AWARENESS AND ATTITUDES OF INTENSIVE CARE NURSES REGARDING THE BOWEL PROTOCOL FOR THE CRITICALLY ILL PATIENTS

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SIGNED STATEMENT

I certify that this thesis contains no material which has been accepted for any award of any other degree or diploma in any other university.

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Rency Varghese

7th August 2013

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ABSTRACT

Patients in the intensive care unit are critically ill and are commonly on life support systems such as mechanical ventilation medication to stabilise their haemodynamic parameters. They are usually unable to eat or drink and are fed through a nasogastric or naso-enteric tube. With the priority being resuscitation and life support, normal physiological functions and requirements can be over ridden, one of which is bowel function.

There are no set guidelines nationally recognised for the management of the bowel. But most institutions have a bowel protocol in order to facilitate and promote the bowel function of these patients. Despite this, anecdotal evidence indicates bowel management is often overlooked or ignored.

The aim of this study was to investigate the attitudes and awareness of the nurses working in the intensive care setting towards the bowel protocol used for the critically ill patients from the level III intensive care units of three different public hospitals (Appendix 1). A simple descriptive design in the form of an online survey was conducted for the nurses working in the intensive care unit. Data were analysed using simple descriptive statistics and qualitative data a content analysis.

The findings of this study indicated that even though many of the nurses were experienced, there still remain concerns regarding bowel management with issues of lack of knowledge and awareness, lack of accountability and responsibility and poor attitudes of staff.

Recommendations were made to increase education and staff awareness with regular audits and vigilant supervision. Also further studies related to this concept are recommended preferably in a different setting.

Introduction

Introduction

This thesis reports on a research study that investigates the attitudes and awareness of nurses working in the intensive care unit regarding the bowel protocol used for critically ill patients.

This chapter introduces and briefly outlines the context and purpose of the study. It also provides a statement of the research question, aims and objectives, the significance and the assumptions of the study. Also the terms used in this study are defined.

Context of the Study

Critically ill patients admitted to the intensive care unit often face various complications secondary to the treatment modality; one of those problems is often the alteration of bowel function. Bowel function is often overlooked and given the lowest priority when it comes to the management of the patient (Chang et al. 2006; Ritchie et al. 2008). As a result, improper functioning of the bowel affects patient outcomes (Ritchie et al. 2008).

Regular assessments of bowel function and management of bowel care elimination have shown to improve patient outcomes (McPeake, Gilmour & MacIntosh 2011; Ritchie et al. 2008). The responsibility for this function lies with each nurse caring for the patient.

Purpose of the study

The aim of this study was to investigate the attitudes of nurses working in the Intensive Care Unit (ICU) regarding the bowel regime used for critically ill patients. Anecdotal evidence and literature (Ritchie et al. 2008) suggests that bowel care is less optimal. Therefore the

study focussed on the possible reasons as to why the bowel protocol was being ignored or not carried out rigorously as directed by the protocol.

Research Question

The research question posed was:

Are nurses working in the Intensive Care Unit (ICU) aware of a bowel protocol available in their working environment and what are their attitudes concerning this protocol?

Aims and objectives

Aim:

The overall aim of the study was to identify the attitudes and awareness of nurses working in the intensive care unit regarding the bowel protocol for critically ill patients.

Objectives:

The objectives of this study were

- To find out whether the nurses are aware of the bowel protocol or bowel management guidelines used for the patients in the intensive care unit.
- To identify the attitudes of nurses regarding bowel care in intensive care patients.
- To discover if nurses recognise the complications associated with poor bowel care in critically ill patients.
- To highlight if nurses identify the importance of implementation of the bowel protocol for critically ill patients.
- To develop an understanding as to why nurses do not adhere to the bowel protocol.

Significance of the study

It was anticipated that the findings of this study will improve the nursing care and standards by increasing the contemporary knowledge in the importance of proper bowel management in the critically ill patients. Bowel care is often overlooked and ignored in clinical setting (Ritchie et al. 2008). It is hoped that the results of this study will encourage nurses to consciously integrate bowel care into their practice and hence to think and act in a professional manner by caring for the patients in a holistic manner. It will be a guide to clinical nurse educators as they can focus on areas that will improve the sensitive areas of nursing care provided to the patients in the critical care setting.

Assumptions

Based on the literature and personal experiences it was assumed that nurses do not consider bowel care to be important, hence it is ignored (Chang et al. 2006). It was assumed that nurses working in the ICU were representative of the population targeted in the study. Furthermore that the respondents completing the survey have truthfully answered the questions.

Definition of terms

These are the terminologies used in this thesis for a detailed understanding of the concepts.

- **APACHE II:** Acute Physiology And Chronic Health Evaluation (Version 2) is a scoring system used to assess the severity of medical illness of patients admitted to the Intensive Care Unit. It is also used to predict the in-hospital death for patients in the ICU (Bouch & Thompson 2008).
- **Bowel Protocol:** The bowel protocol is a written guideline regarding the bowel management of patients in the ICU and is expected to be followed in order to prevent further complications.

