learning hygienic work as trainees.

In the second narrative, hygienic work unfolded following a clinical investigation of suspected VAP. Hygiene in this circumstance follows the technological intervention undertaken to support a medical diagnosis. Importantly, hygiene is sequestered from general view; it is undertaken behind a curtain and involves cleaning up after a larger set of actors. A duty to conceal this work underscores a larger understanding of the nurse’s social assignment. In this field note, the team departs upon the completion of the bronchoscopy, leaving the patient and bedside in disarray. Importantly, team members do not stay behind to witness the nurse’s hygienic work in the same manner as the physician’s technical procedure. As a result, a hierarchy of care becomes evident. In this schema, oral hygiene holds less importance than diagnostic medical work.

Finally, the manner in which economic concerns penetrate unit activities is important. My field notes and interviews confirm that managerial efficiencies are passed down to frontline staff. These concerns not only impact the manner in which oral care tools arrive to the bedside but the quality of these devices as well. This offers insight into the fact that the work of oral care is not just about cleaning. It also consists of hunting and gathering, on-the-spot creativity, patient
proximity, bodily propriety, intensive communication, technology management and attention to managerial issues. Efficient and effective care therefore draws heavily from the nurse’s bodily expertise. Without a larger audience, the repertoire of skill that accompanies hygienic work might remain underappreciated.

In summary, nursing work in oral hygiene is highly complicated and diverse. In the critical care unit, efficient and effective nursing work supports the flow of organizational activities. However, the lack of endorsement of nursing queries and experiences poses problems as it leaves these clinicians feeling uncertain about their contribution. The range of oral problems and patient responses identified here are not well described in the literature. In foregrounding nursing activity, it is important to consider what is visible in the official record. As intersecting and concurrent practices, oral care and clinical documentation appear to transform one another. Nurses are obliged to record oral care, and the time spent in inscription may not communicate what is actually happening. The next chapter takes up this interest in following the textual account of care.
Chapter 6
The Textual Coordination of Work

In this chapter I proceed with a close examination of texts in the critical care unit. In drawing attention to an interlocking set of documents, I explore the how clinical work in the ICU is textually coordinated. Crucial to the flow of this work is the essential role of nursing inscription. In the previous chapter, I identified the nursing flowsheet as a key document as it binds clinicians in recurring forms of activity. In foregrounding a sequence of textual work that precedes and coincides with the flowsheet, I show how nurses are essential to the timely translation of patient events into a graphic display that is recognizable by the medical team. In particular, this inscription work renders the medical concept of ‘organ failure’ visible so that the team can interpret and respond in kind. While this text-work-text sequence plays a central role in coordinating nursing activity, the routine completion of the flowsheet elides critical features of nursing work and concerns in oral care. In contrast to the high visibility of organ failure, the oral space recedes for those involved in the care of the patient.

I also aim in this chapter to show how extralocal or expert ways of knowing oral care have penetrated the local setting through texts. Interconnections between the flowsheet, regulatory policy and evidence-based ideals are revealed. In this case, new institutional concerns for infection prevention precede a direct appraisal of the patient. Despite the concern for preventative oral care, I show how the flowsheet conceptually separates the mouth from the patient body, and accords oral care a lower status. Smith, Mykhalovskiy and Weatherbee (2006) describe the institutional ethnographer’s aim to locate and describe these textual links. In this line of thought, Hussey (2012, p. 13, emphasis added) argues that the ethical and moral content
of people’s actions “don’t just come from anywhere”. I show how the deprioritization of oral care directly reflects the flowsheet’s design. This paradoxical finding is central to my analysis.

Despite the magnitude of nursing efforts in inscription, I show, the highly abstract nature of clinical documentation in fact creates additional work for nurses and physicians. The inability to sustain a holistic account of the patient’s needs and temporal story of hospitalization requires additional notations on blank sheets or ancillary forms. I demonstrate how nurses use notes to advance the practical realities of patient care. This part of my analysis argues that patient issues, such as oral care, exist in the margins. In contrast, physician notes and lists emphasize diagnostic problems and the economics of critical care. The chapter begins with a close reading of the nursing flowsheet. The section that follows builds upon a field note and interview quotes to explicitly show texts in action. In outlining their documentary work, physicians share that nursing documentation is a critical communicational tool for direct patient care. However, my analysis argues that the nursing flowsheet is not designed to foreground oral problems or related nursing interventions. Instead, diagnostic and managerial frames subordinate nursing interests. This recursively shifts attention away from preventative oral care to a larger project of infection identification.

**Reading of a regulated space**

The types of inscription and reading that are accomplished in the critical care unit are many. However, there are three central paper-based documents that I wish to clarify for readers at the onset. During my time in the field, I noted that nurses handled these documents frequently and carefully because of the information they contained. The first document is the standardized physician order set. On admission, the intensivist or designate would complete this five-page preprinted set of medical orders by ticking off appropriate boxes or hand writing items that
would specify the required technologic monitoring, invasive lines, ventilatory parameters, diagnostic tests, medications and medical treatments for each patient. Because the order set has multiple carbon copy pages, nurses would separate one set for the pharmacy and another for the patient chart (a binder which stays at the bedside). From the bedside copy, nurses created a summary of the patient’s diagnoses, active treatments and medications on a preprinted form called the Kardex. Because new orders could accrue at any time of day or night, the Kardex was checked regularly for accuracy as it was used as a reference to transfer an active medication list to the nursing flowsheet (Figure 4).

Given the ongoing sequence of inscription noted above, it is not surprising that critical care nurses spoke about the various types of reading and writing involved in their work. However, they also indicated that their active clinical documentation on the flowsheet facilitates a diverse reading of patient events and clinical practices. For example, they noted how clinical, managerial, legal and research reviews are dependent on their flowsheet charting. As a new nurse in the critical care unit, Amy said that this often felt as though “a billion people” were examining her documentation. Not surprisingly, many nurses felt pressure to accommodate these diverse needs. With this accountability in mind, nurses related how nursing regulation (CNO, 2011) and standards (Critical Care Secretariat, 2006) intersect with evidence-based practices to emphasize accurate and timely patient documentation. For example, Frank said he was “taught that if it’s not documented it wasn’t done”. This meant that the flowsheet structures what could be objectively understood as appropriate achievements in patient care. In turn, gaps in documentation could have serious repercussions as they could be read as a neglect of duty.
Figure 4. The nursing flowsheet (pages 3–6 and 10–11)
Nurses explained that the design of the ICU flowsheet (Figure 4) might invite the aforementioned critical assessment of nursing duty given its social and material prominence. The flowsheet is a large two-sided black and white document that measures 60 cm wide by 46 cm in height. It is comprised of 12 numbered pages and occupies considerable space on the charting table assigned to each bed. Created with multiple folds, it can be easily reduced into a letter-sized document for storage and retrieval. However, it is essential to expand it to its full size to assess all of the fields. Whereas the nursing staff typically works with it unfolded, this larger view required some maintenance, in that the unfolded form is actually larger than the provided table’s surface. I observed many consultants flipping and folding it back and forth, much like the patient’s body, to review its anterior and posterior parts. Maintaining an expanded view required frequent rearrangement of the flowsheet’s pages for hourly nursing inscription.

As is typical in the study unit, the flowsheet sits with the vital signs (pages 3–4), fluid balance (pages 5–6), medications (page 10) and laboratory (page 11) sections facing up (as seen in Figure 4). This appears to facilitate frequent transcription of information from monitors and other technologies. Moreover, it affords a reading of current treatments (e.g., antibiotics) and their impact on physiological markers (e.g., temperature). However, the form also has a second side. This additional area is composed of pages 1 to 2 in addition to 7, 8, 9 and 12. These pages include components such as the head-to-toe assessment, routine practices (evidence-based practices), family concerns, medications, ventilator parameters, narrative notes and general hygiene. Both sides of the document contain vertical and horizontal tables that are further subdivided into 12-hour day/night categories. A 24-hour clock provides a diachronic view as hourly columns move from 0800 on the left toward 0700 on the right of each field. Because of the very small spaces allotted to inscription, the flowsheet offers a legend on the far right that
suggests space-saving codes. Nurses demonstrated that this design demands frequent referencing of the legend to support accurate recording of patient observations and responses to treatments.

In both observation and interviews nurses shared that the flowsheet powerfully influences their attention to time. More specifically, this culminates in a tension or pressure to complete inscription work. For example, Lucy noted in the previous chapter how the flowsheet must be prepared for interdisciplinary review on morning medical rounds. Because “time does not wait for anybody”, the flowsheet’s columns and fields encourage an orientation to a complex schedule of social exchanges or events that may not be visible on the form. Consequently, nurses verified Frank’s prior statement regarding the importance of complete documentation. They shared that blank spaces in the flowsheet might be read as patient assessments or interventions that are “not completed, attempted or recognized” (Wurster Hitchens, 2004, p. 306). This situated reading may be analogous to what Smith (2005) calls a text-reader conversation. This would mean that the flowsheet’s empty fields speak to nurses of the importance of filling them in so the work of the unit can progress in an efficient manner.

In observation and interviews, nurses demonstrated that keeping the flowsheet in continuous view was an important strategy in meeting their documentary accountabilities. This enabled them to constantly audit their own textual progress across each 12-hour shift. A nurse named Amy described how this worked:

Amy: Yeah, sometimes that’s what drives me to do my chart every 2 hours because I have to be able to write down that I did it, what um, it’s, I, I feel like the culture on the unit is very perfectionist and if you can have a perfect looking flowsheet then that says something about you, in the perfectionist world.

Craig: So, there’s a kind of a social pressure to have things look a particular way?

Amy: I like to have my flowsheet look like I like to fill it out and I like to see that I have done regular care. And it does help, if you have, like, somebody that really hates
mouth care and you’ve been kind of letting it slide and then you look down and you see you haven’t done it for 6 hours, like, that it helps a lot.

Because the flowsheet offered a view to completed or pending nursing care, its visibility was important reminder of inscription work. However, this meant it could also be a source of critical evaluation. As a recent nursing hire, Amy found documentation was read as a sign of competency. Because she was learning many things at once, she often fell behind in her charting efforts. In practice this resulted in unwanted exposures as senior nurses verbally reprimanded her about late documentation. Because the senior nurses could take a “battlefield and turn it into a diamond”, Amy emphasized how documentation functioned to demonstrate expertise in representations that transform an often chaotic scenario into an orderly text.

With the aforementioned idea of expert informational management in mind, nurses continually guarded the flowsheet as a second strategy. The flowsheet became a hub or centre point of social activity. This required nurses to clear the desk of pens, binders, stethoscopes and other equipment that could obscure the document. With these distractions out of the way, the flowsheet could serve as a reminder of important data collection requirements. However, nurses often had to compete for physical access to the flowsheet during busy daytime hours. Bill noted that some consultants would “move in” and overwhelm the charting area. In a similar statement, Sally found that competition for the flowsheet meant it could be difficult to record care activities in a timely manner. As a result, it was possible to omit documentation of the people present as well as patient responses to treatment.

**An official routine**

In directing my attention to a reading of high quality care, a nursing educator named Gretta explained that evidence-based content was recently given a prominent position in the
nursing flowsheet. She indicated that international organizations such as the Institute of Health Care Improvement (IHI, 2011) and Safer Healthcare Now (Canadian Patient Safety Institute, 2012) had influenced a recent reorganization of the flowsheet. These external organizations had published lists of “best practices or strategies at preventing ventilator associated pneumonia”, which were incorporated locally. For example, she explained that processes to reduce time on the ventilator as well as VAP were posted on the flowsheet as questions to nurses (Figure 5). In listing these questions as ‘Routine Practices’, Gretta explained how extralocal knowledge entered into the critical care unit and became anchored in the flowsheet. She directed my attention to a

The ventilator associated pneumonia bundle along with the other best practices are incorporated into our flowsheet. So it asks nurses in the health care team to address every day head of bed elevation and how long they’ve been ventilated, if they’re appropriate for a spontaneous breathing trial, aspects that look at us reducing our ventilator days and in turn decreasing the opportunity for ventilator associated pneumonia. There’s posters up at […] various bedsides indicating head of bed elevation and what it should be as well as our bed’s measure, the degree of which the head is elevated. It’s in our flowsheet, it’s also incorporated onto our Kardex.

An intensivist named John confirmed Gretta’s understanding. He noted that VAP was one of the “most studied areas” in the history of critical care. This resulted in a large volume of published evidence to inform practice. In turn, he explained how “positive studies using chlorhexidine mouthwash […] made it into our ICUs as a means to prevent pneumonia, ventilator associated pneumonia”. Further, that this treatment “has been left to the nurses to administer to ventilator patients”. As one part of a “VAP bundle”, he explained how knowledge from international research was merged with local documents to improve patient outcomes.

In considering a nursing assignment to expertly endorsed routines, John suggested that enhanced oral care was likely a moderate “nursing workload issue”. However, Gretta pointed to a much more significant change in patient care priorities. In placing an expansive list of
evidence-informed nursing prompts on the first page of the flowsheet, the order in which patients are assessed was altered. In promoting a view to scientific care strategies, Smith (2005) might suggest that these questions lock in an institutional perspective given the intention to reduce the amount of time patients spend in the critical care unit. This is possible as the list narrows the “selection of what will be recorded, observed and described” (p. 191). In explaining what had been displaced in the reorganization of the form, Gretta pointed to page 2 of the flowsheet, where a physical assessment of the patient would be recorded. In moving this section back one page, the actualities of the patient’s illness and bodily needs were less obvious. Therein, a new organization of the patient record prioritizes a standardized or routine approach to quality patient care.

<table>
<thead>
<tr>
<th>Routine Practices</th>
<th>*Rationale/Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. On continuous sedation?</td>
<td>Yes No</td>
</tr>
<tr>
<td>2. Pain, SAS, delirium scores outside target?</td>
<td>Yes No</td>
</tr>
<tr>
<td>3. Physical restraints required?</td>
<td>Yes No</td>
</tr>
<tr>
<td>4. Central line present?</td>
<td>Yes No</td>
</tr>
<tr>
<td>5. Artificial airway in situ?</td>
<td>Yes No</td>
</tr>
<tr>
<td>6. Receiving mandatory mechanical ventilation?</td>
<td>Yes No</td>
</tr>
<tr>
<td>7. Braden score &lt; 9 &amp;/or pressure ulcer present?</td>
<td>Yes No</td>
</tr>
<tr>
<td>8. Receiving enteral or NG nutrition?</td>
<td>Yes No</td>
</tr>
<tr>
<td>9. Receiving DVT prophylaxis medication?</td>
<td>Yes No</td>
</tr>
<tr>
<td>10. Receiving peptic ulcer disease prophylaxis?</td>
<td>Yes No</td>
</tr>
</tbody>
</table>

**Figure 5. Routine practices (flowsheet page 1)**

In establishing a priority assessment of evidence-based risk reduction strategies, Gretta pointed to the placement of two components of the IHI ventilator bundle (2011) in the fifth line of the “Routine Practices” section (Figure 5, section 5). In positioning expert queries about head of bed elevation and oral chlorhexidine on the first page of the nursing flowsheet, she alluded to the promotion of scientific strategies through texts. The nurse named Amy suggested that the
placement of bundle checklists in the flowsheet worked “to make sure that [these practices] happen every day like housekeeping”. In sequence, the checklist engaged nurses in a cognitive exercise where they internalized the itemized query in order to reflect on the comprehensiveness of the care plan. In simple terms, Amy noted how the ‘Routine Practice’ tool acted as a reminder that oral chlorhexidine should be ordered for all intubated patients.

Both Amy and Rick explained that the placement of expert queries on the first page of the flowsheet assigned an administrative oversight role to nurses as it pertained to the oral space. In addressing his situated reading of ‘Routine Practices’, Rick offered that this list oriented his thoughts to managerial concerns. He was aware that clinical science had merged with economic interests to change local policy. He noted how “research indicates that [hygiene] will cut down [infection]. So the advanced practice nurses and the [nurse] educators and the managers and the Ministry of Health and everybody get together. They come up with a policy that will fix the problem and simply tell the staff what the solution is”. In taking up this large-scale perspective he disclosed how it gave nursing hygiene a “concrete” purpose in a larger project of health resource conservation:

I’m actually kind of pleased that the government are involved in it. It’s something that’s, the research indicates that it’s relatively concrete, that nosocomial infections happen. [...] It’s wonderful to see that there’s a province-wide initiative. It’s wonderful to see that money is being utilized to potentially reduce the duration of hospital stays, to reduce the cost of health care. Health care’s hugely expensive. It’s a very, very limited resource. I would much rather spend my day taking care of sick people that are really sick, that are going to benefit from my care. It’s a complete waste of money to have somebody in ICU ’cause they picked up [a preventable infection], ’cause somebody didn’t wash their hands [...] all of that stuff sucks tens of thousands of dollars [when ICU patients] stay plugging up a bed for something that in an ideal world they wouldn’t have needed to be there for in the first place.
Similarly, Amy’s understanding of these concerns within of the flowsheet reminded her of an external reading of her work. In this case, government interest in reducing costs associated with infection and a prolonged ICU stay emerged from her reading of ‘Routine Practices’. Not unlike Rick, she took up a managerial view that her work was a low-tech solution for an expensive problem:

I forget how many years ago but my knowledge is the government started making these bundles because infections had become such a problem especially in an ICU settings. So, two biggest ones I know about are your VENT bundle or, and your central line bundle and they’re just, they’re made up of really easy to do [interventions that] work together to make a difference in infection rates, to decrease them, and looking at them I would say they’re probably, like, very cost effective, easy to do make a big difference and it’s monitored by the government if we do it or not, I think.

In this instance, Amy was aware that her work in oral care was audited. It became visible in the flowsheet as an item completed “or not”. In an extension of these ideas, Sally felt the flowsheet made nurses “accountable” in text as it was read as a factual account of professional nursing care.

A text-reader sequence

Particular to Rick’s discussion of the flowsheet was its powerful ability to organize a hierarchy of important work. He expressed concern around the expansive volume of clinical knowledge concerning effective and efficient life support interventions. This growing body of information made clinical decision-making a challenging effort. An ongoing cognitive process of sorting relevant or appropriate treatments could displace material activities such as mouth care. Rick read the ‘Routine Practices’ section of the flowsheet as a solution to cognitive overload; it acted as reminder and endorsement of bodily care:
There is a lot to know in ICU. There is an astronomical amount of stuff that we learn, that we’re exposed to, that we hear, read, see, talk about. And quite frankly I can’t remember all of it. And if there weren’t some reminders in front of me about some of these things, sometimes they don’t seem overly important. The reminder reminds you that they actually are important.

Like Rick, many nurses shared that the material practice of oral hygiene could be relegated to a lower priority when patient acuity is high. In order to keep it in view, a nurse named Ally described a text-reader sequence that required her to move the term “chlorhexidine” through a series of documents. She demonstrated how oral care was identified on the physician orders when intubated patients were admitted to the unit. In turn, nurses became agents of the text by moving it to the flowsheet following a series of steps:

Okay, so [the ICU physician orders] says chlorhexidine 0.12% mouth care solution applied to all oral services followed by oral suction [four times a day] except for patients with a documented allergy to chlorhexidine, discontinue after the third dose post extubation. So, like usually the resident will tick that off and then we of course tick it off on our Kardex and then in the morning we transcribe our medication notes from the Kardex onto the nursing flowsheet. As an ICU nurse you’re always looking at your flowsheet it’s like your bible of the day and you’re always tuning into different parts of it; did I do this, did I do that, am I on top of this? And, so having it of course written down on the medication part of the nursing flowsheet has made it much easier than before when we weren’t using the chlorhexidine, there wasn’t that extra reminder to do the mouth care.

In describing this recurring sequence, Ally directed my attention to line number 41 on page 4/5 of the standardized critical care unit admission orders (Figure 6):
She disclosed how the physician would order or decline oral care with chlorhexidine antimicrobial solution by placing a tick mark in the appropriate column on the far left of the table. Following her reading, Sally would initial or sign beside a “yes” order in the far right column that allows space for her signature. In turn, she would activate this request in two parts. First, she would deposit a carbon copy of the order in the pharmacy bin for retrieval by a pharmacist who was responsible for delivering the product to the unit. Second, she would add this item to a list of current medications on page 2 of the nursing Kardex:
In activating the preprinted order within medication section of the Kardex, Ally would inscribe the date she transcribed the order (Figure 7). Further, she would assign standardized times to deliver chlorhexidine (QID or four times per day) in the columns to the far right. She noted that nurses were required to transcribe the cumulative list of Kardex medications to a new flowsheet each 24 hours. As a circular or repetitive form of work, Ally explained how nursing transcription of physician orders occurred each morning at 0730. However, it could also happen anytime a new medication was ordered, or an old one modified or discontinued. Given the important role of medications in critical care, nursing organization of medications generated a helpful reference. The larger interdisciplinary team could review the list at any time. Moreover, nurses used it to keep the delivery of medications organized.

With patient safety in mind, Ally explained that nurses did not simply transfer words between pieces of paper. Instead, they employed a “form of knowledge that isn’t really documented or talked about”. She explained that experienced nurses were mindful of possible errors, omissions or medication interactions as they read and transcribed orders. It was
sometimes necessary to speak directly with a physician to verify a drug or dose that looked unfamiliar. This would include queries about standardized orders that were erroneously “ticked off” in haste. However, she recounted an experience where a physician “just kind of lost it” when approached by a nurse with questions. Further, some physicians did not want to be called during the night. In response, she explained how nurses developed a set of tiered strategies to sort potential errors. As a preliminary tactic, she would often call the pharmacist for a second opinion. Similarly, nurses would confer with one another. Finally, nurses sometimes compiled lists of questions in an attempt to reduce recurring calls to physicians.

Many nurses said that the above referenced strategies were important as the textual authority of a physician’s orders rendered the identified treatment a priority. Therein, a medication, procedure or examination order was always given careful thought. As it applied to oral care, a physician’s order for chlorhexidine offered a textual scaffold to keep the concept of oral decontamination in view. On the one hand, a medication order effectively endorsed chlorhexidine’s effectiveness as a prophylaxis against VAP. On the other, it offered a critical position in a hierarchy of textual activity. Its placement in the medication category regulated the nurse’s response. Provincial nursing standards mandate prompt transcription, scheduling and documentation of medication delivery (CNO, 2008). In the study setting, this placed chlorhexidine in frequent view given the flowsheet’s typical display at the bedside (see Figure 4).

In contrast to the distinct management of oral chlorhexidine rinse, other forms of mouth care, such as toothbrushing, had a lower priority, Sally, Bob and Ally explained. They infrequently reviewed the content of a list of ‘Personal Hygiene’ expectations on the last page of the Kardex (Figure 8):
Ally explained how the Kardex was an ancillary document. The way in which its sections interlocked with the flowsheet was variable. More specifically, a hierarchical arrangement gave pre-eminence to medication lists. This effectively discouraged frequent attendance to other forms of care, such as personal hygiene, that were not recognizably research-informed. This meant that the list of personal hygiene expectations on the rear of the Kardex was considered a list of suggestions:

I don’t usually look at the oral care [section of the Kardex] but it says to […] brush teeth q shift, to use oral swabs um, Q4 hours while intubated. […] To be honest um, I don’t know… like to brush an intubated patient’s teeth…. we can do it with the swab a bit which I do but we don’t really have toothbrushes to actually do [this properly]. I don’t know whether a swab would do the same as um, a toothbrush in terms of hygiene sort of stuff. So, um, I don’t know if we clue into the back part of the Kardex as much as we do the medication part and, and the flowsheet.

In this instance, Ally is able to explain that toothbrushing is not identified as an evidence-based medical intervention. The lack of specificity around its purpose and technique demotes its importance. In a similar move, the intensivist named John noted that he had not read any
definitive studies on toothbrushing as an effective method to prevent VAP. Whereas he felt toothbrushing was of some importance, its lack of effect gave it a liminal status in the larger scheme of clinical work. Because toothbrushing lacked scientific endorsement, he felt that nurses, respiratory therapists, speech language pathologists and physicians had not stepped up to claim it. Toothbrushing sat outside the dominant discourse and was not part of a hierarchy of textually regulated professional activities.

In the next section, I turn to an analysis of the delivery of oral care as it is written up in the nursing account. The flowsheet provided to document this care authorizes a particular reading of nursing. In this case, the narrow range of options limits the possibilities of attending to the oral space as a problem. This limitation subverts the assertion that oral care is of critical importance. This underscores a disjuncture between nursing experience and the problems patients present in practice. Moreover, it delineates a paradox in messaging about preventative oral care and its importance.

**A nursing account**

When it came time to document oral hygiene, nurses understood that the official account was mired in abstraction. This meant that the concept of oral care was uncoupled from the actualities of practice through text. Smith (2005, p. 76) calls this the “divorce between action on the one hand and ideas, thought, concepts, meanings, and so forth on the other”. While chlorhexidine would be signed off as a medication, nurses demonstrated how many more oral interventions took place. Oral care included but was not limited to deep suctioning of the oropharyngeal space, applying hydration to dry mucous membranes, targeting halitosis, lubricating dry lips and repositioning the breathing tube with special tapes and adhesives. These activities needed to be documented. However, Bill expressed concern about the way in which
oral care interventions were collapsed into what he experienced as the “least read” component of the flowsheet, the “General Care Section” (Figure 9):

![Figure 9. The nursing flowsheet (general care)](image)

seen in the third line of a series of various bodily care activities, “Mouth/Eye Care” is one part of a table that is read both horizontally and vertically. Its grid consists of 264 small boxes, permitting a maximum of one code per hour. The left column provides labels for additional nursing activities that would involve physical contact with the body of the patient. These include activities such as “Patient Position”, “Mobilization”, “Hygiene”, “ETT/Tracheostomy Care”, and “Head of Bed Degree”. The legend below the table requires the nurse to document “Mouth/Eye Care” with one of three codes. For example, “B” is toothbrushing, “S” is oral swabbing and “L” is oral lubrication. The eye has one possible code, being “E”. In lieu of a narrative note detailing the specific problem being addressed, these pre-identified codes were supplied for efficient completion of this section of the flowsheet.

Many nurses considered the translation of the patient’s oral space to the “General Care” section as a serious problem. This is because the table would barely resemble the material
actualities of patient care. For example, codes are not provided for biting, lesions and halitosis. In the case of these additional issues, nurses are required to insert an asterisk and make a narrative note elsewhere. Similarly, mouths that are too wet or too dry cannot be easily identified. Finally, the opportunity to sufficiently visualize the mouth and clean it properly often happened when the breathing tube was repositioned once per day. Nurses noted how circumstances required two clinicians to safely complete this task. Inadvertent patient movement during the procedure could dislodge the tube. The participation of another clinician and the cooperation of patients in this matter was a further gap in the documentary format provided.

In its physical location, the “General Care” section is distinguished by its placement on the last page (12/12) on the flowsheet. This means that it occupies a small space, under the “Narrative Notes”, a section that holds freehand text. The manner in which the sheet normally sits on the bedside charting table precludes this section from being visible at most times (see Figure 4). When all of the above observations are taken together, this section of the record appears to dissuade a close and sustained reading of nursing work in the oral space. Given that the sheet does not allow the nurse to fully describe the oral space and the patient’s responses, one may be led to assume that the oral space is not problematic or is the same in most patients.

In the following section, my field note returns to the bedside with Sally after the completion of the urgent BAL. Here, the nursing flowsheet is seen as an active constituent of the care setting. Nurses’ experience informs how to fill in the form for others to read. Further, the requirement to tidy up questions or contradictions that emerge in standardized texts becomes a nursing duty.
Texts as a binding document

As we finished positioning the patient and raising the head of the bed, I asked Sally how she eventually mobilized the team in response to her patient’s respiratory decline. In the end she said, “You have to mention the volume of work”. She pointed to her markings in the flowsheet where she had inscribed the volume of respiratory secretions alongside the patient’s rapid breathing rate. Over several hours of documentation, there were more numbers and codes than space allows. For example, “3MP” was accompanied by several “+” symbols in a row. To the uninitiated these markings would be indecipherable hieroglyphics. Here they are meant to emphasize an untenable situation: multiple episodes of endotracheal tube suctioning for the removal of copious mucoid (M) and purulent (P) lung secretions. In other words, the patient required more nursing intervention than the flowsheet could accommodate. Three hours of urgent nursing movements between the patient, alarming machines and interdisciplinary colleagues were not reflected by a special symbol. Instead, the coding of secretions and respiratory parameters says it all.

With our cleanup of the patient and bedside completed, Sally said we were “OK” to part the curtains and formally rejoin the larger ICU setting. Fluorescent lights and movement within the larger unit flooded my field of vision. A cluster of physicians, one pharmacist and a charge nurse (CCL) soon arrived at the foot of the bed. The medical team was rounding. One of the participants took the flowsheet from the small table at the foot of the bed and everyone squeezed in to analyze what Sally had inscribed so far on her shift. In a similar movement, Sally retrieved her own notes written on a blank piece of paper. She had inscribed something important that was not contained in the flowsheet. The assembled group discussed the plan of care and how to treat the lungs. Medications that might help the patient’s breathing problem took centre stage. After
everyone else had spoken, it was Sally’s turn. She related a consultant’s concern about the patient’s ideal blood pressure range. New standardized orders for patients with neurological problems suggested this to be important. However, her question was deferred and she acquiesced to the team’s interest in other matters. This included the group’s need to move over to the next bedside for a similar discussion. In this instance, nursing work is not so simple. Because her query was not answered, there is more textual sorting and cleaning to be done – this time the informational confusion needed tidying up. Which document should be followed?

Following rounds, we sat together at the foot of the bed before the small table. Sally was transcribing numbers from the ventilator, overbed monitor and intravenous pumps to the flowsheet. Her writing was slowly transforming the document, and I could see numbers, arrows and dots building into a pattern. As they traversed their way across the page from left to right, they graphically represented the patient’s 24-hour monitoring. Of course, this tidy illustration contrasted with what I had witnessed in the prior BAL procedure. In sequence, I asked Sally what should happen next. She informed me that she usually writes a narrative note about what the physicians say during rounds. In this case, the issue she presented about a blood pressure goal was unresolved. Sensing a potential problem of accountability, she explained that she would detail her narrative note to emphasize her attempt to advocate for a patient-centred approach.

In concluding her note, she remembered something and reached for the medical chart. She explained that nurses must transcribe new physician orders in a standardized sequence. This meant whatever is written in the physician orders must be copied to the Kardex and then the flowsheet. She scanned the pages of the large binder to discover that a physician had written new medical orders during rounds and left them without formal acknowledgement. The
assumption here is that moving written information from one place to another is nursing work. This takes a few minutes and I note that it also involves moving a carbon copy of the physician orders to the unit’s pharmacy bin for “pick-up”. An order for new medication requires communication between settings. In order to activate this process, the form must be delivered to the pharmacy department. Sally had to walk across the unit to drop the written orders off in a tray labeled “Pharmacy Bin”. Following her return, she surveyed the bedside and exclaimed, “I’m behind the eight ball!” In using an idiomatic expression that often refers to being in a difficult position, Sally was hoping the intensity of her assignment would soon diminish.

An intertextual account

The accomplishment of texts in the preceding field note offers a sensitive understanding of how texts organize events and practices. In the earlier BAL scenario, the team responded to Sally’s written and verbal communication by assembling to perform an urgent bronchoscopy. What she had written on the flowsheet in the hours prior to the BAL communicated important information to the interdisciplinary team. In this instance, provincial nursing standards regulate how Sally communicates and documents changes in the patient status. As a legal document, the nursing flowsheet also has a retrospective purpose in telling a story of appropriate medical intervention. Its interpretation outside the care setting may support what is otherwise understood to be an audit of quality and safety. In completing her documentary accountabilities, Sally was cognizant that physicians, managers, health researchers and even lawyers might read the chart in order to assess the concordance of the care provided with established evidence-based ideals. With this in mind, nurses repeatedly expressed the trope “if it’s not charted, it’s not done”.

In a situated reading the nursing flowsheet had an immediate purpose in confirming a serious problem. Similar to the alarms of the overbed monitor or ventilator, the flowsheet
verified an urgent event. However, the capacity of the form to capture and communicate the patient’s status was predicated on Sally’s ability to complete inscription work as this event actively unfolded. Demonstrating the nature and extent of the patient’s decline was a key accomplishment. Sally explained that a suitable medical response depended on the larger team’s review and interpretation of her documentation. In explaining this work-text sequence, she was able to show me how the patient’s respiratory decline was constituted as a graphic display of “organ failure”. Her work of inscription made this event recognizable to the medical team so they could interpret the findings.

When I revisited the bronchosopic investigation in a follow-up interview with Sally, I asked about this experience with a view to its documentary requirements. Here, she recalls this as an “incident” and how she is responsible for assisting others to continuously interpret or translate the situation into terms they can understand. For example, she was aware that the physician’s body would be turned away from the overbed monitor and ventilator screens during the BAL. Her reading from the overbed monitor and the communication of critical changes in the patient’s vital signs is evident only in direct observation. Further, the efficient and effective reading by clinicians on future shifts would be contingent on her graphic documentation of this incident. With these varied accountabilities in mind, Sally was aware that provincial legislation renders her responsible for a wide variety of reading and writing:

Craig: Yeah. So when we, when I spent time with you in the unit you had a really busy patient who was intubated, ventilated and a bronch [BAL] was happening when I arrived. And so there was a whole team of people at the bedside. It was very, very busy. Is that something that happens with some frequency?

Sally: Oh yes, in our unit, yes.

Craig: Yeah, okay. And I noticed that the bronch goes down the breathing tube. What’s that like, managing all of that as it’s happening?
Sally: Well it is my responsibility to provide medication to sedate the patient. And make [the doctors] aware of instability and blood pressure and heart rate problems – and manage the drugs according to that. I mean not necessarily push the medications, but I, but I can because a physician is at the head of the bed and doing their bronch with the RT and usually there may be one more, two of each. And it’s a procedure where you glove, gown, and mask.

Craig: Right.

Sally: And I’m to document the incident.

The summary documentation of this encounter notes how regulatory and local texts interact to organize nursing work. Sally related how she is bound by provincial nursing legislation and standards that say she must collect, organize and analyze patient information on behalf of the critical care team. Published standards for critical care nursing in Ontario (MOHTLC, 2005, p. 4) support this assertion:

When assessing and managing client responses to various health conditions the nurse uses critical thinking to problem-solve. This is integral to making good decisions and includes activities of organizing and analyzing information, recognizing patterns, and gathering data to support conclusions drawn (College of Nurses of Ontario, 2003).

Attention to serious physiological changes is key in linking up data collection to nursing duty. The accountability for producing “data” on behalf of the interdisciplinary team is mentioned 16 times in these standards. In contrast, hygiene is not mentioned at all. Hence, it is clear that data collection is a critical form of nursing work and considerably benefits the functioning of the unit.

Benner (1996) notes that critical care nurses make reasoning visible in their documentation. This suggests that nurses frame or highlight active clinical problems within the categories and fields of clinical documentation such as flowsheets. Further, physicians are accustomed to having nurses prepare unfolding clinical events in ways that narrow the possible range of interpretations. However, the functional capacity of clinical documentation depends on the nurse keeping track of the patient’s status and response to medical interventions. In this
sense, clinical interventions such as a BAL are supported by graphic respiratory changes noted on the nursing flowsheet. In understanding how physicians read and respond to particular issues, nurses cannot significantly deviate from their ongoing work of patient documentation. Significant gaps would impair patient safety as decisions and treatments depend upon a sequential reading.

Through the course of my observations, nurses demonstrated how texts might work together to facilitate patient well-being. The authority of particular texts is key in understanding how this works. Aware that multiple texts interact to maintain patient safety, Sally alerted me to the need for clear and concise physician orders. “Following orders” in this case requires clarity regarding which clinical values are most important for identifying, documenting and communicating new problems. In this instance, Sally’s request to clarify physician orders for an ideal blood pressure range was not resolved. She explained, “[the physician] said one thing but my order said another. You know? But okay, a verbal yes or no from a physician is helpful at the moment but in the end it has to be documented”. Here Sally let me know that standardized texts such as physician orders sometimes fail to safeguard patients.

With this gap in mind, Sally explained how she was accountable for resolving this type of discrepancy. This requirement can be traced to published standards that assign an oversight role in medical orders:

The nurse is responsible for taking measures to promote safety for both clients and colleagues. The nurse enables the patient and colleagues [to] avoid injury and illness by taking measures in their prevention, responding to risks, challenging questionable orders and actions, and intervening appropriately in situations of risk (College of Nurses of Ontario, 2003).
Taken together, this standard translated into Sally paging doctors and requesting that they come to the unit to write or sign a clarified medical order on paper. However, in her experience, she noted variable success: “to get them to do it? Yeah, sometimes it’s easy, sometimes it’s not”. In this instance, the review and analysis of medical orders adds a high degree of complexity to nursing efforts. As suggested by Sally, any ongoing discrepancy demanded that she write a narrative note that disclosed her thoughts and actions. More specifically, that she had brought her concern forward to the medical team. Because a lack of clarity may still lead to harm, she stated that she typically documents this discrepancy when she doesn’t “agree” with the medical team. As someone who activated orders, Sally demonstrated how this creates additional work and tension.

In the following section, I will continue discussing the utility and limits of texts in the critical care unit. The activities and practices that link people in recurring forms of work are experienced and recorded in different categories and fields. The particularities of these experiences are embedded in a material and social setting. The section below details how discursive and material arrangements figure into the experience and knowledge of the clinicians who participated in this study.

**Taking up the slack**

In consideration of the oral care problems that nurses may confront in the mouths of intubated patients, I asked an intensivist named Danielle how she is made aware of these issues. She explained that the nurses would speak to her in person. She offered that she rarely looks into the patient’s mouth as a way of knowing. Further, she would not proactively search for related
notations in the nursing flowsheet. Instead, she relies upon the nurses’ expertise and descriptions as fact:

Danielle: I mean from my perspective and, you know, it’s gonna come up only if it’s an issue. So if it’s a problem then I’m gonna hear about it. It’s … otherwise it’s not very systematically discussed and it’s honestly not something I think of on rounds unless it comes as an issue. And usually even it’s not so much the kind of issues that comes up. Often it’s something that needs a prescription, an order, so, you know, if people think there’s mouth thrush that needs an order for a Nystatin then they’re gonna ask for it and “oh okay, I didn’t know that this was an issue”. But that’s how it comes up. If there’s, like, ulcerations or other things, pressure from the tubes or things like that, or, you know, dental issues or things that do not require an order or a consultation like two minute or service we usually don’t hear a lot about it or not at all actually.

Craig: Who would … if there was a mouth issue who would bring it up?

Danielle: The nurses.

Craig: Okay. And do they ever ask you to take a look to diagnose something?

Danielle: Sometimes. So if they’re not sure, you know, about fungal infections or things like that or expect if things don’t look unusual or much worse than what they see usually then sometimes they ask us to have a look but it’s not common.

Craig: It’s uncommon?

Danielle: It’s uncommon ….And honestly if a nurse asked me … said there’s mouth thrush can you order something. I may order a Nystatin without necessarily checking myself […]

In this instance, Danielle notes how her awareness of the patient’s mouth is not enhanced by texts in the ICU. Similarly, an intensivist named John stated “other than putting the tracheal tube in place and occasionally removing it, that’s the extent of it”. In characterizing medical attention to oral hygiene following intubation, he described this as “nil”. He explained that this facet of patient care “does not come off the page well”. In acknowledging how the flowsheet elides the oral space, he confirmed that certain problems required discussion.
According to Campbell (1998), gaps in care processes often organize nursing work. She notes that nurses often take up the slack to advance a project. She argues that the hospital unit is particularly reliant on nurses seeing what needs to be done and doing it. With this in mind, John and Danielle were reliant on nurses to assume responsibility for the oral space. Because physicians did not routinely look into an intubated patient’s mouth as part of their daily routine, it was assumed that others would do so. Nursing knowledge of this set of arrangements conditioned their work. In other words, the lack of detailed interdisciplinary notice in this matter reinforced nurses’ awareness and concern that the oral space required their attention.

In speaking with John about clinical communication, he related how patient documentation had become an area of controversy as well as a target for quality improvement. He explained that the local group of intensivists was currently attempting to improve the way in which they documented patient care. From his perspective, he felt that there was great variation between intensivists in the way they documented patient problems in the chart. He explained that this likely resulted from increasing time pressures in practice. Growing patient caseloads, the requirement to see patients in multiple ICUs, and recent changes in documentation contributed to a sense of disorganization. This culminated in a daily search for relevant patient summaries that could be pieced together for a coherent story and plan. However, these ongoing problems also highlighted what was dependable in everyday practice:

Certainly the flowsheet that we use in our ICUs that’s … it is probably where we get most of our day-to-day information on patients. The most active and up to date to kind of match up the time course of one thing and another thing. So I think that’s probably our most helpful and most useful source of information. I mean it’s sort of gathered by the nurses and transcribed from other sources and it’s a substantial source of work for them but I think it’s clearly the most helpful and useful for everybody that cares for these patients. That would be our number one [source of information] by far and away and then again looking at microbiology and the blood tests and radiology would be a close second.
John’s nod to health information being “sort of gathered” by nurses piqued my interest. On the one hand, it under-estimates the work of nursing inscription as it is actively experienced. On the other, it acknowledges the binding nature of texts in the ICU. Another intensivist named Danielle confirmed the utility of the flowsheet. She described how she was dependent upon its contents:

Danielle: On a daily basis I use always the nursing [flow]sheet.
Craig: You reference the nursing sheet?
Danielle: Yeah, yeah, yeah.
Craig: Is there a particular area that you would sort of … you’d zero in on or look at?
Danielle: Well actually we look at it all …
Craig: Okay.
Danielle: I really look at it … during the rounds … during multidisciplinary rounds [at 10:00 AM] or even when we round in the morning at 7:00 …
Craig: Okay.
Danielle: … it’s great to give you a quick overview if there’s anything major that needs to be [done] … so I actually look at everything. So I look at the vitals … if I have just a quick look I look at the vitals for sure and look at the fluid balance, usually urine output, the bloodwork, then vent setting and ABGs, the neuro I usually ask the nurses … I will go back and read the notes often … actually the most frequent reason why I go in the nursing notes, the written notes, are usually to know overnight assessments and things like that.
Craig: Okay.
Danielle: Sometimes that information gets lost in the [physician] verbal sign over so even if the daytime nurse sometimes is not sure so often I go back and read the description of what was happening overnight. That would be another reason.

In our discussion, Danielle was helpful in acknowledging the dependence of the larger clinical team on nursing inscription. With Danielle’s account in mind, it became important to see nursing
inscription in action. The afternoon I spent with Bill was a busy one, as he had a nursing student at his side. During that encounter, he was encouraging the student to establish a professional approach to documentation by following his example. As an extension of his own training in the ICU, he explained how his original nursing mentors still influence his approach to documentary organization many years later. This meant that he spent considerable time at the beginning of his 12-hour shift creating a particularly neat and orderly document. He sought a reading of his flowsheet not dissimilar to the clean and tidy appearance of the patient:

Craig: Yeah. What I noticed when we spent time together is that you, you’re really diligent about filling in the flowsheet and setting things up.

Bill: Well, I’ll tell you why that is. Sure I do it for myself, but I really like a nice clean sheet. And I think I had a student that day, right?

Craig: Yeah. Bill: So if I [write] the first [set of findings], like, in each column, hopefully it’ll be followed as far as color coding for instance; like, my drips are in red and the concentration of the [drug infusing] or the dose. And then in the cc’s down in the bottom range I have it all in black. So I’m kind of finicky about that. Temperatures have to be red; just anal stuff, I guess, I don’t know.

Craig: Well maybe that’s part of the ICU role?

Bill: Absolutely.

Craig: Yeah? Was it something you read about?

Bill: It’s the way I was learned, I guess, from B. and N.?

Craig: Yeah, so that’s something that everybody does?

Bill: Not all … not everybody, you know, I, you internalize or you make it your own. But B., my preceptor, and N. were very instrumental in getting me off on the right foot like that. Like, you do your assessment, this is what you do. And time management, B. just totally stressed time management.

Here, Bill is communicating a need to prioritize charting at the beginning of his shift. He expressed knowledge that the day can run amok and the ability of the flowsheet to function
optimally can be hampered when it lacks clarity. This meant that the flowsheet demanded his attention at the onset of each shift. Working with the flowsheet in real-time required an eye to the unpredictability of the patient care setting. Whereas one might assume that it could reflect a sense of mastery over chaos, Bill’s attendance to time management alluded to the importance of experience. Staying one step ahead in patient documentation would facilitate the possibilities of timely and complete communication.

With attention focused on the limits imposed by time, clinicians described how reading of the flowsheet actually proceeds. For example, not everyone thought all parts of the flowsheet were helpful in influencing patient care. All participants noted how cardio-respiratory parameters were the principle focus of their reading in the ICU. This meant that the narrative and general care (hygiene) sections had a lesser utility. This meant that they did not review this documented work or ask questions about its completion in routine encounters such as interdisciplinary rounds. John explains:

The things that are written on the flowsheets by the nurses that are again the narrative component to care, which is clearly really important and, you know, most important I think [is that it] doesn’t come off the page very well. It’s just hard for people to kind of pick out the details that are important and I think a lot of the docs probably don’t ever look at the narrative part of the flowsheet.

Here, John expresses concern about the way in which the flowsheet functions in daily practice. He suggests that nursing details are lost within the documentary system. Nurses confirmed this problem. For example, Bill noted how time allotted to reading the flowsheet was insufficient to take up issues such as hygiene:

Bill: I mean, like, the least referred to area on that flowsheet is probably that area right there …

Craig: “General body care”, hygiene …
Bill: Yeah, yeah.

Craig: Okay, all right. So not many people take note of this?

Bill: They may but it’s not, nothing’s, nothing really comes from it.

Craig: They don’t talk about it?

Bill: No, no. “You should do mouth care more frequently” never comes up.

In sharing his observation, Bill insisted that documentation of hygiene is one of the areas on the flowsheet least accessed by the interdisciplinary team. In reference to reading this information, John acknowledged that nursing hygiene work might be buried in handwritten narrative notes. He proposed that in the busy, high-tech ICU setting this creates a burden: one can feel that sentences and paragraphs take too long to read in comparison with numbers and graphs. In turn, a deeper level of description remains underappreciated as important clinical data.

**In the margins**

In pointing to the complexity of summarizing the patient, all clinicians spoke to the limitations of texts. The fidelity of nursing and physician documentation was frequently questioned in its ability to provide a comprehensive summary of the patient. Several clinicians described how standardized orders and updated charting fields were added to mitigate this incomplete picture. However, a type of “complexity compression” ensued (Krichbaum, 2007, p. 87) in relation to cumulative documentary accountabilities. This meant that additional time spent in documentation did not always pay off in enhanced clarity or efficiency. To compensate for an increasingly fractured picture of the patient, many clinicians generated hand-written notes or patient lists during their shifts.

Nurses and physiotherapists described making freehand notes on pieces of paper during their 12-hour shifts. While this was often on white pieces of paper, Sally noted how this was
embedded in the contingencies of rapidly changing scene. Depending on one’s location, notes might appear on paper towel or even the leg of one’s uniform. Together, all of these methods were helpful in remembering events and findings for inclusion in the chart. Alternatively, notes were helpful in communicating practical issues that fell outside the official categories and fields of documentation. In explaining how this worked, Sally described how her notes were crafted into bodily sections that followed the “system” of head-to-toe assessment on the flowsheet. She described how her structured note took shape during verbal handover at the beginning of her shift. As the departing nurses spoke to prior events and findings, Sally wrote down issues that the outgoing nurse described as significant.

In offering up one note as an exemplar, Sally directed my attention to one of two medium-sized boxes that circumscribe points of importance on the first of two pages (Figure 10. Handwritten nursing note). She pointed to the first box’s requirement to perform “mouthcare freq”. This was shorthand for saying that it was essential to perform frequent oral hygiene. These practical concerns linked to a notation on the left that identified the patient as having no cough or gag. The second box posed a query about the “imp?” or overall impression of what was unfolding. Here she was carrying forward ongoing nursing concern that the patient could not protect their airway and required oral suctioning to avoid aspiration. Sally explained how the outgoing nurse warned her that serious respiratory problems might have already ensued. She was warned that turning the patient precipitated low oxygen levels that might further compromise the patient’s safety. This important information prepared Sally so she knew how to proceed during her shift.

As indicated above, Sally found that her notes brought forth the practical realities of patient care. In this regard, a hand written note functioned as a dual form of charting. In
compensating for a loss of detail around active care processes and she found it very helpful. Moreover, it could prevent an incomplete or incoherent summary. In departing from the official text, note taking gave her the freedom to highlight important features that she wished to share with her nursing colleagues. She would update her note with red ink as the day progressed because it would distinguish new events from older information. This enabled her to “talk about the changes instead of reading my progress notes” out loud to the next nurse. With an eye to efficient and effective communication, she would often leave her notes for the oncoming nurse to use as a cumulative reference.

The three intensivists interviewed explained that they also made notes to facilitate communication within their physician colleagues. However, these did not foreground detail about the completion of hygiene such as oral care. Instead, they relied upon various notation systems to stay informed of what an intensivist named Danielle called the “big issues”. The two male intensivists stated that their practice in note taking had evolved over the years. As trainees, they carried extensive notes during their duties in order to know what needed to happen each day. However, John described how he made fewer notes as a senior physician and relied upon medical trainees to carry electronic or handwritten patient lists:

The residents and fellows will carry with them [a printed patient summary] what we call [the] patient sign-out system, that has each patient’s name and their hospital file number, pertinent medical history, reasons for being in the hospital and active issues […] And they refer to that quite a bit to keep patients straight and make notes during the day about things that they need to do or follow up upon, and some of the [staff intensivists] I think use that and others don’t. I occasionally use it and frequently do not and will often have some very small version of that that I’ll carry around myself, but I usually don’t carry around most of the pages associated with that just because of its bulk and the details that are there are not necessary often to carry around with you.
Figure 10. Handwritten nursing note (page 1 of 2)
Despite the availability of a concise electronic summary, Danielle stated that she erred on the side of caution and read the entire chart of each patient within the first 2 days of her week on service. In referencing this reading, she paid close attention to the physician notes in order to understand a chronological flow of events because her experience told her that hand-written or electronic summaries were often insufficient or incomplete. She explained:

And there’s a lot of things that, you know, your impressions or, you know, discussions with families or things like that that are documented in the chart, that will not appear on that kind of [summary] sheet. And that’s also important to have a sense of which directions things are going with the patients and not only about the medical issues but, you know, philosophy of care and things like that.

Despite inconsistencies in written communication, all of the intensivists interviewed carried note cards in their pockets for the duration of the week. In this case, they made brief notes on preprinted billing cards (Figure 11). They explained how they were required to make daily entries on a 2-sided billing card for reimbursement for their services from the provincial government. This afforded a small amount of space to write down a few clinical reminders:

I’m using a lot, initially at least, my billing cards to write notes about the patients. I usually try within the first 24 or 48 hours to review all the charts of every patient that I’m responsible at the beginning of the week to understand well what happened, their course, and know what needs to come next and I actually use those cards to write on them what are the main issues. So at the beginning of the week it’s helpful. After by Wednesday or Thursday usually you know the patients well enough so you don’t necessarily need that as a reminder. But I often go back to them at the end of the week because during the week often I try to write some summary notes for my colleagues who are gonna take over in the chart and often I, you know, use that opportunity to go back to the initial notes I made and make sure that there’s no issues that were left out in the course of the week because you deal with the more acute stuff and sometimes there’s things that are less urgent or acute that still need to be addressed that are a bit left out. So I just make sure that nothing was forgotten, although I’m sure I forget stuff. So those in terms of paper things that I carry around are the things that I use the most regarding patient care.
As a form of double duty, Danielle used notations on the pocket cards to inform a set of expanded notes in the patient chart. Further, she found them helpful for verbal handover at the end of her week of duty. However, all of the intensivists interviewed reminded me that these were not legal documents that remained in the chart. For example, John noted that electronic patient summaries were deposited in special recycling containers for shredding. Similarly, billing cards were not shared with nurses or other physicians as material forms of documentation. Instead, they submitted the cards to administrative staff in order to bill the provincial health system for their services.

In each circumstance, the cards linked physicians to other forms and processes. As suggested by Danielle, the cards facilitated physician narrative notes. However, they also linked up with administrative accounting practices. Elsewhere, administrative assistants transferred data from each completed form into an MOHLTC billing database. This meant that one card would be required for each patient. Supplied codes on the front and back of the card obliged the intensivist to circle a particular set of letters, numbers and symbols each day of the week. These matched up with codes within a province-wide reporting structure. Therefore, the insertion of a set of administrative logics from outside the critical care unit also coordinated intensivist time spent in documentation for reimbursement purposes. In this instance, physician attention is organized away from the patient to another set of interests.
Figure 11. Physician billing card (front and back)
Despite this detailed work of record keeping, intensivists were still required to keep patient progress notes in the patient’s main chart. Under the Medicine Act of Ontario (1991, Part V), legible and timely records of each patient encounter must be maintained as a legal record. However, this posed problems. For example, John explained that these various expectations were a good idea on paper but difficult to execute in practice:

In the chart we will have either the admissions history, physical as good background about medical history that we refer to and then flip through everybody’s sort of notes between then and now over the first day that I’m in the ICU looking after patients. And then over the last year and a half or so we’ve had a problem sheet placed in chart. We’re trying to write down all of the active surgical [and medical] problems that the patients face during the current admission and start dates and resolution dates and actions that were taken to fix the problem. And that is useful, I think, if it’s done by everybody in a complete fashion. The challenge is when it’s incomplete and not done then it loses its usefulness because it’s now incomplete and you still have to look through the medical record, and when people find that they’re duplicating places that they’re charting and one source is incomplete then it kind of loses its usefulness.

John’s attention to problem identification alluded to a lack of clarity when reading the many forms and styles of patient documentation in the chart. In showing me the “Critical Care Problem Sheet”, Danielle directed my attention to the generation of a list of diagnoses as well as related treatments such as antibiotics (Figure 12). In itemizing active and resolved medical problems, the form was meant to enhance clarity and efficiency. In other words, it should reduce time spent searching through the larger chart to sort which treatment (e.g., an antibiotic) was directed at a particular problem (e.g., VAP).

However, Danielle’s description of this new work of documentation returned to the notion of complexity compression. She stated that the “Critical Care Problem Sheet” had become a “problem” in and of itself:
<table>
<thead>
<tr>
<th>DATE</th>
<th>PROBLEMS/DIAGNOSIS</th>
<th>ACTION/COMMENTS</th>
<th>ANTIBIOTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>Inactive</td>
<td>DO NOT use abbreviations in this column</td>
<td></td>
</tr>
</tbody>
</table>

NOT a part of the patient’s chart. To be removed when patient is transferred to the ward.

Figure 12. Critical care problem sheet
… the problem with the problem sheet I found is that often when you’re supposed to document, you know, a new problem you’re not sure often what’s the diagnosis. So I found it way easier to fill by the end of the week when you know what has been happening with the patient. Often by then you have a better sense unless there’s new issues. But what are the activations and what is the plan? And so often when I write my summary note in the chart at the same time I update those sheets. But the problem is like if the patients are admitted at night they’re often not filled up right away just because there’s too much workload and they don’t have time to do it. And then in daytime that’s when people should catch up, and unfortunately it doesn’t always get done. And then even if when that’s done properly initially to carry on and day to day update it with the issues and you don’t always know the importance of … there’s minor issues sometimes that, you know, become meaningful later in the week and that you don’t initially put there so it’s … it’s a little bit challenging but I found that they don’t … for me it still doesn’t … even if I have a fairly well done problem sheet in front of me, it won’t prevent me from going back to the chart and reading the chart through just because you lose the flow of how events…

Here, Danielle’s overarching comment illustrates how texts circulate tensions in practice. Blank spaces called out to be filled as soon as possible. From their direct experience in practice, Danielle and John indicated that incomplete information impeded work processes. Like John’s prior statement, an incomplete form is read as a problem of neglect. However, Danielle noted that the realities of practice meant that this was not always possible. The pressure to document information in a timely fashion was compounded by the need to chart in more than one place. Further, if patients were exceedingly complex, the requirement to chart additional information would increase in proportion. An inability to control the time to attend to an increasingly complex set of documentary accountabilities was conditioned by an unpredictable workload.

**Summary**

In this chapter, I show how nursing work of inscription is central to the textual coordination of work in the critical care unit. The flowsheet is a text that organizes an ongoing conversation with nurses and physicians. However, the current set of arrangements is dependent
on nurses to translate patient events and interventions though a skilled, dedicated and time-sensitive process of inscription. Given priority in a text-work-text sequence is the generation of a graphic display of organ failure on the flowsheet. The timely inscription work of nurses safeguards patients as it facilitates medical interpretation, diagnosis and response. This effectively allows physicians to pay attention to the “big issues” that require patients to remain in the ICU for ongoing treatment. Given the pressure to identify and resolve these issues, physicians and nurses are reminded of the economics of critical care. My analysis points to the precedence given to these large-scale managerial interests as they supersede attention to so-called ‘basic’ or small issues of preventative nursing care. The sequence of texts that reach down into the particular reading and inscription work of everyday/night nursing also links up with a highly refined set of institutional interests.

A central finding of this chapter is the manner in which the flowsheet elides nursing work and concerns regarding the oral space. This is a paradox given knowledge of a scientific theory of bacteria translocating from the oral space to the lungs. Despite the prominence given to this problem through an evidence-informed prompt on the first page of the flowsheet, the geographic location of oral care documentation situates activity in a peripheral and somewhat unimportant field. This means that it may not serve as a reminder or a prompt as explained by nurses. Further, this conceptually separates the mouth from the medical body. In sequence, the mouth does not receive the same attention and reading given to other problems such as organ failure. Notwithstanding their potential contribution to respiratory infection, problems encountered in the care of intubated patients (e.g., oral lesions, biting and halitosis) are not accorded space in the official record. Nurses and intensivists note how these issues must be brought forth verbally as they are not readily visible in the current documentary format.
In the preceding sections, I have demonstrated how nurses are responsible for circulating concepts of VAP prevention through a textual circuit: doctors’ orders and pharmaceutical terms are moved across a sequence of documents including the Kardex and flowsheet. This discursive scaffold keeps scientifically endorsed facets of oral care in view. The prominence of chlorhexidine oral rinse on the flowsheet as a medication thus serves to orient readers to the importance of oral decontamination in the prevention of serious respiratory infection. Less visible are other activities that make up the bulk of oral care such as suctioning, moistening and toothbrushing, in addition to coaching patients through these activities. Therein, the flowsheet geographically separates evidence-based concepts from a lower mandate of ‘basic’ practices. In a symbolic location, the oral space and its activities remain closed. Like the curtain around the bed, the nursing flowsheet tidies up the action and problems through abstraction.

My analysis aligns with the finding of other nursing investigations that have noted a systemic reliance on nurses to collect and exchange of patient information in a timely fashion (Urquhart et al., 2008). However, my analysis emphasizes that the flowsheet, as a binding document, does not preserve pragmatic detail that nurses require to facilitate patient care. With this limitation in mind, clinicians create and maintain a diverse set of ancillary documents to serve as reminders, recommendations and communication tools. In observing this work in context, I have noted how a significant portion of this effort falls outside the official account. Handwritten nursing notes, the physician problem list and billing cards are just a few examples. Despite their importance, they are not acknowledged for their contributions. Official forms such as the nursing flowsheet suppress awareness of these ancillary documents and a larger problem of abstraction that promotes their need. Clinicians demonstrate that the complexities of the official patient chart require ancillary record keeping. My findings line up with other researchers’
in disclosing that individualized patient care is not visible in standardized forms (Kärkkäinen, Bondas & Eriksson, 2005).

Keenan et al. (2008) argue that the primary purpose of clinical record-keeping systems is to facilitate information flow and decision-making in patient care. However, the intensity and scope of this work may not be visible to those outside the practice setting. ICU nurses are said to spend between 20% and 35% of their time on patient documentation (Douglas et al., 2013). My analysis shows how this also entails a significant social and temporal pressure for nurses to complete their charting responsibilities. Because multiple people and interests link up with their inscription work, the manner in which this unfolds is essential for stakeholders to consider. I am directing concern toward the fact that nurses may not be able to proceed with expectations to perform routine acts of preventative hygiene when greater attention is organized towards organ failure and its triage. Finally, nurses disclose a reorganization and expansion of documentation priorities within the ICU flowsheet. Evidence-informed queries now precede a physical assessment of the patient.

In summary, nurses are vital to the smooth running of the unit as their inscription work is critical to the timely translation of events and interventions in terms that stakeholders can understand. Through observation and interview, I have preserved some of this work. However, a tension exists as the patient record has expanded beyond clinical data to include managerial interests. Reducing the time patients spend on ventilators and in the ICU is a key priority. This has changed the structure and approach to patient assessment and documentation. The next chapter follows up on my observation of interlocking texts and extralocal interests. There, I follow a larger trail of paperwork and tensions that circulate around infection prevention. In
doing so, I focus on the movement of patient data towards a larger institutional nexus where a different reading takes place.
Chapter 7
Institutional Arrangements

In this chapter, I will survey the concepts that locate Ontario’s critical care nurses in a new network of accountability. During my conversations with nurses and interdisciplinary informants, I was directed to investigate a new set of relations as they took shape under the auspices of the Critical Care Secretariat (CCS) and Ontario’s Critical Care Transformation Strategy (OCCTS). Nurses’ guidance was essential in understanding how the establishment of the OCCTS had its origins in another serious respiratory illness, severe acute respiratory syndrome (SARS) (see Fowler et al., 2003). In the first half of this chapter, I examine the official OCCTS report and its analysis of the SARS crisis in Ontario. It lays out a transformative agenda to ensure that future critical care services meet the needs of the population. The manner in which nurses are visible in this plan is central to my analysis.

The relations of accountability that I am exploring incorporate a new textual regime that organizes the work of critical care clinicians across Ontario. I describe a new reporting structure that links up 201 adult and pediatric critical care units in Ontario. New authorities and expectations emerging from this model require clinicians to prove that they are participating in evidence-based care strategies by way of low infection rates. Because infections such as VAP can prolong patient stay in the ICU and hospital, the prevention of this threat has system-wide implications. These include improved critical care bed capacity and the promise of flexibility if a surge in demand for ICU beds arises. At the core of this strategy is interest in limiting the time patients spend in critical care and the related costs. In giving VAP reduction priority, my analysis argues that disease and inefficiencies are given preferential visibility.
In the latter half of this chapter, I use excerpts from interviews with managers and health leaders to show how they are made accountable to the tenets of the OCCTS through performance evaluation. I share how oral care is one part of a targeted strategy to reduce costly infections such as VAP. Tensions and controversies follow as participants express different responsibilities in their temporal-spatial locations in a new accountability circuit of infection prevention. In rendering a link between nursing work in oral care and the OCCTS, a larger map of textual work comes into view (Appendix I). My analysis demonstrates how a new project of quality measurement shifts attention away from preventative oral care. In this case, the prioritization of health services metrics sustains a distance between the ideals of preventative care and the actualities of nursing. Misconceptions prevail regarding nursing knowledge and the conditions in which this work takes place.

The ideals of the Ontario critical care strategy

In 2004, the Ontario Ministry of Health and Long-Term Care (MOHLTC) created an expert taskforce to formally review adult critical care services in the province. The Critical Care Secretariat (CCS) was simultaneously formed as a government office and authority to oversee the taskforce recommendations. The final report emphasized that critical care in Ontario was in a “crisis situation” (Bell & Robinson, 2005, p. 1). It explained how the SARS pandemic of 2002–2003 overwhelmed critical care services in the province. SARS patients were given priority access to a limited number of critical care beds. However, the isolation and treatment of SARS patients in ICUs impaired routine patient access and movement across a variety of health care settings.

In many ways, the report called for a new managerial apparatus to reconfigure healthcare accountability. SARS exposed mutually dependent elements within a complex care delivery
system, and moreover, a lack of system-wide coordination and capacity due to limited managerial foresight. The isolation and treatment of SARS patients in Ontario’s ICUs had proven effective. However, the need for such measures had not been anticipated. At the onset of the pandemic, the paucity of baseline information concerning the availability of critical care beds, ventilators and nursing services contributed to a strained response. All elective patient care services were initially stopped; particular hospitals later became dedicated to SARS patients while others addressed a backlog of elective services (Naylor, Chantler & Griffiths, 2004). Although the SARS pandemic had been resolved at the time of publication, the taskforce explained how this experience drew attention to health services forecasting:

The demand for critical care is increasing dramatically for a number of reasons. The aging population is using high levels of critical care services, new drugs and life-support technologies are making more treatments possible, and there are increasing public expectations to “maintain life at any cost.” Access to critical care is also facing challenges from within: there is a shortage of specialised staff and limits to financial resources. Critical care is expensive. Advanced technologies, complex patient management and high staffing levels all add up to a high cost service. It has been estimated that critical care accounts for about 5-10% of acute care hospital bed occupancy and as much as 34% of hospital budgets in some jurisdictions (Bell & Robinson, 2005, p. 1).

The authors described how the above referenced circumstances, if improperly managed, would contribute to a catastrophic scenario. In other words, a deleterious domino effect of increasing wait times for care, prolongation of hospitalization and higher costs would ensue. Long waits for medical care were described as a source of dissatisfaction for the patient, clinician and policy-maker. Overall, the taskforce argued that a lack of advanced planning would portend serious health consequences.

In taking up a managerial perspective, Bell and Robinson (2005) urgently called for critical care service to be transformed to ensure patient access to high quality care. In the past,
quality depended upon subjective appraisals by health professionals. The report substituted a managerial perspective, meaning that quality would require an “objective process be developed to measure critical care performance based on benchmarks, guidelines and standards” (p. iv). Further, these goals could be informed by lessons learned from the province’s “Wait Time Strategy” (p. 88). Technologies used to monitor wait lists for planned surgical procedures and other treatments (for example, see Kirby, 2007) could be applied to the critical care crisis. They argued that quality could be measured electronically and that backlogs in patient care could be efficiently targeted to avoid a crisis.

Given the threat of shifting demographics, resource constraints, interdependencies and insufficient forecasting capacity, the report described how investment was urgently needed. A continuous flow of information on the availability and use of ICU beds would support evidence-based managerial decision-making. In turn, opportunities for targeted improvement would be enhanced. In view of staffing and funding models of the period, the report noted ideal occupancy for established ICU beds to be 80%. However, the authors disclosed that many of Ontario’s ICUs operated at or above 90% occupancy. Considering projected service volume, the taskforce foresaw adding between 782 and 1017 new ventilated beds across the province by the year 2026. The authors cautioned that addition of ICU beds would be difficult to implement without the efficient operational oversight offered by technology.

In 2007–2008, the CCS and MOHLTC implemented a minimum data set as recommended in the OCCTS report. A “transparent approach to sharing performance-related information” was made actionable through the deployment of a Critical Care Information System (CCIS) in Ontario’s adult ICUs (Bell & Robinson, 2005, p. 85). The collection and analysis of real-time patient data would be used to focus on “the performance of individuals as well as
groups of institutions” (Bell & Robinson, 2005, p. 87). This managerial concept of transparency was extended in April 2009, when the MOHLTC mandated every hospital to publicly report central line infections (CLI), ventilator-associated pneumonia (VAP) and surgical site infections (SSI) (MOHLTC, 2012).

In the post-SARS environment, the mandatory publication of VAP data placed a new spotlight on critical care services. As one part of the CCIS data set, VAP rates became a hospital-level metric of quality and safety. Visible on each hospital’s external website, the VAP rate was published for public review. However, the OCCTS also sanctioned infection prevention as a remedy for problems of capacity. In adopting a ‘culture of accountability’, infection data was meant to identify possible delays in the smooth processing of patients. This follows the OCCTS position that the delivery of high quality, evidence-based care would reduce “the length of time someone was critically ill” (Bell & Robinson, 2005, p. 55). As part of a framework to reduce the demand for critical care beds, the collection of patient data provided the ability to set benchmarks and identify units needing to enhance their clinical performance.

Key to the recommended expansion of safe and effective services was nursing (Baumann, Blythe & Underwood, 2006). One of the practical concerns identified by the taskforce was a shortage of nurses to staff beds and prevent problems such as VAP. At the time of the taskforce report, recruitment and retention of qualified nurses in Ontario was inadequate for the needs of the population (RNAO, 2003). In addition, inconsistencies in training across the province suggested another problem: variation in educational preparation meant baseline competencies were dissimilar across nurses, units and hospitals. As a result, nursing staff was not easily transferable between settings, and costly retraining often occurred at the hospital level. As one response, the OCCTS authors recommended standardized credentialing. This meant that nurses
could theoretically transfer between different types of ICUs or hospitals if they met “provincially recognized standards and core competencies” (Bell & Robinson, 2005, p. 66). A Critical Care Nurse Training Standards Task Force was convened and subsequently published “Standards for Critical Care Nursing in Ontario” (MOHLTC, 2006). This effectively enforced core provincial nursing curricula for beginning practitioners in the specialty.

The transformation of critical care services into a new network of accountability is mapped in the taskforce’s conceptual model of the ideal adult patient trajectory (Figure 13). The schematic’s linear design emphasizes how stakeholders would coordinate their work to enhance efficient “patient flow in and out of critical care” (Bell & Robinson, 2005, p. 90). A close reading of this schematic identifies the expanded boundaries of the critical care context. With the ICU placed in the centre, the text boxes on either side identify points of system admission, transfer, diagnosis, treatment and discharge. In including previously disparate parts of the health care system (e.g., palliative and complex continuing care units), the report effectively merged clinicians and managers in a “unified approach to the utilization of critical care resources” (Bell & Robinson, 2005, p. 96). Through a discourse of evidence-based managerial strategies, the schematic draws them together in a linear chain of responsibility.

Although the taskforce model emphasized multiple strategies and participants, the province’s 5,000 critical care nurses are not immediately evident. Instead, special advisory groups form a chain of expert decision-makers beginning outside the hospital and leading inward from regional panels called Local Health Integration Networks (LHINs) through hospital boards to intensivists. LHINs were assigned discretionary control by the government to plan, fund and assess the new continuum of critical care services within their designated regions. At the level of the hospital, the board was enrolled in monitoring and governing the strategy. Finally, as a
“single point of accountability”, the intensivist model of ICU management was endorsed. This rendered the specialty-trained ICU physician as the most responsible clinician at the point of care. He or she would be accountable for ensuring the efficient flow of patients through their unit (Bell & Robinson, 2005, p. ii).

Given the diminished presence of nursing in the taskforce model, one might assume the strategy could operate without nurses’ support. However, this would contradict contemporary reports linking nursing resources, infection and managerial error. For example, Baumann, Blyth and Underwood (2006) explained that the casualization of the nursing workforce directly influenced the response to SARS. Managerial policies of the 1990s relied upon a “just-in-time” staffing model (p. 230), in which cost savings were achieved through a reduction of full time nursing staff. Lean staffing strategies meant that a full complement of infection control practitioners and intensive care nurses was not available in each hospital. Despite these suboptimal circumstances, a small cadre of overworked acute and critical care nurses was credited for isolating and treating SARS patients (RNAO, 2003). Given these constraints, communications about definitive SARS cases and the appropriateness of infection control precautions were challenged (RNAO, 2003). This may explain, in part, the high proportion of SARS transmission from patients to health care workers in Ontario (Naylor, Chantler & Griffiths, 2004).

In light of the importance of adequate frontline nursing staff, the taskforce report is somewhat coy regarding the contribution of managerial practices to the transmission of SARS. The report does not acknowledge SARS-related illness and death amongst ICU health care professionals. Instead of analyzing the nature of frontline infection prevention, the authors focused on reducing the need for critical care.
Figure 13. Overview of the recommendations of the Ontario Critical Care Steering Committee: The adult critical care patient’s journey (Bell & Robinson, 2005, p. ii).
Bell and Robinson (2005) argued that post-SARS infection control standards had increased the time it took for clinical staff to care for patients at the point of system entry. Following admission, potential or actual infection would further increase length of stay. Taskforce authors referred to one observational study (Dimick, Swoboda, Pronovost & Lipsett, 2001) and expert opinion (Alameddine, Dainty, Deber & Sibbald, 2009) linking lower nursing staffing levels to increased complications and costs. Consequently they contended that designated levels of critical care units (e.g., low to high acuity units with strict admission criteria), standardized nurse-to-patient ratios and evidence-based strategies would reduce demand for critical care by way of effective, efficient and coordinated services.

Summary

The OCCTS emerged as a response to the SARS crisis in Ontario. It highlighted various deficiencies and opportunities to transform critical care services for the future. The taskforce report demanded standardization as a means to this end. This included an investment in nursing. However, the plan was not recognizably informed by the local and situated experiences of nurses. As the largest group of practitioners in critical care, nurses were noticeably absent in the model and leadership structure. Although poor communication between health leaders and frontline nursing staff was a critical flaw during the SARS crisis (RNAO, 2003), it was not corrected in the model. In its ideals, the OCCTS may align with what Ng (1995) calls a common sense response to a complex social problem. It ascribed to particular technologies and people, the authority to inform expert decision-making. Further, it used institutional language to renew and adapt a managerial project of accountability (Smith, 2002). Terms such as ‘patient flow’, ‘capacity’ and ‘preventable infection’ became a proxy for quality and surrogate measures of local accountability within the OCCTS.
In the remainder of this chapter I trace an extended sequence of work from what Rankin and Campbell (2009, p. 275) call “inside” nursing care. In the previous chapters, I described how bedside ICU nurses are engaged in the critical work of oral care. Now synonymous with VAP prevention, regular and effective oral hygiene should be provided to orally intubated patients. Although nurses are responsible for providing this care, this is not the singular focus of attention in this chapter. Instead, I will demonstrate how nursing expertise and time are now engaged in infection surveillance. The contentious and evolving work of infection typology is radically different from the material work of oral care and increasingly occupies nurses. Controversial in this matter is VAP’s subjective definition. Several authors argue that the diagnostic criteria for VAP preclude an objective diagnosis (Klompas, 2009, 2010, 2012; Michetti et al., 2012). I aim to show how nursing agency is directed away from patient care and towards the contentious work of VAP surveillance.

I am building an argument that diverse nursing tasks are articulated and consistent with a broad social assignment of nurses to clean up the ambiguities and problems of serious illness. Tidying up in this instance includes a modern work of data collection and data cleaning. Similar to a neatening of the ill patient’s appearance, health services metrics are read as an index of care (Rankin, 2009). As a method of problem containment, ICU nurses are enrolled in a new textual act of housework as they tidy unseemly statistics. In requiring mandatory hospital reporting of eight patient safety indicators in Ontario, the government has recently sought to improve transparency, accountability, and public confidence in the provincial health care system (Bell & Robinson, 2005). This requirement has dramatically changed the work of critical care nurses as it gives them more to do without the provision of additional resources (Whelchel, Pynn & Lizakowski, 2012).
A daily accounting of things

When the nursing student inserted a water-saturated oral swab into the patient’s mouth, he responded by sucking strongly on its sponge tip. However, the student’s widening eyes indicated a measure of surprise. As the nurse accountable for the patient and student, Bill remarked with humour that the patient’s response reminded him of an infant’s “rooting reflex”. Needless to say, the patient was not an infant nor was he suckling. However, as a critically ill, ventilated patient, he was completely dependent on nursing care. In light of the student’s presence, Bill discussed how intubated patients rarely have anything pleasant placed in their mouths. In fact, most objects would be irritating, if not painful. Oral ulcers and facial wounds from the endotracheal tube and its securement devices frequently render the mouth a sensitive space. In reflection, Bill offered that the patient probably felt thirsty and the water-laden swab provided some relief. I could see the student thinking further about these theories as she furrowed her brow in response. In turning back to look at Bill for direction, she clearly was uncertain as to her next steps.

After a few moments of hesitation, she continued with her novice oral care efforts and replaced the swab with a clear plastic Yankauer to remove oral secretions that might be building up around the breathing tube. In a similar response to the swab, the patient immediately closed his mouth over the device. In this instance, the need to curtail activities and respond to the tempo of the patient is something that nurses tacitly demonstrate. In this way, one body talks to another. Despite this fluid conversation, the student’s face registered that something else was wrong. She turned to Bill to report that the suction was not functioning. Within seconds, Bill had traced the suction tubing from the Yankauer in the student’s hand, back to its vacuum connection on the equipment panel. “The suction is turned off!” he exclaimed. In pointing to the mechanics of the
system he suggested to the student that “you should be able to hear the hiss if it’s on”. Bill flipped the switch and the establishment of the vacuum was instantly audible. The bubbling and pop of oral secretions being withdrawn confirmed this fact. Cloudy strands of mucoid-purulent secretions appeared in the Yankauer and made their way down the clear tubing, underneath the closed curtain, towards the wall-mounted receptacle. Our eyes collectively followed these disturbing secretions as they moved along the system.

Just as the secretions left our field of view, the curtains parted and the Clinical Care Leader (CCL) entered. As the nurse in charge of the unit for 12 hours, she had a long list of accountabilities to consider. In bypassing an exchange of pleasantries, the CCL conveyed a sense of official duty. Like many other CCLs across the hospital’s ICUs, she is responsible for patient flow and CCIS data collection in her unit. This means she has only a short time to collect and organize a diverse range of patient information. Knowing the story and disposition of each patient is part of her assignment. In lay terms, this requires knowledge of who is waiting to be admitted and who is ready to be discharged. The large white form on her clipboard suggests that this work is structured and important. She and Bill exchanged some snippets of patient information. In particular, they discussed the invasive technologies in use, namely, the ventilator and central venous access line that deliver potent drugs to the bloodstream. The staccato, back-and-forth nature of this exchange suggested that they had done this before; Bill seemed to know the questions in advance. This resulted in a few items being inscribed on her form. Then as quickly as she had arrived, she and her clipboard departed.

Mol (2002) suggests that the messy, sometimes frenetic reality of hospital work can be difficult to reconcile with our preconceived ideas of care. This means the shape and circumstance of this work can be shocking to those who are uninitiated. For example, Diamond (1992) noted
that visitors can become “pale and weak” when confronted by the sights and smells that accumulate when ill or ageing bodies are gathered together. Similarly, nursing students can faint when confronted with the vivid realities of practice. Morse and Mitchell (1997, p. 649) call this “compathy”: a physical equivalent to empathy. They suggest that, as an under-examined reality of practice, the properties of acute and critically ill bodies can elicit a debilitating response in nurses. In light of its impact on caregivers’ capacities, they argue how spatial proximity to illness is an underappreciated assignment. This observation effectively disrupts unsophisticated notions of nursing, particularly when the work transgresses boundaries of the body, privacy or alternatively when it elicits pain.

The field note above suggests that Bill’s nursing student is learning that oral care can be one of the most persistent of all nursing duties (Ginsberg, 1961). However, its regular occurrence does not make it particularly straightforward. Given Morse and Mitchell’s (1997) insight into the body, this renders oral hygiene a particularly complex task. Patients may respond unexpectedly by clamping down on objects or resisting care with painful expressions. Further troubling this effort is equipment that may not fit in the patient’s oral space or function as intended. People, objects and the routines of the ICU exert their own influence on this sensitive effort. In all cases, people and objects require patience and creativity.

**Disembodying and dematerializing**

For the nursing student, moving beyond an initial sense of novice practice requires the body to catch up. Something needs to be taken up or learned. Sandelowski (1999, 2002a) might explain that the scope of skill development in nursing is often underestimated. The implications of devices and people are often elusive when we encounter them as texts; the generalizing character of words and images can subordinate knowledge that is drawn from direct experience
(Campbell, 1998). For example, Potter and Perry’s (2012) nursing skills textbook offers a linear approach to oral care of an unconscious or debilitated patient. Following the gathering of supplies, the nursing student is instructed to begin by closing the curtain around the bed. Besides a rationale of patient “privacy” (p. 412), the requirement to delimit the nursing space says other things. The textual authorization of concealment speaks to a larger social knowledge that people carry with them wherever they go. In this case, bodily matter must be removed twice. Not only should the dirt disappear but also the effort.

In the field note above, the student’s active work of infection prevention is similarly concealed in the CCL’s data collection. In removing the nurse, patient and context, the dematerialization of people and activity prepares information to be moved outside the immediate care setting. With this abstraction in mind, the charge nurse in the preceding field note is generating data that can be mobilized across an extended network of accountability. This includes notation about probable or actual infection. The account on paper allows what Volosinov (1973) calls a container; the residue of unresolved social problems can be neatly packaged in words. The following sections break down a recurring sequence to show where texts and work processes intersect.

A tick in the box

The “Critical Care Information System (CCIS) Data Collection Form” on the CCL’s clipboard resembles many other forms in the critical care unit (Figure 14). Like many others, this is a black and white form comprised of columns and rows. Beginning at the top of the form, one sees spaces for the date and time.
Whereas any date can be inscribed, “10:00” (or 10:00 AM) is preprinted. The inability to insert another time suggests a pressing deadline. In the adjacent space is a spot for the “PAA” (patient administrative associate) or “RN” (registered nurse) to print their name. “Mary Smith” appears in small font and is used as an example of how to spell out one’s name as the data collector. The a priori assignment of gender in this instance is informative. The data collector is assumed to be a woman who is able to incorporate this requirement into her other duties. Finally, a small tick box at the top right corner signals that the data, once collected, must be “entered into CCIS by PAA/RN”. The top row thus serves to notify the collector that this form connects to another sequence that entails manual data entry into an online repository.

Down the left column of the data form are a series of bed numbers and a field to write the name of the patient occupying that space. In following each of the 20 bed lines across the form,
one can see the option to tick or circle “Yes/No” in sixteen discrete columns. Each of these columns pertains to the presence of basic monitoring, ventilation, hemodynamic support (e.g., drugs supporting blood pressure), dialysis, special cardiac devices and anti-infective agents. Because most of the technologies listed are unique to the critical care environment, the presence of a “Yes” or “No” response would theoretically support or negate the continued care of the patient in the ICU. An accompanying definitional sheet notes that monthly metrics produced from daily data include the local team’s timeliness in discharging patients once they are weaned off these technologies.

Anna, a nurse and Patient Care Manager (PCM) in the critical care area, shared that the requirement to collect and electronically transfer patient data to Ontario’s CCS began in the years following the SARS epidemic of 2002–2003. She offered that the MOHLTC was caught off guard when SARS overwhelmed critical care resources in the province. In turn, the government created the CCS to better manage the human and material resources of critical care. In recalling the SARS epidemic, she noted that “we needed critical care beds [but] nobody had any idea of who had what kind of bed or what hospital could provide what level of care”. In walking me through the CCIS data form, Anna noted that official collection began “in 2007”. Today, “every hospital who has a level 2 or a level 3 ICU is registered … or registered per se through this CCIS website […] and everyone is required every day to input admissions, discharges, workload and […] any adverse outcomes”.

Implicit in both my field note and Anna’s account is how nurses are made accountable to the contemporary management of limited health care resources. As a textual strategy to maintain control over scarce resources, ICU nurses are enrolled as expert data collectors within a large-scale provincial network. Equivalent to an epidemiological surveillance program, the continual
recording of health status or risk factors produces data for analysis. As a form of early and ongoing problem detection, the data form allows scrutiny of ICU occupancy, patient acuity and length of stay. However, the dynamic nature of patient care means data collection needs to be continuous. Patients and their conditions are in constant flux. As a result, Anna went on to explain that this recent accountability required a transfer of responsibility to a particular category of nurses (Campbell, 1998). In the study setting, this was assigned to the CCL, patient care manager and infection control practitioner, all experienced ICU nurses.

Anna was able to explain how MOHLTC concern regarding the mismanagement of ICU beds eventually penetrated multiple levels of nursing work to orchestrate a fundamental reorganization of care. In this case, new accountabilities entailed collecting and reporting ICU VAP data to the government. As a means of improving patient safety and reducing costs, the unit’s VAP data demonstrated whether the unit and its practitioners were meeting this expectation. In her experience, the unusual nature of this project paradoxically rendered it a standard nursing assignment. For example, she explained, “If there’s [a project] that we don’t know who to give it to, I get it”. In other words, administrative oversight falls to nurses to organize and execute on behalf of the hospital (Fairman & Lynaugh, 1998). In turn, Anna was positioned alongside nurses in other ICUs, as links in a new chain of reporting. Anna shared that as a first step in this process, she and another ICU manager designed their own data collection form. In turn, unit nurses were able to efficiently transfer administrative data beyond the boundaries of the ICU and hospital.

A work of nursing surveillance

In pointing out three features at the bottom of the CCIS form, Anna noted that the fields entitled “VAP” and “Central Line Infection (CLI) Dx” are tracked when a nurse fills in the
patient’s name and the date these problems were identified in the bedside chart. Although they may be considered less important in being at the bottom of the form, she noted the reverse to be true. As “adverse events” of the ICU, they needed to be taken seriously. Therein, their position on the page meant that they needed to be handled separately from other data. In explaining the social pressure associated with the mandatory reporting of infection, Anna noted that she had to be particularly vigilant about the accuracy of infection data in contrast to other patient information:

Stuff like our VAP and our CLI [central line infection] rates and our hand washing rates that’s stuff that will go on our hospital website as well and it goes to the CEO and it also goes to the Board. So if they see, for instance, oh, our VAP rates are really high, they’ll say why and expect you to have a quick and easy fix solution, right, so that’s why that’s … I want to make sure it’s accurate because if one person, you know, is ticking the wrong field continuously you could have … you know, the rate could be like 100%.

As a result of the negative optics associated with high infection rates, Anna did not allow the CCLs or unit clerks to upload VAP and CLI diagnoses into the computer system independently. Instead, she worked with the Infection Prevention and Control (IP&C) Department to verify each case. As an unofficial custodian of the local data, Anna had developed a strategy of daily data cleaning to ensure errors were caught promptly. This meant that she relied on a team of nurses and interdisciplinary staff to validate VAP cases before they were sent to the CCS.

As an IP&C practitioner, Barb worked with Anna to confirm VAP cases. However, prior to her work in this role, she was an ICU nurse in a small community hospital. She noted that the method of infection surveillance that she first learned on the job in the 1990s was called “total hospital surveillance”. However, today it is called “targeted surveillance, where you’re trying to get the best bang for your dollar. And you’re looking at more of the prevention”. In describing
how this works, Barb noted that infection prevention requires an understanding of the variable resources that function in each unit:

And [...] there usually isn’t just one answer. It’s, there’s a lot of gray areas and [...] you know there’s many causes for, as you know, for different problems. And so you look at trying to resolve or some form of resolution you know might not be the correct one for the time. But [we consider] how is the unit managing? And certainly every unit differs in their management, to their management styles and their managing of [several] dozen bedsides.

In directing my attention to “dollars” and “management”, Barb was referring to the fact that infections are expensive problems to resolve. However, her reference to management styles suggested a unique set of resources on each unit. In turn, the application of standardized approaches to infection might be ineffective. Despite Barb’s understanding that creativity is essential, part of her job was not flexible. In relating a linked process with Anna’s work, she explained that the “driver” in her work is now “mandatory reporting” to the CCS. Adopting the “case definition” of VAP provided by the CCS required Barb to screen the critical care unit every workday.

Like Anna, Barb had created a unique data collection form and work process to meet the expectations of the CCS (Figure 15). This meant she began each workday at the “top” floor of the hospital and worked her way down through the building, unit by unit. In respect to ICU screening, this required her to visit each bedside over a series of days to examine the nursing flowsheets and identify VAP symptoms. During weekly meetings in her department, she and a colleague would sit down and compare the VAP case definition, alongside her cumulative patient summaries, in order to arrive at a definitive diagnosis.
In directing my attention to the CCS definition of VAP, Barb pointed out a series of small tick boxes on the bottom of page two of her worksheet. There, she was required to confirm a VAP diagnosis based upon a predefined list of variables. Once this was complete, the definitive VAP case was communicated to the critical care unit PCM. In the case of a definitive diagnosis, Anna explained that she had to rectify the CCIS database, as it would be incomplete without the VAP
designation. This entailed special authorization to amend the CCIS database. However, this also required a particular attention to time: there was often a gap between the patient’s active presence in the ICU and the achievement of a consensus diagnosis in Barb’s department. For Anna, this posed an ongoing work of database cleaning:

So if someone developed ventilator associated pneumonia and IP&C hasn’t diagnosed it till maybe two weeks later but the patient’s already been discharged or they … maybe they passed away and it’s been greater than seven days then you have to keep that on a little slip of paper in a folder, a tally of names, and at the end of the quarter you’ve got this time frame where the [Secretariat’s database] system is opened up and you can go in and make corrections.

For Anna and Barb, the temporal delays in diagnosing VAP required data organization and storage in order to report on patients who were often discharged or deceased. This meant that their nursing efforts persisted beyond the original patient encounter.

Despite what Anna described as a “diligent” process of carefully diagnosing and reporting infection, she explained how VAP reporting methods were not standardized across the province. In speaking with colleagues at other hospitals, she learned how VAP reporting is sometimes relegated to non-clinical staff. This knowledge led local ICU managers and physicians to explain that provincial VAP rates were not comparable. Moreover, it was mired in a potentially evasive process. Anna and her colleagues discovered how clinical staff in other hospitals would purposely avoid writing VAP in the patient chart.

If the doctor hasn’t, you know, written it or diagnosed then it’s not reported or in some hospitals it’s [erroneously] reported as Ventilator Acquired Tracheitis, which they diagnose it as, that so they don’t have to diagnose it as a VAP. So … so there’s all sorts of things out there so I’m not quite sure … you know, we can only go by our numbers and what we are [doing] and how we’re doing and, you know, maybe it’s not always good to compare because it’ll drive you crazy because you think the other people aren’t doing it the way that it should be.
With performance comparison in mind, what emerged was a problem of transgression. Despite their diligent efforts, Anna and Barb reported how VAP rates were consistently higher in their ICU when compared to rates across the province. They argued that provincial comparisons between hospitals did not adjust for variable patient acuity, case mixes and the availability of resources. Further, surveillance quality varied given the fact that they were left to each hospital to operationalize. In this case, an objective VAP adjudication process paradoxically resulted in a negative appraisal of practice. As a result, they questioned the veracity of the information being reported and the concept of benchmarking within the CCIS network.

**A short in the circuit**

As tensions began to emerge around variable infection reporting methods, a corresponding work of resistance came forth. In many ways, participants felt overwhelmed by the added pressure to produce or review patient data in pre-specified categories and forms. Despite local concerns about the fidelity of VAP reports, CCIS data was accorded a factual status. Published on a government website (called Health Quality Ontario) and the hospital’s website as a bar graph, the VAP rate report asserted an objective account or ‘proof’ of care effectiveness (Figure 16). However, Anna argued that this was not a reliable account. Cleaned up in the VAP rate report were people, a variable context and a fluctuating set of patients.

As a significant transformation of events, the VAP rate report required considerable interpretation. In other words, clinicians cautioned against a simple reading. This is because the report did not preserve the patients and practices that preceded its construction. Their experiences tripped over the report, as it did not account for what happened or what was really going on. Pushing back against a negative reading became an active strategy in the work of VAP prevention.
For physicians, scientific issues of diagnosis and benchmarking were methodological challenges that emerged in their reading. Physicians disputed the veracity of published VAP reports on the basis of methodological weaknesses. For example, the intensivist named John noted how various VAP case definitions may be applied in different regions of Canada and internationally. This led him to understand that similar cases would have different infection rates because of the subjective nature of a VAP diagnosis. As a result, he wondered if VAP summaries actually compared “apples to oranges”. This meant that different types of patients with radically different risks for VAP were grouped inappropriately for comparison. In this instance, John was able to reposition himself through a discourse of scientific expertise. Heterogeneity in case definitions produced an untenable level of bias and a reason to disregard VAP statistics as a measure of quality.

Figure 16. The Quarterly Ventilator Associated Pneumonia (VAP) rate report

As these concerns accumulated in successive interviews, the work of oral care began to recede and controversy regarding VAP surveillance gained prominence. This entailed a
metaphorical short circuit in the new accountability loop. In other words, the drive to a zero VAP incidence held unintended consequences (Klompas, 2009). Instead of becoming more interested in preventative care, clinicians actively debated whether VAP really existed, if oral prevention truly worked, or if anything had really changed over time. This meant that the collection of surveillance data did not provide a transparent account of practice. Overall, physicians suggested that VAP might simply be an “epiphenomenon” of critical illness (Scales, 2011, p. 1098). This meant an inevitable range of infection symptoms emerged when serious illness was intercepted with the application of life support technologies such as mechanical ventilation.

Despite these controversies, ICU nurses were required to continually actualize a diverse set of concepts in VAP prevention. Their spatial proximity to patients put them in frequent contact with multiple forms of messaging to do so. For example, nurses noted how posters, physician orders, the flowsheet and CCIS forms oriented their attention to VAP prevention. As a result of this sustained focus, Barb worried that ICU staff were suffering from a different type of short circuit: information overload. She shared, “I often wonder if there’s just too much out there for staff at the bedside to be looking at and struggling with”. Aside from the quarterly VAP metrics (Figure 16) that Anna posted and emailed to staff, nurses commented on posters distributed in the units that illustrated VAP prevention concepts (Appendix J). These texts talked to nurses about important scientific concepts; however, the words and images of VAP prevention did not afford the opportunity to talk back.

Taken together, the broad textual campaign of VAP prevention blurs the difference between expert concepts and ‘basic’ preventative practices; it continually overlooks what nurses are doing. For example, Anna became aware of the conversations that hospital accreditors had undertaken in her unit during their triennial assessment of the facility. As expert practice
assessors speaking with frontline staff, accreditors inquired whether ICU nurses knew how the hospital’s VAP rate was calculated. In her mind, being placed in the “hot seat” in regard to epidemiological methodology was an astonishing affront to nursing expertise. Given ICU nurses’ responsibilities to deliver preventative oral care, she felt this focus was inappropriate and misguided. Anna was concerned about the pervasive detachment from the actualities of active practice that resulted from a focus on health services metrics. This focus undermined nursing knowledge and reinforced expertise at the managerial level.

Concerns for accompanying textual overload suggested a confusing and potentially untenable level of messaging both inside and outside the ICU. For example, Anna was certain that public reporting of VAP rates on the hospital’s website would be incomprehensible to a layperson. Similarly, the intensivist named John shared how VAP “episodes per thousand ventilator days [was] a measure that people are not that familiar with”. Though John felt that local work that went into a diagnosis of VAP was diligent, he noted, “there’s an issue with looking at the rates too frequently because they let you down” given the “large degree of [visual] flux” they provoke (Figure 16). This meant that the eye could be tricked into seeing a dramatic rise in a bar graph with the addition of just one or two new VAP cases. This could mislead people to think that variation over time is unnatural and the hospital is subject to unsafe or deficient practices.

**A single point of accountability**

In light of these variable readings, the intensivist named Danielle spoke about the problem of cognitive overload in quality improvement. She acknowledged that many local documents had to be developed and old ones updated to reflect new expectations around VAP prevention. As an example, she had taken up emails, posters and redesigned flowsheets that
encouraged preventative VAP care. However, she worried that periods of intensified advertising might be destructive, in that awareness campaigns ultimately end and systematically return the issue to “the background”. Similarly, John felt that with any topic “enthusiasm ebbs and flows and I think that over the last three or four years there has been a collective sort of sigh of boredom almost in the diagnosis and the clinical entity”. Paradoxically, John and Danielle felt the need to sustain an ongoing focus on VAP had exhausted the attention of clinicians.

In the context of a new model of efficiencies in critical care, Danielle expressed how the topic of VAP prevention was not her priority. In contrast, “bed management” had become a significant focus in practice. The OCCTS focus on efficient patient flow had assertively reconfigured her responsibilities as an intensivist.

From a physician perspective when you round on 20 patients and you [only] have three hours and you need to address the acute issues … and you get input from the nurses, other disciplines, the resident so you need to listen to all this, decide what to do with the patient, give some feedback … do some teaching with the residents and the trainees … now more often the families are at the bedside … update the family and translate what you just said in medical words …[then] I don’t think realistically [infection prevention] can be discussed specifically every day on rounds for each patient. There’s a time issue there; it doesn’t work. So […]… there’s this [intensified] focus on it … and then obviously it gets lost again when you’ve moved from the period where it was a focus because there’s so many other things to think about. So I don’t know what is the solution to this but as a physician I find it extremely challenging.

Given the overwhelming competition for physician attention, Danielle offered that her medical training had not entirely prepared her for the pressures of implementing health care efficiencies. Diagnosing illness, teaching trainees and speaking with families were compressed into a short timeframe each day. Yet embedded in her account is the conceptual work of the OCCTS. As a single point of accountability in the ICU, an oversight role oriented her to the flow of patients through critical care. She acknowledged how tensions often erupted between her and consultants
who expected her to find ICU beds for their patients. She noted how direct experience in the workplace was essential in learning how to deal with the intensity of this social process. Therein, the actualities of her work precluded standardized discussion of oral care.

Interestingly, all three intensivists interviewed indicated that texts work to avoid unnecessary discussion and concern around the oral space. In this way, texts function to pass along both work and concern. For example, Danielle shared how chlorhexidine was part of the standardized “admissions order so it rarely gets missed because it’s one of those things that happens, like, systematically”. In this sense, oral care was addressed when it was ticked off on a preprinted form. It was not something that she needed to “think about constantly” because it was a “medication order”. As a result, she shared, “I couldn’t tell you what the nurses do on a regular … on a routine basis”. The depth and breadth of patient oral needs was outside her knowledge as it was firmly rooted in the nursing domain.

John also noted how texts worked to reduce the need to discuss the oral space and its care. He suggested that over the past 20 years of research, influential documents were doing this work on his behalf:

Temporally I think we’ve seen a reduction in VAP rates over the last half dozen years in most ICUs. Now people would associate that with the introduction of VAP bundles, best care practices aimed to reduce VAP and common components of the bundles as you know include more recently chlorhexidine mouthwashes, for a while raising the head of the bed of the patient to hopefully prevent aspiration.

In crediting improved care outcomes to care “bundles”, it was clear that texts were assigned an active role in circulating work. However, attributing care improvements to the placement of key documents suggests that texts held powers unto themselves. Less visible in his account is the essential work of translating therapeutic concepts into practices. This might include an
An Advanced Practice Nurse (APN) named Laura agreed that texts were a vehicle to circulate responsibility. However, she clarified that this did not happen without intervention; it was her corporate assignment to “identify what’s ideal practice” and “translate [it] into actual care at the bedside”. She credited the clinical nursing educators and APNs for reaching out to physicians and pharmacists to generate new orders, policy and messaging in oral care. In creating a network of consensus, she alluded to several months of work, as important ICU documents required changes relative to consensus VAP prevention strategies. This entailed an investment of her time alongside corporate committees, graphic designers, printers and managers to physically place these texts into the critical care unit. As a final step, she was accountable for the education of ICU nursing staff on the updated documents and their incorporation into practice.

Significant to Laura’s account was an early introduction to the tensions associated with her enrolment in a new accountability network. The same year the OCCTS report was released, her ICU was included in a multicentre MOHLTC-funded study of quality improvement (Scales et al., 2011). In an effort to evaluate and measure the delivery of six evidence-based practices in the ICU setting, Laura was required to roll out several strategies including one addressing VAP. While the study emphasized that the majority of ICUs in Ontario have insufficient human resources to conduct quality improvement projects, it assigned data collection to nurses or unit clerks (Scales et al., 2011, p. 365). Laura explained that this experience sensitized her to a compressed nursing role. Doing more with less required her to examine “what can we do quickly, what is evidence based, where are we falling down, [all the while] keeping fiscally responsible”.

explanation of how guidelines or bundle recommendations arrived in the critical care unit to exert their influence.
As a project that preceded the introduction of the CCIS in 2007–2008, the aforementioned study acted, Laura explained, as a feasibility case for continuous data collection in Ontario’s ICUs. As a demonstration project, it linked individual units and sites to the CCS. It measured adoption and adherence to predefined set of practices. A key finding was the manner in which tensions associated with “competitive” network performance enhanced uptake of best practice (Dainty, Scales, Sinuff & Zwarenstein, 2013, p. 317). Laura felt that many of the evidence-based practices would be helpful for patients. However, she acknowledged that the study actually aimed to measure the success of a knowledge translation strategy in contrast to the quality of direct patient care. She argued that the “success” of the strategy was mired in an ideological framework: concepts of adoption and adherence were superimposed over top of clinical practice.

With the collective tensions and experiences of physicians and nurses in mind, I took up their recommendations to meet with leaders at the CCS. Although my initial efforts were rebuffed, I eventually found a willing nurse executive who worked within the CCS. The following sections detail her experiences working for the CCS and its overarching program of efficiencies for critical care in Ontario. In addition, I will introduce Bruce as the study hospital’s ICU medical director. As a key recipient of CCIS data, he explains his position in the OCCTS model.

**A new accountability circuit**

Carrie worked for the CCS on multiple projects since its inception. As a “coach”, she moved around the province talking to hospital teams about the design and delivery of expert ICU care. As a former ICU nurse who had moved into hospital management roles, she understood how problems affecting the ICU could impact an entire hospital system. In particular, she was
aware how ideas around “mundane” nursing work today “had a much greater impact than perhaps nursing previously or anybody else had thought” in the past. In reference to mouth care she shared that efforts to improve frontline staff knowledge were key to transforming outcomes. With health economics in mind she shared how linking infection with fiscal awareness was important:

I mean there’s general agreement I think that you know CLI and VAP keep patients in ICUs longer, which isn’t good for the patients nor, from a system perspective, good for the system. So I think, you know, I think simultaneously was looked at from a quality improvement and occupancy and a financial kind of framework. And all of a sudden it sort of was, “Wow, you know if we stop these few things from happening to these really sick patients, then we might be able to improve quality of care that we provide for people.” We may be able to impact the financial implications probably more to the system as opposed to being able to [find efficiencies] in the Canadian healthcare system or at a department or program level.

In order to influence the judicious use of care resources in ICUs across the province, Carrie worked with the CCS to develop knowledge “toolkits” on VAP prevention. For example, she joined an “expert” team of clinicians and managers to review the extant literature in oral hygiene for ICU patients. In summarizing this evidence in informational toolkits, recommendations included managerial approaches to continuous quality improvement, instructions on how to enter CCIS data, as well as bedside audit tools (CCS, 2011). These resources were then transferred to the local health networks for dissemination to ICU leaders across the province.

Though informational kits being produced by a government agency might be seen as unduly influencing medical judgment, Carrie acknowledged that the CCS could not tell clinicians how to practice. Instead, the idea was to begin to establish a network of knowledge of best practices. The pressures that come with network membership were evident in her talk about performance measurement:
Critical Care Secretariat isn’t about what’s physician driven or pharmacist driven or whatever [...] they’re supposed to be accountable to patient outcomes and improving the patient outcomes for the Province of Ontario from a critical care perspective. So I think then, I think the mechanism at the moment in the system to ensure that things are being done and have a high profile, is to link them to patient outcomes and accountability structures. And there’s more of that than there ever have been. Right? And so I would think that that’s the way to sort of position some of these things. Because you know I think any critical care physician or hospital board member actually knows that mouth care is important because they know that we all get marked on file. And they know that preventing that VAP is important because it appears on the public website.

In referencing the mandatory data collection and public reporting as an accountability mechanism, she noted how it connects people across sites and professions. But perhaps more importantly, she spoke to a “critical care perspective”. As an example of what Smith (2005, p. 123) calls a “monologic objectified perspective”, this viewpoint is difficult to define. In mentioning physicians and hospital board members as formal recipients of the study site’s CCIS VAP rate, she admitted uncertainty about the information nurses receive. In considering a potential gap in the feedback loop, she was not clear whether ICU nurses received the data directly. Regardless, she felt that infection outcome metrics offered the best method to identify opportunities for process improvement.

For Carrie, CCIS data was an efficient managerial tool: it functioned as a “drill down” technique to penetrate what was really happening in practice. She explained that ICU clinicians “that are used to a lot of high-tech activity… don’t always value the low-tech” activities such as mouth care. In lieu of “core nursing behaviours” embedded in hygienic activity, nursing priorities are now focused on “airway, breathing and circulation”. For her, this was a problem requiring correction. For example, she believed that “100% compliance” with evidence-based oral care did not exist. In her mind, not all nurses knew why oral care was important. Instead, nurses were “running around playing with all their [high-tech] stuff”. This vexing gap in
knowledge and behaviour made outcome surveillance important if not essential. Distribution of data along an accountability network afforded the opportunity to reinforce good nursing practice.

As the physician director of the critical care units in the study hospital, Bruce received VAP data directly from the Secretariat every quarter. However, in contrast to Carrie, he found it to be a controversial marker of quality. In his opinion it was subject to biased reporting and errors of interpretation. Like John, Barb and Anna, he believed that VAP could be subject to a problem of inter-institutional “variation” in reporting given its subjective components:

I know here that we’re being very objective about reporting our VAP rates. But there are concerns about other people who choose not to be as objective. And the proof of that being an issue to me is just that there are centers who report zero VAP. And I don’t believe that any intervention I’ve ever seen in medicine has a 100% effective at preventing disease especially when it’s complex as VAP. And therefore it’s hard to truly believe that we’re talking about the same conditions. I’m having none of it because it’s just not biologically plausible that you can eradicate this disease with chlorhexidine.

Bruce’s lack of trust in VAP reporting methods was particularly evident when he shared, “the easiest way to improve your rates is not diagnose it”. Whereas variable or poor VAP data collection method has been called “ascertainment bias” (Scales, 2011, p. 1098), Bruce is alluding to a subtle level of deceit. Klompas (2012, p. 6) suggests that no surveillance definition will ever be without an element of selective manipulation or “gaming”. This harkens back to Schoenbach’s (2004) description of epidemiology’s study of patterns being applied to gambling in order to improve the odds of winning money. Therein, probability and statistics can be used to improve one’s position in a competitive field of medicine and health services.

Despite his hospital’s objective approach to documenting VAP, Bruce noted that errors of interpretation created new work and tension. He detailed that an “e-mail comes to me that is actually primarily sent to the Chief Executive [Officer] that has VAP and catheter-related
bloodstream infection rates within it. And we get data [from the CCS] on that every quarter basically”. As a local response to the data, he typically receives a corresponding wave of emails from the CEO and hospital board that comment on the direction of the change in VAP from previous quarterly reports. In humor, Bruce shared that “nobody cares if your rates are low”. However, if they are on the rise, the opposite is true. In this case, he has struggled to explain that the rate simply does not reflect the realities of practice. Similar to the intensivist named John, they both noted a common mistake of drawing conclusions from inadequate or small samples.

Interestingly, the issue of spatial proximity came to bear in Bruce’s thoughts about the objective and detached status of health services metrics. He felt that quality measures such as VAP rates should ideally be closer to the patient. For example, a measure of the ability to “provide the prevention” would be preferable to disease outcomes like infection or mortality. In turn, he felt comfortable disregarding the CCS VAP reports. Over time, he was able to explain his views to the hospital CEO and Board. As a result, their calls regarding VAP rates “had dried up”. Unfortunately, Bruce had never observed oral care for a ventilated patient even though he had worked in the ICU as intensivist for many years. In turn, he offered:

It would be interesting to know a bit more about that [chlorhexidine application] itself and how we apply it and indeed come back to the protocolization and the behavioural stuff of how, what the difficulties are and how to overcome them in that. So I guess, but you see I’ve never really observed people applying it and it would be interesting to know just what they are doing and how, how much variety there is and variations there is in that.

The actual practices of oral care had eluded Bruce’s awareness. This gap in perception is mirrored by Carrie’s query about the training being offered to novice critical care nurses in provincially mandated college courses. Notwithstanding her direct involvement in published standards of critical care nursing (Fisher, 2007), as well as recent changes in critical care nursing
educational programs in Ontario (MOHLTC, 2006), she expressed concern that the practical skills of oral care might not be “in any kind of curriculum”:

I mean I would hope that in the critical care curriculum that they’re even, like I would hope, and gee I haven’t asked the question, that they’re teaching those things. Right? Like they’re even talking about making sure that mouth care is beyond just making the patient feel better, it actually plays an important role […]. Like, so I’m hoping that those things are even discussed, let alone the skills of how to do those.

Carrie and Bruce’s lack of familiarity with oral care underscores a disconnection between standardized ways of knowing nursing and the actual character of the work. Despite their endorsement of oral care, they did not have an intimate knowledge of the skills and challenges that constitute oral hygiene. Moreover, they were not familiar with the educational training that would contribute to this important practice. In part, this might be due to the fact that much of their work engaged health services data. As leaders in the health care system, they were required to review objective measures that bypassed the work being done by nurses.

Of importance is the contrasting manner in which Bruce and Carrie dealt with VAP cases, when compared to frontline staff. Their emails and phone calls with the CEO and hospital board members sat in contrast with a nursing response. In this case, the “quick and easy fix” that PCM named Anna shared came into play. This meant that the PCM, nursing educator and APN would often ramp up their educational efforts to contain the problem. More specifically, this required them to respond personally by communicating with over one hundred nursing staff. This would entail email communication (appending the VAP rate report), discussion of the issue in unit staff meetings and the performance of point-of-care educational sessions on VAP prevention.
With all of the above accounts taken together, a new accountability circuit comes into view (Appendix I). Beginning in nursing work, it is possible to trace a sequence of interlocking texts that circle through the critical care unit. Through the work of inscription, words and numbers begin their journey in the frontlines of nursing care. The overlapping diagnostic work of physicians, managers and infection control practitioners act as sites of processing interchange (Pence, 2001): new texts are created or modified along the way. In its eventual form as a bar graph, the VAP report functions to support the work of administrators in interpreting clinical activity (Rankin, 2009). However, in returning to the hospital, the VAP rate report also proposes an ideological circle (Smith, 2005). Expert concepts renew and reinforce an objective rationale for oral care.

**Summary**

In this chapter, a nexus of people and work came into view through linkages made in text. From the bedside to the boardroom, data linking infection to mouth care connected an extensive group of clinicians, managers and health leaders. As an alternative account of nursing work in oral hygiene, this section moves beyond the confines of the critical care bedside to render a larger sequence of work visible. In following this path, the problems and contingencies that nurses experience in patient care recede behind a program of textual accountability. In place of the concerns that nurses recount are tensions and controversy related to the managerial and methodological complexities of surveillance.

French and Mykhalovskiy (2013) suggest that it is helpful to trace active concepts, discourse and participants in a large-scale surveillance network. In their work, they interrogate a contemporary public health discourse of pandemic and emergency preparedness. In bringing mundane acts of surveillance activity forward, they note how controversy follows what is
normally behind-the-scenes work of data collection. Interview narratives in this chapter align with the idea of a dissonance amongst the members of a surveillance network. In this instance, the continuing transformation of data into reportable patient measures obscures the knowledge and experiences of clinicians. Informed by the SARS pandemic, real-time CCIS data does hold the potential of being an early-warning system for the MOHLTC. However, in this case, a ventilator-related respiratory illness first identified in the early 1970’s is now treated as a public health crisis (Stevens et al., 1974). Thus, the OCCTS model “aspires towards [a] pre-emptive ideal” in the early identification of a serious threat to the public’s security (French & Mykhalovskiy, 2013, p. 175).

With the OCCTS model in mind, it is clear that a “fundamental remapping of the spaces of illness” has occurred (Armstrong, 1995, p. 393). In addressing the problem of VAP, the model appears to encourage increased formalization and bureaucratization. However, increased transparency and accountability measures require the delegation of new duties. The agenda of the OCCTS penetrated the ranks of nurses and reassigned duties to a select group of them including APNs, CCLs, managers and infection control practitioners. Despite a lack of special training to perform audit measures, nurses created novel ‘workarounds’ to make surveillance happen. Working creatively as they had done in oral care, they used their time and energies to support the OCCTS goals. In transforming patient findings into new texts, they rendered problems mobile through textual technologies. This enabled issues like VAP to be moved forward for review.

Physicians also described how health reform assigned new accountabilities in practice. They acknowledged how the OCCTS assigned an oversight role within a rational model of patient efficiencies and movement across the critical care continuum. In reality, this responsibility devolved into interpersonal problems with consultants. Managing sparse bed
resources relied upon informal training to manage the ongoing pressure to admit additional patients from the emergency department, wards, other ICUs and hospitals. This required physicians to limit their focus on extraneous variables including the delivery of oral care. The cognitive and temporal burden of a busy workplace precluded extensive reading and discussion. Physicians relied upon standardized orders and simple lists to organize granular detail. Amongst the complexities of the critical care context, maintaining a coherent picture of each patient’s illness trajectory became a struggle and a source of dissatisfaction.

Given the interdisciplinary reliance on texts to coordinate multiple duties, it is not surprising that some clinicians expressed concern about the overwhelming collection of documents in the critical care unit. Recent research suggests that knowledge translation texts, such as those targeting VAP prevention, have an uneven effect. This might mean that they have a higher impact on nurses than on intensivists. For example, Sinuff and colleagues (2013) demonstrated that among fourteen VAP guideline recommendations, nursing-delivered oral care and head of bed positioning were the most improved practices in a prospective, time-series interventional study. In contrast, physician-specific practices including antibiotic regimes demonstrated poor concordance with clinical practice guidelines. Given that the interventions included broad distribution of education materials, bedside reminders (e.g., posters) and electronic reminder loops (e.g., email, a study-specific website), these texts may be reaching nurses preferentially. Alternatively, physicians may not believe in consensus guidelines or find them difficult to operationalize in practice.

Tracing an accountability circuit from the bedside to the mandatory public reporting of infection shows how the concept of transparency has changed clinical practice. I have shown how the ideals of the OCCTS model have penetrated the work of nurses and their
interdisciplinary colleagues. Despite grave concern regarding the availability of skilled critical care nurses during the SARS crisis (Bell & Robinson, 2005), the MOHLTC implicitly encourages practices that require nurses to perform activities other than direct patient care. These include the generation of quality improvement data, which is done without sufficient resources or training (Scales et al., 2011). While much of the textual work of the hospital is local and immediately relevant to patient care (Campbell, 1998), I have shown how nursing time and resources are otherwise redirected. In producing managerial data, nurses are directed away from the immediate needs of critically ill, ventilated patients. Attention to skilled nursing assessment and intervention is consequently diminished.

Foregrounding the circuitous path of patient data from the critical care bedside towards a larger social nexus is both fascinating and worrying. Looking outside conventional notions of minute-to-minute nursing activities has been helpful in showing how the OCCTS is reshaping clinical activity. Trouble is identified in the work and tensions generated by the overlapping efforts of nurses, managers, infection control practitioners and physicians to reconstitute the patient in texts. As Mol (2002) suggests, health problems often have a type of social momentum: they are invariably pushed forward in textual form; they move down the line of accountability for others to ponder in future settings. French and Mykhalovskiy (2013) note how electronic media, including the Internet, enlarge the boundaries of this schema. The spatial dimensions of illness are expanded and enroll public attention in the resolution of infectious threats.

Not surprisingly, nurses, managers and physicians have demonstrated that their attention is often fractured in the context of health care reform. A contemporary focus on evidence-based managerial goals of infection prevention paradoxically limits the visibility of hygiene and the context in which mouth care is delivered. In essence, everyday activities are decoupled from the
ideals of an efficient and effective care model. This means that an outcomes-based focus precludes a sensitive account of how care actually happens. In the place of such an account, good work steps back and negative metrics step forward. This perpetuates the invisibility of nursing hygiene as skilled work becomes difficult to define and recognize. Moreover, what is helpful or desirable for individual patients becomes less important to readers of health services data. Managerial discourses produce and reinforce a distance between expert practice and the expertise necessary for the care of intubated and mechanically ventilated patients.
Chapter 8
Reformulating Nursing Work in Oral Hygiene

The study presented in these pages has passed through many settings and stages. Beginning in my own experiences and reflections, it has traversed through multiple locales to arrive here. Of course, it is worth reiterating that this destination was part of a larger plan. A distinct maneuver in IE is to come in close to produce an intimate account of the work under study. However, the researcher must also pull back and scan the horizon. The broad social and material context in which nursing work is anchored is essential to the analysis. Without these two views, it is difficult to know where people are situated in an articulated world of ideas and actions.

In thinking back to my original impetus, I expressed an interest in joining an ongoing dialogue concerning nursing work. As a hot topic in critical illness, oral care had been described in ways that distinctly departed from my own experience. Further, people other than nurses were making claims about this effort. IE offered the possibility of reformulating this conversation to mitigate a problematic silence. In reinserting people and activity into this discussion, the very nature of this work could be reclaimed. In turn, IE could act as a corrective for inadequate accounts of nursing work. Importantly, this would require the inquiry to begin in practice as opposed to the problems delineated by science. Opening up the actualities of practice required my conversations to begin with nurses who were undertaking oral care.

Certainly, I expect that some critical care nurses might not share my original sense of trouble about the way oral care is rendered in contemporary accounts. They might see the recent attention to hygienic acts as an entirely positive move. Nursing might now enjoy a new kind of
pragmatic legitimacy, where oral care is seen not only to benefit patients, but also the institution of health. In this instance, a return to a discourse of ‘basic’ nursing care might also sustain a type of moral legitimacy. Therein, a reorganization of work at the bedside is said to enhance the survival of individuals in addition to the viability of the health care system. With this in mind, the Institute of Medicine (2011) suggests that nurses are now becoming full partners with physicians and other leaders to meet the intensifying demands for safe and efficient health care. This gives nurses a vital role in sharing the “collaborative management of their practice” (p. 212).

The data I have collected unsettles the veracity of the positive assertions shared in the preceding paragraph. I content that nursing work is being reorganized towards interests that prioritize management over practice. Others have shared a similar concern:

Rationalization as an ideal starts from the idea that the problem with the quality of health care resides in the messiness of its practice. However, even if it may be messy, practice is something else as well: It is complex. The juxtaposition of different ways of working generates a complexity that rationalization cannot flatten out – and where it might, this is unlikely to be an improvement. In those sites and situations where a so-called scientific rationale (be it that of pathology, pathophysiology, or, most likely at the moment, that of clinical epidemiology) is brought into practice, with sufficient effort it may well come to dominate the other modes that are already at work. But this does not so much improve medicine as impoverish it (Mol, 2002, p. 182).

The above quote by Mol (2002) resonates with my analysis, as oral care is indeed messy. Further, it is often complex and demanding. The desire to clean this up through statistically informed methods of knowing and intervening is understandable. However, it does not change the aforementioned realities of practice. Instead, it simply over-writes it.

With the above-mentioned ideas in mind, I have been careful to begin this inquiry within the locations and experiences of critical care nurses. In suggesting that researchers enter in
everyday/night activity, IE provides a unique commitment to practice. In moving from the particularities of nursing towards the extralocal, I have attempted to stay attuned to nurses’ concerns and experiences. In doing so, I have discovered a network of people, problems and skilled activity related to mouth care. This inquiry’s innovative method encourages nurses to reconsider the manner in which their work is being organized and defined by a larger set of relations. Further, the limited way in which these relations permit others to understand the realities of nursing practice.

As it pertains to contemporary discourse of oral hygiene, the implications of a shift from patient comfort to infection control is one that requires further deliberation. I am suggesting that a move away from the immediate needs of patients to an expansive set of managerial accountabilities may be premature. This is because nurses have shown me how oral comfort and serious infections are likely interrelated and inseparable. A variety of patient, situational and mechanical barriers prevent consistent nursing access to the oral space. However, the demands placed by an institutional emphasis on infection surveillance and control paradoxically obscure this important knowledge. As an extended set of nurses is drawn into the demanding work of surveillance, they are concurrently pulled away from resolving the dilemmas of active practice. This is a serious contradiction in nursing accountability.

My findings acknowledge that the diverse oral problems and related care of intubated patients is socially intense and intricate. Oral care is highly demanding work. Further, it entails an expansive set of problems and practices. In its active form, the work is fluid and ongoing, rather than routine or intermittent. However, the time and manner in which nurses can carry out this practice is quite uncertain. In this chapter, my analysis and recommendations register the unresolved problems and issues that patients and nurses encounter. Returning to the situated
practice environment has been particularly helpful in understanding that these issues need to be drawn into a larger conversation.

**A summary of the chapters**

My immediate aims are not to suggest a method of resolution to nursing dilemmas or the larger problem of infection in the intensive care unit. Rather, the objective is to expand the terms of this dialogue. I began this goal in both my reflexive preface. There I described how my own experiences in oral care were disenfranchised. Reflected in the expert accounts to which I had access were assertions of scientific neglect and disorganized practice. In some ways oral care occupied two worlds: one that I knew from experience and another that I could only visit in the literature. Infused with the discursive style of biomedicine, oral care became a prescription for quality improvement. Rather than an intimate bodily act, it was hooked into categories such as VAP, mortality and ICU length of stay. Often discussed separately from its context and practitioners, oral care was accorded the status of an independent actor. In turn, my work as a nurse appeared to be cut free and oral hygiene could seemingly do things on its own.

In my first chapter I introduced concern about inequity in matters of oral health. Access to professional oral health service is limited in most regions of the world (The Lancet, 2009). The ubiquitous nature of this arrangement often makes it difficult to see its effects on vulnerable populations. My literature review showed how scientific and managerial statements consistently note that oral care is one of several nursing-led interventions that are neglected in the critical care unit. However, the analysis in these discussions frequently faltered, as they failed to consider why nurses are targeted as agents of oral health. Mouth care is now deemed an essential practice. However, its execution is only vaguely described. This means that oral care can be read as a perfunctory chore; its discursive assignment appears closer to a domestic duty than a scientific
achievement. These dual characteristics render oral care a confusing entity and accord it an uncertain place in my nursing experience. My analysis argues that inequitable attention to oral care extends a pervasive set of vulnerabilities in the critical care unit.

In my methods chapter, I discussed why it was essential to do an IE. Whereas a variety of ethnographic traditions could get me close enough to see the contours and substance of oral hygiene, they would not suffice. The analytic product would inevitably strand me in one of the two worlds I was trying to connect. Smith’s (1999, p. 130) IE could help me to show relations “between various and differentiated local sites of experience without subsuming or displacing them”. I needed to know how it was possible that clinicians and scientists, to whom I was listening, spoke the way they do. Thus, IE proposed a way to trace how words and worlds come together. Further, how they may be held in place. Given the challenges of a social world in constant motion, Campbell (2003) acknowledges that this is both the opportunity and the challenge of the institutional ethnographer.

Towards this end, my first results chapter brought nurses and the contingencies of care forward. Nurses demonstrated constantly evolving patient circumstances, a wide array of oral problems and a prevailing logic spoken as the ABCs of care. This corresponds to what Bakhtin (1984) calls “heteroglossia”: the uneasy alliance of expert and lay ways of speaking (Holquist, 1990, p. 24). Nursing experience was frequently subverted, as dialogue concerning a complex theory of bacterial translocation was foregrounded. This was an important finding as it stressed how more than one viewpoint concerning oral care was asserted in the practice setting. I learned that written and spoken language in the practice setting is not benign. It is a resource that comes with the predetermined intentions of others. As an internal polemic, it is socially powerful in asserting what is visible and important in nursing.
As these complex relations began to open up through observation and interview, it became clear that nurses had pragmatic concerns about the activation of evidence-based ideals in oral care. They argued that the notion of standard or “routine practices” was a conceptual hazard. Entering into mouths as part of a standardized physical assessment required experience; routines often generated a discomforting or unpredictable response in patients. Similarly, oral hygiene could provoke complex problems such as vomiting and aspiration. In this regard the “C of ABC was not cleaning”. How to ensure that routine hygiene did not dislodge the breathing tube or threaten hemodynamic stability was tacit knowledge. In practice this meant that good oral care was predicated on the availability of experienced nurses and particular conditions; more than one person was sometimes necessary for safe care.

In meeting the goals of evidence-based oral care, nurses had to address vexing problems such as “neuro breath” and “biting down”. Odours and closed mouths spoke of bacteria, pathogenicity and unfinished business. Because these issues were not afforded space in the patient record, their textual absence could belie an intricate array of nursing interventions. Despite their importance to patients and nurses, these topics were not the subject of scientific inquiry or discussion amongst the interdisciplinary team. This meant that official categories and terms were not available to validate these material experiences. Notwithstanding the fact that neuro breath and oral resistance might exacerbate VAP risk, silences around these issues appeared to lower their importance. This unsettled a larger project of quality and safety, a project that did not address the full range of problems encountered in the care setting.

Nurses explained that the evacuation of excess oral secretions and the application of a pharmaceutical product became the dominant definition of oral hygiene. Because issues such as oral resistance were not accompanied by expertly endorsed solutions, nurses constructed what
Rankin (2009) calls complex workarounds to mitigate physical barriers to mouth care. Nursing innovation in the form of patient coaching and tool creation quietly supported the smooth running of the unit. These practices required additional time and patience as nurses disclosed an extensive assignment to cleaning: tidying the ambiguities of mouths, bodies and the bedside was routinized by the behaviours of others. Nurses were left alone, often with little time, to rectify clutter, disorder and general untidiness. Their own good knowledge alerted me to the fact that cleaning facilitated the optimal functioning of the critical care unit.

In the second results chapter, I undertook a close examination of texts in the critical care unit. The interlocking nature of clinical documents was traced through the transcription efforts of nurses at the bedside. There, nurses figuratively and literally moved established terms and ideas about oral care through a series of documents. The material position of the flowsheet at the bedside and its hierarchical organization systematically lowered the status and visibility of the mouth. In its active use, the flowsheet was a binding document, as many clinicians depended on the timely inscription work of nurses to inform clinical decision-making. However, a high level of abstraction detracted from a holistic account of the patient. The discovery of ancillary forms and notes showed how clinicians struggled to maintain a coherent account. Potential gaps in communication required nurses to occasionally bypass texts in order to verbally convey detailed problems in oral care.

In the final results chapter, a network of infection surveillance came to light through the introduction of multiple actors and their documentary accountabilities. The ideals of the OCCTS proposed an expanded jurisdiction and vision for critical care. In this schema, the collection and reporting of a minimum data set facilitated an early warning system for problems of patient capacity. Despite their direct role in actualizing this vision, nurses were not visible in the
conceptual model of transformed critical care services. Through observation and interview, tensions became apparent, as nurses were intimately involved in two competing forms of hygiene: patient and data cleaning. Therein, the ideals of the OCCTS were not recognizably informed by nursing experience, and the fidelity of health services metrics was seriously questioned. Controversy surrounding VAP surveillance effectively eclipsed the work of oral care, and health leaders acknowledged a lack of familiarity with nursing work.

**Major findings**

This research project was designed to pay close attention to what nurses know. This aligns with the work of other nursing scholars who have chosen to begin inquiry in the activities and practices of the work setting (Allen, 2007; Campbell, 2006; Diamond, 1992; Rankin, 2009). In contrast to a project beginning in the ideals of practice, this IE foregrounds the skills and practices that nurses actively employ. This is important, as inquiry needs to be grounded in more than a refined set of analytic categories (Lawler, 1991). Nursing work entails bodily problems. These are issues that require pragmatic solutions. Because much of nursing practice is sensitive or taboo in nature, nurses may not think to explain what they are doing until someone asks them to do so. Participant observation has been particularly important in understanding what is typically undervalued and invisible in the high-tech world of critical care nursing.

The discovery of a new discourse of oral hygiene and an expansive accountability circuit has been possible because of a close examination of texts. In this case, my analysis aligns with prior work that describes how standardized approaches in health care depend upon distributed work (McCoy, 2007; Mykhalovskiy, 2001; Nettleton, 1991). For example, Timmermans and Berg (1997, p. 281) note how the “ABC of resuscitation” has penetrated medical and lay ranks through textual protocols and language. Activating the concepts of patient resuscitation requires
the assignment of actual work to people. It also necessitates workarounds, reminders and corrections to make things happen as intended. However, all of this effort is “transformed and displaced” by a set of interlocking texts (Berg, 1997, p. 418). The abstraction inherent in a chain of clinical documentation obscures the fact that social coordination “feeds off existing infrastructures and power relationships” (Timmermans & Berg, 1997, p. 295). In other words, pre-existing professional and gender hierarchies are maintained in the accomplishment of standardized VAP prevention. I contend that this increases the complexities of nursing practice as it limits views to what nurses are doing in the critical care unit.

With the above ideas taken together, I must acknowledge that this research has invigorated my interest and value in nursing. The manner in which nurses sensitively address the oral care needs of their patients is extremely impressive. In this regard, the nature of oral care in intubated and mechanically ventilated adults merits special attention in my findings. Caring for patients with or at risk of malodorous, exudative and ulcerated oral cavities requires nurses to remain close to suffering individuals. In a post-SARS workplace, this demands proximity to bodily substances commonly associated with contamination, disease and death. As a patient population that cannot speak, the intubated adult is dependent on nurses to maintain this position; nurses are the only clinicians who regularly intervene in these complex problems. Reading the patients’ responses to treatment and translating these observations for others are a formidable task. The assignment to these intersecting roles contributes to an exceedingly complex practice.

I contend that the ongoing disappearance of nursing hygiene in the critical care unit is a significant problem. The active nature of this practice resists simple categorization. In my ethnographic fieldwork I focused on specific sites or contexts in which this problem persists. I demonstrated how bodily care is concealed in multiple ways: behind curtains, in locked units and
through abstract documentary categories. In these ways, the essential transfer of associated skills and techniques, between nurses, is not visible. A hidden curriculum precludes awareness of gaps in nursing education. The regimented routines to which nurses are socialized further conceal the fluid nature of oral work. For example, the incorporation of the oral space into assessments and other mundane activities (e.g., turning patients in bed) may further inhibit awareness of the frequency and complexity of this effort. Finally, the ongoing correction of unhygienic or offensive bodily states is less discussed and valued for its contribution to the smooth functioning of the critical care unit.

Since I began this study, guidelines for the prevention of critical illness have changed. For example, international consensus guidelines for the prevention of sepsis have expanded their recommendations for oral hygiene. Dellinger and colleagues (2013, p. 589) now endorse two forms of oral hygiene to prevent sepsis originating in the respiratory track (e.g., pneumonia): 1) oral chlorhexidine gluconate to reduce the risk of VAP in patients with severe sepsis; and 2) selective oral decontamination (SOD) and selective digestive tract decontamination (SDD) to reduce the incidence of VAP. The latter recommendation is associated with a significant reduction of infection and mortality (de Smet et al., 2009). In SOD, topical antibiotic pastes are applied to the oropharynx. SDD typically combines SOD with enteral non-absorbable antimicrobial agents alongside intravenous administration of antibiotics during the first four days of intensive care.

If evidence-informed treatments cannot be properly applied in practice, they will not be effective. This is a simple yet critical point. The movement towards an expanded repertoire of preventative oral regimens, as noted in SDD, places the findings of this inquiry in an important light. Previous studies have reported nurses’ perceptions that oral care is difficult and unpleasant
(Binkley et al., 2004; Allen Furr et al., 2004). More recently, nurses have reported that more than 56% of the patients receiving SOD/SDD found the oral component “annoying” and 36% of patients “refused to cooperate” (Jongerden et al., 2010, p. 2). This suggests that more work needs to be done to understand nursing access to the oral space, how to best apply these treatments, in addition to patient responses to these varied prescriptions. Further, the expanded repertoire of preventative oral care means that the labour intensity of oral chlorhexidine, SOD and SDD must be investigated.

**The problem of comfort**

The lack of investigation around oral comfort or pain in a contemporary discourse of oral hygiene is an important finding. My analysis joins an enduring nursing conversation concerned with empirical abstraction and a resultant fragmentation of the body (Lawler, 1991; Malone, 2003; McGibbon et al., 2010; Sandelowski, 2002a, 2002b). In practice, caring for the mouth means facing the person in a vulnerable state. In their proximal role, nurses repeatedly encounter the pain, fear and communication incapacities of the individual under care. In considering the predicaments that patients and nurses confront, international consensus guidelines helpfully note how “adult medical, surgical, and trauma ICU patients routinely experience pain, both at rest and with routine ICU care” (Barr et al., 2013, p. 264). However, a high level of documentary abstraction elides these active experiences, as it provides little space in which to acknowledge these actualities. Pain intensity during routine procedures such as suctioning and turning is considered high (Puntillo et al., 2004). The serious implications of oropharyngeal pain for ventilator weaning (Payen, Bosson, Chanques, Mantz & Labarere, 2009), in addition to other important outcomes, remain subjugated knowledge.
As suggested by Nettleton (1988), the mouth remains separated from the biomedical body. Knowledge of the mouth’s social and physiological contributions to systemic health has only recently expanded. As a sensitive portal to the inner body, the mouth plays a unique role in providing access for intubation and mechanical ventilation. Despite knowledge of many discomforts that proceed during treatment, space allotted to discussion of these problems has significantly contracted in the critical care nursing literature (Dale et al., 2012). As a work of repair, this investigation has sought to bring the mouth back into the critically ill body. This is essential to understanding what nurses are being asked to do in their everyday/night work.

**An accountability circuit of infection prevention**

Through observation and interview, I have been able to trace the ideals of the OCCTS through a new accountability circuit. In following the texts and tensions that circulate amongst clinicians, managers and health leaders, I have demonstrated how multiple stakeholders are enrolled in a project that foregrounds health services metrics as an objective method of performance evaluation. Duly influenced by the SARS crisis in Ontario, the OCCTS hooks oral care into a framework that prioritizes infection prevention. Nurses and other clinicians must adhere to strategies that limit problems contributing to high costs and prolonged ICU length of stay. By endorsing oral care as one part of a VAP prevention program, the CCS has linked 201 ICUs across the province in an ambitious effort to improve bedflow and reduce the demand for critical care services.

Located on the frontlines of this accountability circuit, critical care nurses significantly contribute to the operationalization of a transformative agenda. Clinical nursing documentation facilitates interdisciplinary communication in addition to acting as an essential resource for VAP diagnosis and screening. In the study setting, nurses are central to the collection of a minimum
data set reporting VAP criteria defined by the CCS. This effectively facilitates real-time data analysis of province-wide ICU resource use in addition to forecasting models for future planning. Despite their pivotal role, nurses are barely visible in the OCCTS model. In light of the lessons emerging from the SARS crisis in Ontario, the low visibility and leadership of nurses in the OCCTS contradicts important post-SARS recommendations for greater nursing inclusion in health care planning (RNAO, 2003). My analysis argues that the systematic exclusion of frontline nurses in the OCCTS leadership model perpetuates a dangerous situation. Unlike their intensivist colleagues, nurses lack an equal role in influencing the unfolding agenda.

A hidden curriculum

The skills and knowledge that nurses employ in oral hygiene for intubated patients depend on a hidden curriculum. Although credentialing is now standardized through critical care nursing educational programs in Ontario, it is clear that nurses do not receive special training in oral care. This finding is mirrored in recent research examining the importance of informal learning in medical education (Mykhalovskiy & Farrell, 2004). Further, this confirms previous research findings that speak to gaps in the oral care content of nursing programs and textbooks (Jablonski, 2012). A lack of formal instruction in the tools and techniques of advanced oral care means the nurse must learn through informal social channels. I have shown how nurses rely upon informal mentorship that includes instruction in innovative approaches and tools. Nurses learn how manual dexterity, coaching and lip-reading are necessary to the accomplishment of a procedure that patients might otherwise decline. The inversion of social norms in this instance is important, as nurses may be required to bypass propriety and push across a sensitive margin.

Despite the discomfort that patients exhibit during oral intervention, critical care nurses are now encouraged to look “beyond comfort” in the care of mechanically ventilated adults
(Berry & Davidson, 2006, p. 318). This suggests that visible oral problems that devolve from the endotracheal tube and its securement devices are not their top priority. A socially organized view to infection prevention mandates oral decontamination as a “critical” act in the prevention of VAP (Berry & Davidson, 2006, p. 319). This turn away from the patient proposes an outside-in orientation that pushes nurses out of their temporal-spatial location (Malone, 2003). Rather than have the patient indicate the quality of a treatment, external experts are now the arbiters of effective care. In other words, nurses are now being asked to align their work with managerial goals (Rankin, 2009). This means that nursing must also ‘nurse’ VAP rates. In placing their concern at a higher level, nurses are being asked to reconceptualize care as something separate from the immediate patient encounter (Purkis & Bjonsdottir, 2006).

In addition to the above shift in practice, a significant reorganization of nursing activity has also extended beyond the bedside. In the course of my investigation, I discovered how other nurses, such as APNs, managers and infection control nurses, were required to learn new practices. In a parallel move with bedside nurses, they had to teach themselves how to proceed within a new circuit of accountability. Despite extensive graduate education and clinical experience, they still were required to learn how to report directly to a government office. As set out by the CCS, new textual obligations included data collection, data verification and database cleaning. As maneuvers more commonly ascribed to quantitative research methods, nurses in direct practice learned the procedures and pitfalls of these accountabilities.

The importance of discourse

My empirical observations show that nurses have exquisitely detailed knowledge of how and when to enter into a patient’s oral space. In this case, language embedded in activity is situated and context dependent. Because the intricacy of oral care is not suitably recognized in the critical
care nursing literature, a disjuncture or rift appears between ‘oral hygiene’ and the active practice of ‘mouth care’. I discovered how the latter term prevails in the study setting. This suggests a distance between scientific concepts and the activities that nurses perform.

I contend that nursing science has neglected to acknowledge how nurses actually speak and communicate patient findings outside of documentary forms. In employing a narrowing field of discursive categories, the critical care nursing literature has also failed to illuminate what nurses are doing in the mouths of patients. What I am calling curtailing (e.g., reassessing) (Lomborg & Kirkevold, 2005), coaching (e.g., talking the patient through care) and lip-reading (Happ et al., 2011) are not suitably identified or empirically investigated in the nursing literature. Similarly, the skilled handling (or creation) of tools to open mouths and clean is not addressed. Despite this gap, nurses employ these pragmatic solutions to the problems they encounter every day.

Language circulating in the nursing literature asserts that oral care is a ‘basic’ nursing task. In contrast, I have shown that this is not the case. Inadequate or insufficient language is available to acknowledge a variety of oral problems. For example, descriptions of what I am calling ‘oral resistance’ are difficult to find in the critical care nursing literature. In its active encounter, nurses frequently called this ‘biting’ or ‘biting down’ on the endotracheal tube. Other patient care fields have only recently begun to empirically study this problem. For example, oral sensitivity (e.g., resistance to toothbrushing) is discussed as a barrier to overall oral health and well-being in children with autism spectrum disorder (Stein, Polido & Cermak, 2012). Similarly, gastrointestinal disorders requiring reduced oral intake may lead to “oral aversion” in children (Byars, et al., 2003, p. 473). Finally, resistance to oral care in older adults with dementia has been well documented (Jablonski et al., 2011). In labeling and studying this problem, authors
outside critical care have brought this reality forward in order to seek pragmatic nursing solutions.

With the above ideas in mind, it is clear that a current definition of oral hygiene in the critical care literature is inadequate. Nurses’ unique responsibility to the oral space requires an expanded definition to accommodate the realities that are embedded in the practice setting. This finding underscores the importance of discourse in hygiene (Brown, Crawford, Nerlich & Koteyko, 2008; Grant, Giddings & Beale, 2005). As Smith (2005) argues, discourse is essential to social coordination. It regulates reading, writing and the observation of events. In this sense, it constrains what is visible as expert knowledge in nursing.

The accomplishment of texts

I have shown how texts coordinate and constrain what is visible in mouth care. Similarly, Rankin (2009) and Allen (2004) speak to the problem of texts in the nursing environment, arguing that in spite of their instrumental use in direct patient care, texts are much more complex than previously acknowledged. In this study, I have shown how texts form a hybrid approach to patient care. Therein, nurses’ work of inscription is harnessed towards clinical and administrative ends. Because particular ‘facts’ can be mobilized from the patient encounter, it is possible to repeatedly circulate a static message concerning clinical goals. The narrow range of interests and practices propelled forward relates to what Smith (1990, p. 139) calls an “ideological circle”. In tracing the circulation of patient data from the bedside to the boardroom, I have showed how VAP data moves along a circular pathway. As a formal schema, texts reassemble and communicate what is considered ideal in practice. Despite the limits of this approach, the schema itself is not called into question.
The findings from this study join related empirical work in the social sciences to point out how ideological messages throw into sharp relief the tensions they seek to resolve (Mykhalovskiy et al., 2008). In this sense, failure or transgression is mobilized. For example, Mykhalovskiy (2003) discusses how the neglect of authorized texts positions certain clinicians as poor adherents to evidentiary ways of knowing. I too have discussed how critical care nurses have fallen into this category (Dale et al., 2012). In this case, the tensions that follow texts in nursing are productive in mobilizing an anxiety about transgression. I have demonstrated how clinicians are subject to a negative reading of their work in VAP reports. Although nurses are central to the generation of managerial reports, they are not well served by a reading of this work. Textual technologies conceal how surveillance data is produced in addition to the juncture between nursing and managerial roles.

As I examined the documents that nurses had to complete each shift (e.g., flowsheet and surveillance tools), I discovered that the institutional utility of oral hygiene is found in its conceptual form; these documents did not improve the active care delivery process. Nurses confirmed Smith’s (2005) assertion that they are written out of the official account. In their absence, nouns such as ‘chlorhexidine’ took on agency; they exerted an active presence and reduced the need for others to look into the oral space. However, nurses had concerns regarding this arrangement. In this case, nurses were aware that their work was under-examined and not given its due credit. They raised concerns about a lack of pragmatic detail in evidence-informed guidelines and interrogated the fidelity of published VAP rates.

A gendered space
It is important to emphasize that the majority of individuals performing oral care in the critical care unit are women. In the study site, women are at work teaching, trouble-shooting and executing various forms of mouth care. The same women are enrolled in a large-scale project of data collection and transfer that indirectly comments on the efficacy of their work. In both instances, they revealed how this effort mirrored a domestic duty to tidy the anxieties that follow dirt and illness. Maintaining an orderly patient, bedsapce, flowsheet and workflow was a high priority, although the location of gender in this accountability schema has been less studied to date.

Twigg at al. (2011) note that nursing has been particularly coy about the realities of gender in an enduring assignment to bodywork. The social and spatial arrangement of gender in clinical work offers a unique opportunity to reconsider the roles of men and women in hygienic care (Isaksen, 2002). I have noted an enduring assumption that hygiene is intrinsic to women’s nature. However, female nurses disclosed discomforting experiences in learning body care. In this case, many aspects of this work did not feel natural or normal. Similarly, men experienced a dissonance between gendered expectations and the requirement to clean exudative bodies. They found their training experiences to have limited their exposure to hygienic work. Therein, they felt ill prepared to do this work. These varied experiences are not well described in the critical care literature.

These findings suggest that inequitable training opportunities in hygiene are articulated to gendered expectations and norms. Women are expected to pick up the slack and correct anxieties around men cleaning bodies. Moreover, women are expected to overcome uneven training opportunities. For example, standardized content in critical care nursing training within the province of Ontario does not attend to practice development in oral care. This absence is a key
issue as it reinforces an underestimation of the technical difficulties encountered in practice. Entrenched disregard for the practical completion of bodily hygiene may limit how and when nurses proceed with oral care. Lack of discussion around tools may further diminish critical discussion concerning appropriate or essential resources. These combined gaps may exacerbate patient and nursing vulnerability given the current emphasis on VAP reduction.

A problem of method

Latimer (2003) suggests that nursing has long suffered from accusations of methodological naiveté. In research investigating what nurses actually do, this problem appears to persist. Naturalistic inquiry (observation, interview and artifact analysis) has suffered a withering critique given its so-called inability to provide answers or solutions to large-scale problems. Perhaps this is due to its interest in experience. Its scale and content may be seen as ambiguous or messy. Further, the epistemological status of the individual is often considered biased and therefore untrustworthy (Campbell, 1998). Without careful empirical linkage, it can be difficult to reconcile the particular with general approaches to health care improvement. In turn, it has become easier to disembody and dematerialize these experiences.

As it pertains to the critical care unit, qualitative or ethnographic inquiry has not received adequate attention. My literature review uncovered only two qualitative studies to date addressing oral care. In this case, both studies took nurses as the object of analysis. I contend that an imbalance in research methodology has posed limitations. The intensification of quantitative methods has not resolved a purported problem of uneven oral care in the critical care unit. Although researchers are seeking a ‘gold standard’ for oral hygiene in critical care, this suggests a generalizing approach that may not match the diverse needs of all patients or populations. The undisclosed needs of real patients places nursing practice in a liminal space.
In mapping and disclosing how oral care is organized in the critical care unit, it became apparent to me that my attention was organized by a larger set of relations. Foremost in this matter is attention to objective appraisal (Mykhalovskiy et al., 2008). The VAP reports I have disclosed are particularly powerful forms of accountability relations. Given the predominance of objective, evaluative approaches in health care today, I concur with Kitson’s (2010) assertion that nurses are at risk of losing control of their practice. The rise of epidemiological data, as a higher form of expertise, is credited with diminished attention to the patient and a necessary dexterity in practice (Goldenberg, 2006; Lambert, 2006). Poor attention to active care delivery has undermined nurses’ abilities to talk to one another about the possibilities for practice (Choiniere, 2011). In this regard, I have shown how nurses have unanswered questions about oral care technique. The ability to share real problems and articulate solutions is currently hampered by a lack of description.

Given this aforementioned gap, Carl May (2003) asks nurses where they stand in relation to the data. This is an intriguing question and is particularly relevant to an understanding of hygienic activities. Whether nurses’ practice is truly informed by health services research is important to debate. Because nursing is a material practice undertaken in a complex environment, I am arguing that it is essential to make room for a ‘full bodied’ analysis. Understanding how people, texts and activity coalesce requires more than a rational, linear model. Realistic accounts are necessary to counteract misconceptions and pull up variables that may otherwise be invisible. This may be a particularly opportune time to redress an imbalance in research methods. For example, VAP metrics upon which hospitals, insurers and governments base their policies have recently received a blistering critique. Their utility as quality metrics (Klompas, 2012) and markers of mortality (Baekert et al., 2011; Scales, 2011) is now being
reconsidered. Central to these arguments is the inability of metrics to explain what is happening in practice.

Given the limitations of health services metrics, much work remains to be done to explore the experiences of critical care nurses. What emerged in this study are the tensions and contradictions that follow standardized approaches to practice. A detached and objective approach to health care evaluation imposes new work and accountabilities. However, the manner in which this unfolds depends upon the social location or status of clinicians and stakeholders in the critical care arena. How other aspects of patient care (for example, bathing, toileting and feeding) are being coordinated and reshaped by textual forms of knowledge requires explication. Oral care is only one area that has been significantly transformed by a medico-managerial framework.

**Strengths and limitations**

This inquiry joins the emergence of new voices asking important questions about knowledge and practice in matters of health (for example see Bisaillon, 2013). Its strength is derived from its innovative approach to a complex problem. It does so in exploring the tensions and contradictions that emerge when official claims are compared to the experiences and knowledge of health workers (Bisaillon & Rankin, 2013; Mykhalovskiy et al., 2008). In identifying the social relations of oral hygiene, I have been able to show how nurses are employed in conflicting ways. I contend that using restricted nursing resources in the production of health services metrics is a serious problem. A lack of transparency in this matter makes nursing vulnerable and subject to inequitable appraisal. In this light, this study has successfully foregrounded the experiences that devolve from conceptual models and their textual constituents.
One of the strengths that I wish to highlight is the unique contribution this study makes to IE. In emphasizing a mapping of texts and social organization, Smith (2005) asserts that people may be not fully aware of the forces coordinating consciousness and activity. They may be blind to the relations that “extend outside the scope of the everyday world and are not discoverable within it” (Smith, 1987, p. 152). In this case, I would agree that nurses might not be aware of the specific people and activities outside the ICU that link up with their work. However, I would assert that many nurses and interdisciplinary participants are well aware of the forces and concepts circulating through their activities. In fact, they are able to point these out as a source of tension and conflict in their work. Further, they are able to disclose different capacities to reposition themselves in the face of these forces. For example, intensivists could effectively discredit health services metrics. However, holding the same opinion as the intensivists did not deliver nurses from the organizational forces coordinating their time and energies. Nurses expressed that they were not well positioned to change the current arrangements.

Before proceeding into a discussion of recommendations for nursing education, practice and research, it is important to consider the limitations of this study. Foremost in this matter is the fact that I did not focus on the experiences and knowledge of intubated and mechanically ventilated patients. In requesting recommendations for future study informants, nursing and interdisciplinary participants routinely inquired whether I was interviewing patients. Given my declared interest in nursing, the omission of patients was a choice I made in the design of this study. My decision to pursue an IE was informed by my own experiences providing mouth care for intubated patients. My lack of experience being critically ill may limit my ability to pursue this perspective effectively. However, I would argue that this does not eliminate the opportunity to do so in the future. This is a critical line of inquiry and one that requires considerable thought given the communicational incapacies associated with serious illness.
With participant sampling in mind, it is important to acknowledge that this is a single-centre study. Ethically permissible methods of participant recruitment in the study site included emails, posters, point-of-care in-services and participant recommendations. These methods may have posed limitations in reaching eligible participants. For example, some nurses may not read their email regularly and this would influence the opportunity to participate and share their experiences. Those who are not interested in research participation may have especially important insights about evidentiary forms of knowledge and the implications for social organization. Furthermore, greater diversity of experience may have been established had I recruited from different hospitals. With the above points taken together, my methods may have limited data collection to participants who had similar experiences in oral care.

In IE, the recommended sequence of moving from what Bisaillon and Rankin (2013) call standpoint informants (e.g., nurses) to extra-local informants (e.g., interdisciplinary participants) requires a move away from the active work setting. I must acknowledge that the nature of oral care is particularly fascinating in the setting of critical illness. It would not be unreasonable to spend a greater duration of time observing and describing mouths and the interventions that nurses employ in practice. Thus, IE’s requisite analytic sequence moves the institutional ethnographer in a direction that may conflict with nursing interests and obligations to the patient. In my reading of nursing IEs, I have noted a lack of description of the patient body, the physical setting and the activities therein. Departing from the body and its urgent demands for assistance may feel premature for nursing readers, given the limited empirical investigation into the realities of oral hygiene.

As a final point of limitation, Walby (2007) suggests that IE is necessarily complicit in the objectification that it wishes to study. As an alternative sociology, it attempts to push back
against the nominalization of people, activity and a narrow view to expert knowledge. However, Walby asserts that institutional ethnographers draw almost exclusively from Smith’s writing and direction. Therein, he alludes to a standardizing frame that may limit the expansion of IE. Bisaillon (2012) concurs and suggests a tendency towards discursive and methodological orthodoxy may be avoided through a renewed emphasis on novel ethnographic methods. In recommending observational methods, Diamond (2006) encourages us to be mindful of the circumstances and manner in which people are using their bodies at work. I would extend consideration of new approaches to the study of artifacts (for example, tools or technology) that people employ every day. I am suggesting that tools can be helpful in uncovering the “interpenetration of the present and immediate with the unknown elsewhere” (Smith, 2005, p. 41). Tools can be empirically traced to their source. Further, they may tell us of the institutional relations that shape local experiences and events.

**Recommendations**

**Education**

I have shown how oral care is dependent on each nurse’s own good knowledge. Nurses bring their own life experiences and skills to bear on this effort. In this case, personal experience in oral care merges with informal mentoring within the unit. Despite this beneficial combination of experiential knowledge, I have underscored a mismatch between nursing curricula and the expectations of the practice setting. Making space for experiential practice knowledge is critical. What is considered valid and reliable evidence today is quite limited. An overreliance on numerical forms of knowledge means that bodywork and its practitioners are inappropriately held back.
Today, nurses must employ a variety of oral care strategies to combat VAP. However, they must also respond to the immediate comfort needs of patients. Paradoxically, a special program to generously share and practice these skilled approaches does not exist in critical care nursing education. I contend that this gap contributes to an inequitable assignment given the lack of advanced preparation for the realities of practice. Because nurses are the only clinical group to consistently perform oral care, they are not well supported to fulfill the competing demands of practice. Placing experiential knowledge in balance with biomedical science is an important target.

In this study, nurses disclosed a gap between their official training and the shocking realities of practice. This contributes to a physical and temporal distance between the enactment of oral care and its expert description. Learning how to provide oral care requires realistic discussion and supportive preparation. This might include frank discussion about the broad set of expectation placed upon nursing. Pressure to prevent or resolve individual as well as population health problems should be transparent. **Recommendation:** There is an urgent need to reformulate critical care nursing education in oral hygiene. The provision of comfort and the prevention of injury would benefit from a generous training program in university and community college programs. I strongly recommend that nurses, educators, administrators and researchers collaborate with the MOHLTC and the CCS to develop new curricular goals that incorporate experiential practice knowledge.

Previous research has questioned the content of oral hygiene education in nursing. For example, Turner and Lawler (1999) note that instructional nursing texts often describe oral care in a decontextualized manner. Further, accompanying language and images have changed very little over the last one hundred years. With this lack of realistic description in mind, recent
research asserts that textbooks hold little value for nurses (Thompson et al., 2001), and that their content is insufficient (Jablonski, 2012).

As the adult ICU population continues to evolve, the availability of practical description will become even more important. For example, most patients today are dentate. The retention of teeth (or implants) is associated with a higher proportion of oral pathogens and respiratory infection when compared to edentulous adults (Paju & Scannapieco, 2007). The needs and challenges posed by a mouth containing teeth are therefore more complex. Furthermore, the increasing prevalence of dementia and other neurocognitive disorders in the ageing population means that many patients will be unable to cooperate during oral intervention. Without adequate support, both nurses and patients may be vulnerable to what Jablonski and colleagues (2011, p. 77) call “care-resistant behaviours”.

Implementation studies seeking to reduce VAP may perpetuate the above mentioned problems as they do not foreground the perspective of nurses. They simply allude to educational content rather than providing realistic images or detailed descriptions of oral care. These aforementioned limitations pose a barrier to practice enhancement. Further, these issues sustain the inequitable position of the nursing profession. Without adequate resources, nurses may be ill prepared to meet the demands posed by patients’ bodies as well as the practice environment. As a point of departure, it is important to understand what resources are currently allotted to oral hygiene education in Canada. **Recommendation:** A survey assessing the state of oral care content in Canadian nursing educational institutions is warranted. This may include a sample of recent graduates to confirm their experiences.
Practice

Despite assertions that nurses are becoming equal partners in health care improvement (IOM, 2011), clinicians demonstrate a lack of control over their own nursing practice. New accountabilities have been assigned in oral care, documentation and auditing. It is important to identify and reduce the burden of these competing clinical priorities. In describing the ABCs of critical care, nurses pointed to a sedimented hierarchy of cardio-respiratory priorities. With this in mind, nurses were particularly clear in explaining that the patient and context are in constant flux. Given that the practice setting is not plastic to their will, this suggests a limit. In other words, the uncertainties of the critical care unit challenge expectations to perform routine or timed acts of care.

Despite the reality of a practice context in constant flux, there does not appear to be a transparent reporting of nursing workload or patient acuity at a higher level. By this I mean a fair and balanced use of managerial tools to transparently report on the practice context. Without this information, frontline nurses, patients and families will be hard pressed to argue for additional nursing resources during periods of intensified activity. Further, important differences between units, patients and staffing needs may go unnoticed. Therein, nurses may continue to experience tremendous barriers, and administrators may be failing to support endorsed practices. In other words, administrators may not be held accountable for the provision of adequate resources.

The SARS pandemic reinforced the critical role of nursing resources in the frontlines of care. Bypassing nursing observation, expertise and recommendations proved lethal during the SARS pandemic (RNAO, 2003). My analysis of the OCCTS model suggests that nursing expertise is similarly displaced. In sequence, I contend that the hierarchical organization of communication channels has not been redressed. In an opposite move, hierarchy and status are
further entrenched in medical and managerial roles. The OCCTS model appears to place a particular burden of responsibility on the intensivist. However, I have shown how intensivists have limited time to pay attention to granular detail at the point of care. Moreover, they do not hold expertise in oral health. Opportunities to discuss oral problems and their prevention are therefore constrained. **Recommendation:** Given that the influence of the practice environment has not been well examined in nurse-delivered oral care, it may be helpful to refocus and rebalance reporting of health services metrics. I strongly urge consideration of process indicators to measure the availability of adequate human health resources. Levels of nursing intensity and patient acuity should be transparent metrics reported across the health system. This would shift focus towards the responsibility of hospital and government administrators to provide supportive resources for patient care.

The ongoing production of patient data is a highly regulated nursing duty. However, the opportunity to favourably identify patient problems and nursing interventions is currently restricted. In this study, I have shown how nursing documentation facilitates the work of other clinicians and administrators. The manner in which nurses experience this expectation and its implication for bodywork is under-examined. Enhancing opportunities to document oral care in the flowsheet, with the addition of special oral assessment scales, is one option. However, this may simply increase nursing work at the point of care. The issue of complexity compression related to documentary accountabilities requires more thought (Krichbaum et al., 2007). For example, computerized charting systems may release nurses from time spent documenting variables for clinicians and administrators. However, technology may also exacerbate current conditions. The current thrust of health care improvement now leverages the intensified use of computerized charting systems. Investigating these realities in a context sensitive manner is
essential. **Recommendations:** I strongly recommend that nurses, educators, administrators and researchers collaborate with the MOHLTC and the CCS to investigate the manner in which nursing time is organized by computerized and traditional paper-based patient care records. The ability of these tools to document a range of oral problems, nursing interventions and related patient acuity should also be considered.

**Research**

A keen point for researchers to take away is that hygiene is elusive. The manner in which it is executed coincides with its concealment. Curtains, timing and textual documentation remove people and activity. Thus, it is important to note the unique benefits of observational research. Given the added communicational and cognitive incapacities of patients in critical illness, novel approaches to the investigation of oral care are crucial. Approaches that reinsert the body and the social context are essential. Although nurses name patient oral access and patient resistance as priority care problems, the critical care literature has little to say on this matter. Rectifying this gap is important.

As it pertains to a wide variety of oral care interventions, real patient responses ranging between extremes of cooperation and resistance needs to be understood in relation to the patients exhibiting these behaviours. Visual approaches may be highly effective in foregrounding these events and may function as communication tools in research, training and dialogue around the importance of nursing resources. **Recommendation:** I recommend prospective observational research to bring forward what nurses and patients are experiencing in practice. Attention to a variety of adult patients and acuity states is important. Patient responses may be documented
innovatively using visual methods (e.g., photography), standardized observational tools and patient/provider interviews as a form of data triangulation.

The problem of “neuro breath” as it is experienced in the setting of brain injury is particularly interesting. Nurses describe not only a distinct odour but also copious secretions and a high degree of oral resistance in this population. Empirical documentation and scientific validation of these phenomena may open new avenues of research. What is causing these problems and what they imply for VAP require explication. Recommendation: Prospective observational research for the sub-population of critically ill brain injured patients is warranted. Substantiating problems with scientific description and theory is important. Whether these patients require additional or unique oral intervention requires investigation.

The long-term repercussions of critical illness have only recently been addressed in a longitudinal format (for example, see Herridge et al., 2011). Moving forward, it may be helpful to understand how oral health may be implicated in recovery or palliation following critical care. Shifting the perspective to the patient and family may be particularly helpful. For example, different illnesses and treatment exposures in the ICU may pose different issues for patients and their caregivers. What happens during a patient’s stay in the critical care unit may have serious consequences for a patient’s future quality of life.

Despite the importance of oral prevention, health care dollars are not allocated to preventative or corrective dental care in Ontario as well as many other jurisdictions. Therefore, experts argue that oral care should be incorporated into the work of non-dental health professionals (The Lancet, 2009). Good oral health has logical implications for recovery from serious illness, as it is necessary for the consumption of a proper diet, respiration, communication and social interaction. Oral health following discharge from the critical care unit
is not well described in the nursing or medical literature. **Recommendation:** I strongly recommend prospective observational research investigating patients’ oral health following ICU discharge. The level of nursing or family assistance required and the ability of patients to resume their own oral care needs to be understood. Professional dental care intervention and costs for survivors of critical illness must be investigated.

In my review of the literature, I noted how nurses were subject to negative reviews based on research describing low use of toothbrushes in practice. An assumption embedded in this assertion is that nurses have control over the tools available in practice. In general, the combination of toothbrushing and swabbing is thought to offer a higher standard of care to intubated patients (Roberts & Moule, 2011). However, a recent systematic review argues that toothbrushing does not reduce the incidence of VAP. Moreover, it does not reduce related patient mortality or ICU length of stay (Alhazzani, Smith, Muscedere, Medd & Cook, 2013).

Given that a ‘gold standard’ of oral care does not exist in the critical care literature, the constitution of oral care is still evolving. Unfortunately, this means that nurses will remain vulnerable to ongoing critique in their capacity to mitigate oral health problems. Further, an erroneous assumption that standardized tools exist in all units may be made. In this study, nurses expressed concern about the design and quality of oral care resources. It is important to understand what oral care tools are currently available to nurses, their purchasing arrangements, and the overall investment in dental care resources across a variety of critical care settings. **Recommendation:** I recommend that nurses, managers, health researchers and dental care experts join forces to investigate the availability, costs and quality of oral care tools in critical care units in Canada.
Concluding remarks

In paying close attention to the work and knowledge of nurses, this study disrupts assumptions that oral care for intubated and mechanically ventilated patients is a basic task. The discursive and conceptual ways in which this effort is understood severely limits an understanding of nursing’s social assignment in the critical care unit. In this study, I have shown how nurses use their bodies in unique ways to preserve the integrity of the patient. However, nurses also use their bodies to protect the public from the threat of serious infection. The intersection of different social institutions in this work has shown how the nature of this task is underestimated. Evidence-informed guidelines and managerial technologies of audit produce a distance from this material work; they act as a metaphorical curtain around the patient and nurse. I have sought to pull this curtain back.

In Ontario, critical care nurses are under pressure to execute particular forms of care to preserve the patient and health care system. I have paid close attention to the manner in which a new set of accountability relations enters into the practice setting to reorganize nursing work. As critical care nurses are the only clinicians performing regular oral care, the diversion of expert nurses to surveillance duties uncovers a serious issue. Although it is well intended, the assignment of data collection and reporting duties to a limited pool of nurses may not serve the best interests of patients. I contend that nursing resources would be better directed towards the active treatment of the patient. New forms of accountability work such as infection surveillance may act as a countervailing force in nursing goals.

In this study, I have questioned what is considered evidence and its use. Contemporary interest in epidemiological surveillance and pandemic prevention has infused the clinical setting. Language and focus consistently reorient nurses towards an outside-in appraisal of care.
Notwithstanding the merits of practice evaluation, its contemporary form sidesteps what is really happening at the point of care. Moreover, it does not enable the critical appraisal of managerial structures. This study followed oral care as one example of a problematic disappearance. As a counterpoint to assertions that nurses have turned away from the body, I have demonstrated a different problem of neglect. The loss of nursing in epidemiological data precludes a sensitive translation of the patient body and insight into an expert nursing response. Findings of this IE destabilize the idea that an investment in managerial technologies systematically improves care.

I strongly encourage nurses and their interdisciplinary colleagues to consider ideological terms such as ‘evidence-based practice’, ‘care bundles’ and ‘guidelines’. For those active in the creation and distribution of expert texts, it is particularly important to consider the context in which these words and their associated documents operate. Language takes up space and asserts an active presence. Therein, new texts may shift attention and result in unintended consequences as they enter into a complex institutional nexus of gender, health, education and government. As a call to return our attention to the body, I encourage others to take up a context-sensitive approach to nursing inquiry. In lieu of highly individuated views to health problems, future investigation must account for the social and material setting in which patient care is anchored.
A Reflexive Afterword

Although I did not originally plan a reflexive afterword, I now understand that it offers the opportunity to expand upon the circularity of my relationship to the people, events and analysis encountered in these pages. Garfinkel (1967) offers that reflexivity involves recognizing and studying the accomplishments of everyday existence. In my reflexive preface I explored the manner in which expectations in oral hygiene have organized specific practices and experiences in my life. Although oral care may appear to be a mundane set of habitual activities, the circumstances surrounding it are anything but ordinary. The opportunity to speak openly about the intersecting institutions conditioning this work has proven useful. What I previously expressed as an imbalance in voice has shifted over the course of this study as my experiences have joined up with those of other critical care nurses.

The occasion to revisit this original sense of a problematic has be helpful in considering how my own embodied experiences have allowed certain events and issues to come forward. For the majority of this study, I wore corrective orthodontic braces, as my bite was misaligned. At many points, the treatment was physically and socially distressing. In tandem with my prior history of painful dental experiences, this attuned my attention to the active responses of patients and nurses to oral intervention. Similarly, my own troubling relations with dental care experts likely contributed to my discussion with nursing and interdisciplinary participants regarding the work of negotiating events where patient comfort and cooperation are impaired. Although nurses consistently found this to be difficult work, not all interdisciplinary participants shared this opinion. I find this discrepancy particularly informative.
The expansive accountabilities of oral care in my personal life have been characterized by tension, as expectations are often high. Moreover, they continue to evolve. This likely sensitized my attention to the tensions that I have traced alongside a new accountability circuit of infection prevention in critical illness. By this I mean that people do perceive and respond to a variety of pressures in their everyday work. However, in disclosing and mapping these tensions, they have not conveniently dissipated. Instead, a new sense of accountability emerges, in part, from my own personal awareness that the IE project is never really complete. This is only one step in a larger journey. Whereas intersecting imperatives and pressures in practice will continue to call upon clinicians, the challenge I foresee is for me to respond differently. This may require me to speak from a different location.

In my preface, I spoke about the possibility of bringing experiential knowledge into conversation with medico-managerial ways of knowing. In reality, this is not straightforward. Despite this awareness, I know that challenging and expanding the constitution of valid evidence is vitally important for nurses, patients and the health care system. Many researchers have identified the dissonance between description and reality as a crisis of representation. That is to say that research often omits important perspectives and voices. Therein, the task that I now face is how to change the terms and scope of this conversation. Making nursing concerns accessible, important and ‘researchable’ would help in the long-term. However, this is going to require alliances with a wide variety of powerful stakeholders. The risk of not finding collaborators is significant.

This draws me back to the problem of inequity in matters of oral health. Preventative oral care is not globally funded and remains under-investigated. Care resides at the level of the individual and most of this work takes place within the confines of the home. It is in this less
visible site that women have historically been targeted to improve the oral health of families and therefore the larger population. In a similar fashion, I have been able to see how nurses (being primarily women) have been organized to do something similar in the critical care unit. Why illness originating in the oral space is often traced back to the omissions of individuals, and not the conditions of practice, is a curiosity. How the influence of the larger world falls away in these matters continues to astound me. I find this a compelling area to interrogate. Thus, the conversation has only started.

In thinking back to the special invitation I received to consider the field of oral health, I would like to extend a similar message. The research account presented here is a text. Texts carry conversations out of the immediate and into an intertextual space that traverses time and space. Thus, knowledge and experience is invariably evolving as it meets up with new words, voices and various forms of representation. I would like to encourage others to add their voices on this journey.
References


[http://ocp.hul.harvard.edu/contagion/germtheory.html](http://ocp.hul.harvard.edu/contagion/germtheory.html)


## Appendices

### Appendix A Interview Guide

<table>
<thead>
<tr>
<th>Critical Care Nursing Participants</th>
<th>Interdisciplinary Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grand Tour:</strong> Can you take me back to your student nursing days and tell me stories about learning and doing hands-on mouth care?</td>
<td><strong>Grand Tour:</strong> Can you tell me about your role?</td>
</tr>
<tr>
<td><strong>Temporal Questions:</strong> Can you walk me through a typical day in the ICU? Tell me about the opportunities to do mouth care. Do you do mouth care all alone?</td>
<td><strong>Temporal Questions:</strong> Can you tell me about the flow of your work day? How does it begin? How do you know what you need to get done?</td>
</tr>
<tr>
<td>What are patient’s mouths like in the critical care unit? Can you describe particular issues they face?</td>
<td>What can you tell me about mouth care in the critical care unit? How might your role connect to mouth care?</td>
</tr>
<tr>
<td><strong>Text Queries:</strong> How do you know which mouth care practices you need to do for each patient? Are there particular forms you work with? Can I see the forms you have mentioned? Can you walk me through them? Who reads these forms? Where does the information go?</td>
<td><strong>Text Queries:</strong> Are you aware of mouth care through any particular documents or processes? Are there particular forms you work with? Can I see the forms you have mentioned? Can you walk me through them? Who reads these forms? Where does the information go?</td>
</tr>
<tr>
<td>What are the controversies of mouth care?</td>
<td>Are there controversies of mouth care?</td>
</tr>
<tr>
<td>If you could change something about mouth care what would it be? What would make mouth care better?</td>
<td>What would make mouth care better? What would you change?</td>
</tr>
<tr>
<td>Is there anything else I should know or something you would like to talk about?</td>
<td>Is there anything else I should know or something you would like to talk about?</td>
</tr>
</tbody>
</table>
Appendix B Nursing Study Announcement

Staff Notice of Nursing Study

Study Title: Locating Critical Care Nurses in Mouth Care: An Institutional Ethnography
Study Sponsor: The Canadian Institutes of Health Research (CIHR)

My name is Craig Dale. I am a Registered Nurse and PhD student in Nursing. I would like to tell you about a study I am conducting under the supervision of Dr. Jan Angus, of the Lawrence S. Bloomberg Faculty of Nursing at the University of Toronto. The Research Ethics Board at [redacted] has reviewed this study.

Background, and why this study is being done
Many researchers have studied mouth care for critically ill patients. However, surveys have been the predominant method of nursing inquiry. The purpose of this study is to produce a description of mouth care in terms of what it is like for nurses to provide this care for mechanically ventilated adult patients. In other words, what actually happens within nursing work processes that accomplish oral hygiene?

What is an Institutional Ethnographic study?
This type of qualitative research produces a detailed description of work. I am seeking nurses who can help me generate detailed accounts of their work in mouth care by sharing their active experiences and recollections.

In this study, I will not be evaluating the quality, frequency or efficacy of nursing mouth care work. In addition, I will not be collecting patient information or identifiers.

The goals of the study are two-fold. Firstly, I hope that this study will help us better understand the organization of nursing work in mouth care for intubated, mechanically ventilated patients. Secondly, the information you share may help us see links to larger imperatives outside the critical care unit that impact how nurses are able to do their work.

What will I have to do?
- Allow me to join you for a 4-hour buddy-shift when you are assigned to an intubated, mechanically ventilated patient
- Walk me through forms and documents pertaining to your everyday work
- And/or Participate in one 60-minute interview to discuss your work in more detail

Costs and Reimbursements
A coffee coupon will be provided for observation participation. A cash stipend will be paid for the 60-minute interview to allow for travel and meal expenses.

Who do you contact if you have any questions? If you have questions about participating in this study you can contact me – Craig Dale at [416] 998-8604. Alternately, you may contact my PhD supervisor Dr. Jan Angus at [416] 978-0695. If you have any questions about your rights or any ethical issues related to this study you may contact [redacted] Research Ethics Board, at [redacted]
Appendix C Family Notice of Nursing Study

Patient & Family Notice of Nursing Study

Study Title: Locating Critical Care Nurses in Mouth Care: An Institutional Ethnography
Study Sponsor: The Canadian Institutes of Health Research (CIHR)

My name is Craig Dale. I am a Registered Nurse and PhD student in Nursing. I would like to tell you about a study I am conducting under the supervision of Dr. Ian Angus, of the Lawrence S. Bloomberg Faculty of Nursing at the University of Toronto. The Research Ethics Board at [redacted] has reviewed this study.

Background, and why this study is being done
Many researchers have studied mouth care for critically ill patients. However, surveys have been the predominant method of nursing inquiry. The purpose of this study is to produce a description of mouth care in terms of what it is like for nurses to provide this care for mechanically ventilated adult patients. In other words, what actually happens within nursing work processes that accomplish oral hygiene?

What is an Institutional Ethnographic study?
This type of qualitative research produces a detailed description of work. I am seeking nurses who can help me generate detailed accounts of their work in mouth care by sharing their active experiences and recollections.

In this study, I will not be evaluating the quality, frequency or efficacy of nursing mouth care work. In addition, I will not be collecting information about you or your family member.

The goals of the study are two-fold. Firstly, I hope that this study will help us better understand the organization of nursing work in mouth care for intubated, mechanically ventilated patients. Secondly, the information shared may help us see links to larger imperatives outside the critical care unit that impact how nurses are able to do their work.

What will I have to do?
- If a nurse participating in this study is assigned to your family member for care, I will approach you to provide more information.
- I may be at your family member’s room for a 4-hour interval observing and asking the nurse questions about their care.
- You will have the opportunity to ask questions and/or decline my presence at your family member’s bedside. Your preferences will not affect the care your family member receives.

Who do you contact if you have any questions? If you have questions about your rights or any ethical issues related to this study you may contact [redacted] Research Ethics Board, at [redacted]
Appendix D Nursing Work Observation Consent

Nursing Information and Informed Consent Document (Work Observation)

Study Title: Locating Critical Care Nurses in Mouth Care: An Institutional Ethnography

Principal Investigator: Craig Dale RN and PhD Student at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto.

Sponsor: Canadian Institutes of Health Research (CIHR)

You are being asked to consider participating in a research study. Before you give your consent, it is important that you read the following information and ask as many questions as necessary to be sure you understand what you will be asked to do.

Background, and why this study is being done
Many researchers have studied mouth care for critically ill patients. However, surveys have been the predominant method of nursing inquiry. The purpose of this study is to produce a description of mouth care in terms of what it is like for nurses to provide this care for mechanically ventilated adult patients. In other words, what actually happens within nursing work processes that accomplish oral hygiene?

Study Design
This study involves three methods to collect information
1. Nursing work observations in the critical care unit
2. Nursing work interviews
3. Interdisciplinary work interviews

You are being asked to consider participating in the first part of the study design:
1. Nursing work observation in the critical care unit

In this study, I will not be evaluating the quality, frequency or efficacy of nursing mouth care work. In addition, I will not be collecting patient information or identifiers.

Study Goals
The goals of the study are two-fold. Firstly, I hope that this study will help us better understand the organization of nursing work in mouth care for intubated, mechanically ventilated patients. Secondly, the information you share may help us see links to larger imperatives outside the critical care unit that impact how nurses are able to do their work.
What am I being asked to do?

1. Allow me to accompany you for one 4-hour ICU period when you are assigned to an intubated, mechanically ventilated patient.
2. Suggest influential people I might talk to in order to learn more about mouth care in the critical care unit.
3. Show me forms and documents pertaining to your everyday work.

What will happen during the 4-Hour Work Observation? At convenient times during your shift, you will be asked about the flow of your work duties including important forms and documents. Detailed questions about mouth care will be asked if you provide that care. It will not be necessary to provide more mouth care than is normally needed.

In addition to the 4-hour buddy shift you will be offered the opportunity to follow-up with a 1-hour one-on-one interview within one to two months. A separate information sheet and consent form will be made available for your consideration. The purpose of the follow-up interview is to clarify my learning from the buddy shift. It is not mandatory to participate in a follow-up interview.

Potential Harm
It is not anticipated that participation in observation will pose harm. However, you may experience time pressure explaining your work concurrent to patient care. In addition, you may experience stressful recollections. Efforts will be made to ask questions at appropriate intervals. We may stop the observation if you deem it appropriate for you or the patient. I will remove myself from the care setting at the request of family and during interdisciplinary patient rounds. We can discuss available assistance for stressful experiences as appropriate to you.

Potential Benefits
There is no direct benefit for you from participating in this study. However, it is possible that you may benefit from describing your experiences. You may also enjoy contributing to research that expands upon in-depth knowledge of nursing work.

Costs and Reimbursements
There is a $5 coffee coupon for participating in the observation to compensate for any delays incurred in your work routines.

Privacy and Confidentiality.
In this study I will not be collecting any personal identifiers. Anything that you say will be kept in strictest confidence. I will type up notes following the observation. Notes will be assigned a code so you are not identified. At the end of the observation, you’ll be asked to choose a name that will be used when I type up my notes. In my notes or any other form of presentation or write-up of this project, any information that could lead to you being personally identified will be altered and your real name will not be used. All notes will be kept be kept on an encrypted memory key or password-
protected computers until the completion of my PhD dissertation.

Your Rights
Taking part in this study is voluntary.

During the observation shift, you have the right to not answer questions and the right to stop participating altogether at any time. If you decide that you want to withdraw from the study, all your data will be destroyed.

Deciding not to participate or withdrawing from the study will not affect your employment or your relationship with [redacted] or the investigators.

The Research Ethics Boards at the University of Toronto and [redacted] have reviewed this project. If you have any questions related to your rights as a study participant or about ethical issues related to this study you may contact the [redacted] Research Ethics Board at [redacted].

You will be given a signed copy of this consent form.

Who do you contact if you have any questions?
If you have questions about this study you can contact me - Craig Dale at (416) 998-8604 or craig.dale@utoronto.ca. Alternately, you may contact my PhD supervisor Dr. Jan Angus at (416) 978-0695 or jan.angus@utoronto.ca

Signatures
Please turn to page 4/4 to complete this form.
DOCUMENTATION OF INFORMED CONSENT

Full Study Title: Locating Critical Care Nurses in “Mouth Care”: An Institutional Ethnography

Name of Participant: ____________________________________________

Participant
By signing this form, I confirm that:
• This research study has been fully explained to me and all of my questions answered to my satisfaction
• I understand the requirements of participating in this research study
• I have been informed of the risks and benefits, if any, of participating in this research study
• I have been informed of any alternatives to participating in this research study
• I have been informed of the rights of research participants
• I have read each page of this form

Name of participant (print)  Signature  Date

Investigator Obtaining Consent
By signing this form, I confirm that:
• This study and its purpose has been explained to the participant named above
• All questions asked by the participant have been answered
• I will give a copy of this signed and dated document to the participant

I acknowledge my responsibility for the care and well being of the above participant, to respect the rights and wishes of the participant as described in this informed consent document, and to conduct this study according to all applicable laws, regulations and guidelines relating to the ethical and legal conduct of research.

Name of Investigator (print)  Signature  Date

Nursing Work Observation ICD Version 3 1032011
Appendix E Nursing Work Interview Consent

Nursing Information and Informed Consent Document (Work Interview)

Study Title: Locating Critical Care Nurses in Mouth Care: An Institutional Ethnography

Principal Investigator: Craig Dale RN and PhD Student at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto.

Sponsor: Canadian Institutes of Health Research (CIHR)

You are being asked to consider participating in a research study. Before you give your consent, it is important that you read the following information and ask as many questions as necessary to be sure you understand what you will be asked to do.

Background, and why this study is being done
Many researchers have studied mouth care for critically ill patients. However, surveys have been the predominant method of nursing inquiry. The purpose of this study is to produce a description of mouth care in terms of what it is like for nurses to provide this care for mechanically ventilated adult patients. In other words, what actually happens within nursing work processes that accomplish oral hygiene?

Study Design
This study involves three methods to collect information
1. Nursing work observations in the critical care unit
2. Nursing work interviews
3. Interdisciplinary work interviews

You are being asked to consider participating in the second part of the study design:
2. Nursing work interviews

In this study, I will not be evaluating the quality, frequency or efficacy of nursing mouth care work. In addition, I will not be collecting patient information or identifiers.

Study Goals
The goals of the study are two-fold. Firstly, I hope that this study will help us better understand the organization of nursing work in mouth care for intubated, mechanically ventilated patients. Secondly, the information you share may help us see links to larger imperatives outside the critical care unit that impact how nurses are able to do their work.
In this study, you will be asked to:

1. Participate in one 60 minute interview regarding your experiences in mouth care for mechanically ventilated patients
2. Walk me through some of the documents you use in practice
3. Suggest influential people I might talk to in order to learn more about mouth care in the critical care unit.

During the interview, you may be asked for:

• Step-by-step detail for providing mouth care
• Care routines in the critical care unit
• An overview of documents explaining how this work should happen

This one-on-one interview may take place in a private hospital office or a meeting place outside the hospital. The location and time shall be convenient to you.

Potential Harm
It is not anticipated that participation in the interview will pose harm. However, you may experience stressful recollections. We may stop the interview at any time if you deem it appropriate. We can discuss available assistance for stressful experiences as appropriate to you.

Potential Benefits
There is no direct benefit for you from participating in this study. However, it is possible that you may benefit from describing your experiences. You may also enjoy contributing to research that expands upon in-depth knowledge of nursing work.

Costs and Reimbursements
A $40 research stipend will be paid following the 60-minute interview to allow for travel and meal expenses.

Privacy and Confidentiality.
In this study I will not be collecting any personal identifiers. Anything that you say will be kept in strictest confidence. The interview will be audio-taped and I will type up some notes following our talk. Notes and interview transcripts will be assigned a code so you are not identified. At the end of the interview, you’ll be asked to choose a name that will be used when I type up the interview. In the interview transcript and in any other form of presentation or write-up of this project, any information that could lead to you being personally identified will be altered and your real name will not be used. All notes, tapes and transcripts will be kept on an encrypted memory key or password-protected computer until the completion of my PhD dissertation.

Your Rights
Taking part in this study is voluntary.
During the interview, you have the right to not answer questions and the right to stop participating altogether at any time. If you decide that you want to withdraw from the study, all your data will be destroyed.

Deciding not to participate or withdrawing from the study will not affect your employment or your relationship with [REDACTED] or the investigators.

The Research Ethics Boards at the University of Toronto and [REDACTED] have reviewed this project. If you have any questions related to your rights as a study participant or about ethical issues related to this study you may contact the [REDACTED] Research Ethics Board at [REDACTED]

You will be given a signed copy of this consent form.

Who do you contact if you have any questions?
If you have questions about this study you can contact me - Craig Dale at (416) 998-8604 or craig.dale@utoronto.ca. Alternately, you may contact my PhD supervisor Dr. Jan Angus at (416) 978-0695 or jan.angus@utoronto.ca

Signatures
Please turn to the page 4/4 to complete this form.
DOCUMENTATION OF INFORMED CONSENT

Full Study Title: Locating Critical Care Nurses in "Mouth Care": An Institutional Ethnography

Name of Participant: ________________________________

Participant
By signing this form, I confirm that:
• This research study has been fully explained to me and all of my questions answered to my satisfaction
• I understand the requirements of participating in this research study
• I have been informed of the risks and benefits, if any, of participating in this research study
• I have been informed of any alternatives to participating in this research study
• I have been informed of the rights of research participants
• I have read each page of this form

_________________________  ___________________________  ________________
Name of participant (print)  Signature  Date

Investigator Obtaining Consent
By signing this form, I confirm that:
• This study and its purpose has been explained to the participant named above
• All questions asked by the participant have been answered
• I will give a copy of this signed and dated document to the participant

I acknowledge my responsibility for the care and well being of the above participant, to respect the rights and wishes of the participant as described in this informed consent document, and to conduct this study according to all applicable laws, regulations and guidelines relating to the ethical and legal conduct of research.

_________________________  ___________________________  ________________
Name of investigator (print)  Signature  Date

Nursing Work Interview ICD Version 31032011
Appendix F Interdisciplinary Work Interview Consent

Interdisciplinary Information and Informed Consent Document (Work Interview)

Study Title: Locating Critical Care Nurses in Mouth Care: An Institutional Ethnography

Principal Investigator: Craig Dale RN and PhD Student at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto.

Sponsor: Canadian Institutes of Health Research (CIHR)

You are being asked to consider participating in a research study. Before you give your consent, it is important that you read the following information and ask as many questions as necessary to be sure you understand what you will be asked to do.

Background, and why this study is being done
Many researchers have studied mouth care for critically ill patients. However, surveys have been the predominant method of nursing inquiry. The purpose of this study is to produce a description of mouth care in terms of what it is like for nurses to provide this care for mechanically ventilated adult patients. In other words, what actually happens within nursing work processes that accomplish oral hygiene?

Study Design
This study involves three methods to collect information
1. Nursing work observations in the critical care unit
2. Nursing work interviews
3. Interdisciplinary work interviews

You are being asked to consider participating in the third part of the study design:
3. Interdisciplinary work interviews

In this study, I will not be evaluating the quality, frequency or efficacy of nursing mouth care work. In addition, I will not be collecting patient information or identifiers.

What is involved in this study?
An institutional ethnographic study produces a detailed description of work. I am seeking people who can help me generate detailed accounts of their work relevant to mouth care.

The goals of the study are two-fold. Firstly, I hope that this study will help us better understand the organization of nursing work in mouth care for intubated, mechanically
ventilated patients. Secondly, the information you share may help us see links to larger imperatives outside the critical care unit that impacts how work happens.

In this study, you will be asked to:

1. Participate in a 60 minute one-on-one interview to learn more about your work and thoughts on mouth care in the critical care unit.
2. Walk me through documents or forms you use in your work.
3. Suggest influential people I might talk to in order to learn more about mouth care in the critical care unit.

The interview may take place at a date, time or location convenient to you.
You will be asked to describe your role(s) and any relevant connection to critical care whether or not your everyday work links in a direct or indirect fashion to mouth care.

Potential Harm
It is not anticipated that participation in an interview will pose harm. However, you may experience stressful recollections. We can discuss available assistance for stressful experiences as appropriate to you.

Potential Benefits
There is no direct benefit for you from participating in this study. However, it is possible that you may benefit from describing your experiences. You may also enjoy contributing to research that expands upon in-depth knowledge of nursing work.

Costs and Reimbursements
A $40 research stipend will be paid following the 60-minute interview to compensate for your time.

Privacy and Confidentiality.
Anything that you say will be kept in strictest confidence. The interview will be audio-taped and I will type up notes following our talk. Notes and interview tapes will be assigned a code so you are not identified. At the end of the interview, you’ll be asked to choose a name that will be used when I type up the interview. In the interview transcript and in any other form of presentation or write-up of this project, any information that could lead to you being personally identified will be altered and your real name will not be used. All notes, tapes and transcripts will be kept on an encrypted USB key or password-protected computer until the completion of my PhD dissertation.

Your Rights
Taking part in this study is voluntary.

During the interview, you have the right to not answer questions and the right to stop participating altogether at any time. If you decide that you want to withdraw from the
study, all your data will be destroyed.

Deciding not to participate or withdrawing from the study will not affect your employment or your relationship with [blurred] or the investigators.

The Research Ethics Boards at the University of Toronto and [blurred] have reviewed this project. If you have any questions related to your rights as a study participant or about ethical issues related to this study you may contact the [blurred] Research Ethics Board at [blurred]

You will be given a signed copy of this consent form.

You will be notified of the results of this study.

Who do you contact if you have any questions?
If you have questions about this study you can contact me - Craig Dale at (416) 998-8604 or craig.dale@utoronto.ca. Alternately, you may contact my PhD supervisor Dr. Jan Angus at (416) 978-0695 or jan.angus@utoronto.ca

Signatures
Please turn to the page 4/4 to complete this form.
DOCUMENTATION OF INFORMED CONSENT

Full Study Title: Locating Critical Care Nurses in “Mouth Care”: An Institutional Ethnography

Name of Participant: ________________________________

Participant
By signing this form, I confirm that:
• This research study has been fully explained to me and all of my questions answered to my satisfaction
• I understand the requirements of participating in this research study
• I have been informed of the risks and benefits, if any, of participating in this research study
• I have been informed of any alternatives to participating in this research study
• I have been informed of the rights of research participants
• I have read each page of this form

_________________________ ___________________________ ____________
Name of participant (print)  Signature  Date

Investigator Obtaining Consent
By signing this form, I confirm that:
• This study and its purpose has been explained to the participant named above
• All questions asked by the participant have been answered
• I will give a copy of this signed and dated document to the participant

I acknowledge my responsibility for the care and well being of the above participant, to respect the rights and wishes of the participant as described in this informed consent document, and to conduct this study according to all applicable laws, regulations and guidelines relating to the ethical and legal conduct of research.

_________________________ ___________________________ ____________
Name of Investigator (print)  Signature  Date
Appendix G Field Note

312
Appendix H Oral Care Tool Costs

From: [Redacted] 10:26 AM To: Dale, Craig CC:  
Subject: RE: Query from Craig Dale about oral care products

Hi Craig:
Costs
a) pack of toothettes PK 20 for $1.71
b) a toothbrush PAED BX 144 for $9.30
c) Yankauer ea $1.65

<table>
<thead>
<tr>
<th>LARYNGOSCOPE PKG</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Macintosh blade #3</td>
<td>$481.60</td>
</tr>
<tr>
<td>1 Miller blade #2</td>
<td></td>
</tr>
<tr>
<td>1 Laryngoscope handle, std for 2 &quot;c&quot; batteries</td>
<td></td>
</tr>
</tbody>
</table>

DIFFICULT AIRWAY PKG. $60.00

Hope this helps.
I believe [Redacted] is sending the other pricing.

From: [Redacted] 9:48 AM To: Dale, Craig Subject: RE: Query from Craig Dale about oral care products

Hi Craig:

- Mouthwash (the individual small bottles that we order) $0.73 each
- Petroleum jelly (the small smith and nephew tubes) $0.70 each
- TAPE WATERPROOF PINK 2.5CM LX $1.79 each

I am having a problem locating the cost for the subglottic Endotracheal tube. I am waiting to hear back from [Redacted] on this one. It maybe an outside adhoc order through [Redacted].

Will have to get back to you

From: [Redacted] 12:49 PM
To: Dale, Craig
Subject: RE: Query from Craig Dale about oral care products

Craig:
Sorry I was thinking of the Chlorhexidine that we give to the preop patients for [Redacted] and we also used it in the unit for a while. To reduce bio burden on their skin surface.
Chlorhexidine (as Gluconate) 0.12% 10ml oral rinse is 0.64 cents each

Debbie
Appendix I Accountability Circuit Map
Appendix J VAP Concept Beside Poster

**VAP Prevention**

- **Colonization of Mouth with Pathogens:** Use Chlorhexidine Mouthwash
- **Micro-Aspiration of Stomach Contents:** Elevate Head of Bed 45°
- **Aspiration of Secretions Above Cuff of ETT:** Use ETT with Sub-glottic Secretion Drainage
- **Aerosolization of Pathogens:** Use Closed Suction System
- **Airway Humidification:** HME or heated Humidifier. Change HME every 5-7 days.
- **Ventilator Circuit Management:** Change per patient or if soiled
Copyright Acknowledgements

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Date: December 5, 2012

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Sincerely,

Craig Dale RN, PhD candidate
Lawrence S. Bloomberg Faculty of Nursing, University of Toronto
130 - 155 College Street, Toronto, ON
craig.dale@utoronto.ca
craig.dale@mail.utoronto.ca