- **Defecation:** Defecation is the process of emptying and the excretion of the waste products from the digestive tract via the bowel (Smith, Duell & Martin 2008).
- **Endotracheal tube:** An endotracheal tube is a tube inserted for airway purpose either through the nose or the mouth to facilitate ventilation (Curtis 2010).
- **Enteral tube:** An enteral tube is a tube placed in the alimentary canal of patients who are unable to eat or drink orally in order to deliver nutrients (Curtis 2010).
- **Glasgow Coma Scale (GCS):** The Glasgow Coma Scale is a scale used to measure the level of consciousness in critically ill patients. It is mainly used for the head injury patients. It consists of three main components - eye opening, verbal response and motor response. The total score is 15. A score of 7 or less indicates coma (Curtis 2010).
- **Inotropes:** An inotrope is a type of medication used in critically ill patients to increase heart muscle contraction (Curtis 2010).
- **Intensive Care Unit (ICU):** The Intensive Care Unit is a specialised unit of a hospital where seriously ill patients are closely monitored and treated by the use of high technical monitoring devices and equipment and specially trained medical and nursing staff (Curtis 2010).
- **Mechanical ventilation:** Mechanical ventilation is the use of a machine used to improve the exchange of air between the lungs and the atmosphere and is often called a ventilator (Curtis 2010).
- **Nasogastric tubes:** A nasogastric tube is a type of enteral tube used for short term feeding purposes in patients unable to eat and drink orally (Curtis 2010).

Outline of the study

This chapter introduced the reader to the reported study and provided an overview of the background to the study, the purpose of the study, the statement and research questions and the significance of the study.

The second chapter will describe the anatomy and physiology of bowel, the importance of bowel care in various populations, the types of patients admitted to the Intensive care unit. It will also describe the various studies that are conducted related to these aspects.

The third chapter will describe the methodology used for this study. There is a detailed description and explanation of the research design used for this research study. Ethical issues, data gathering instruments, issues of validity and reliability and statistical analysis are also described in this chapter.

The fourth chapter will present the results of the data analysis. There will be a graphical and narrative representation of the statistical figures and will also describe the concepts and issues that have emerged using content analysis.

The fifth chapter will provide discussion based on the existing literature. This chapter will also include restatement of the problem, summary description of the procedure, major findings and their significance, study limitations and recommendations for further research.

Conclusion

This chapter introduced the topic of the research and the researcher's area of interest. An overview of the context was also provided. Bowel management being the least priority and ignored in super specialised areas, increases the risks of patient's morbidity and mortality in the long term run (Robinson & Wright 2013, pers. comm., 2nd February). The aim was therefore to investigate the attitudes and awareness of nurses working in the intensive care setting regarding the bowel protocol used for critically ill patients. The research question which was the focus of the study – Are nurses working in the Intensive Care Unit (ICU) aware of a bowel protocol available in their working environment and what are their attitudes concerning this protocol?

Literature Review

Introduction

This literature review highlights the different research relevant to bowel management, its importance in the different groups of patient population focusing especially on critically ill patients. The research is critiqued and the gap in the literature identified and an argument developed regarding the need of this study. The researchers have identified that prior to the formulation of bowel management protocol there were no guidelines to prescribing and administering aperients (Chang et al. 2006; McPeake, Gilmour & MacIntosh 2011). The bowel protocol is designed to improve the management of care of patients in the intensive care unit. No study has been carried out specifically that has evaluated the knowledge base of the nurses who are primarily caring for these patients. Hence, it has created an opportunity for the researcher to focus on the aspect of the background knowledge the nurses working in the Intensive Care Unit have in relation to the bowel protocol used for the critically ill patients

Search Strategy

A search of the literature was performed using the databases Cumulative Index of Nursing and Allied Health Literature (CINAHL), PubMed, Medline, OVID, SCOPUS, Joanna Briggs Library and Cochrane Library.

For searching articles in PubMed, Medical Subject Headings (MeSH) terms were used guided by the logic grid below:

Bowel care Bowel care* Bowel management Bowel protocol	Critically ill patients Intensive care patients Mechanically ventilated patients	Nursing Nurses ICU nurses Nurs*

Constipation Diarrhoea Laxatives Faecal incontinence	ICU patients* Acutely ill patients	

Boolean phrases were selected in the search options like 'AND' 'OR'. For example,

(Bowel management OR Bowel care OR Bowel protocol OR Constipation OR Diarrhoea OR Faecal incontinence OR Laxatives OR Bowel care*)

AND

(Intensive care unit OR Critically ill patients OR ICU patients* OR Mechanically ventilated patients OR Acutely ill patients)

AND

(Nursing OR Nurse OR ICU nurses OR Nurs*)

The three sets of terms were copied and pasted into the three 'Advanced Search' boxes and then the search was performed.

Selection of the literature was performed based on the dates the articles were published. Articles written in English and published within the past 10 years (2003 to 2013) were taken into consideration. Only peer reviewed articles relevant to this topic were selected.

In order to appreciate the importance of bowel management, it is necessary to have an understanding of the anatomy and mechanisms involved in normal bowel function, the

acuity of patients admitted to the ICU, the importance of proper bowel management in these patients and how it impacts on the different patient population groups in the Intensive Care Unit (ICU) when these functions are interrupted.

The gastrointestinal tract

In human beings, the gastrointestinal tract is a hollow tube that extends from the mouth to the anus and is approximately five metres long. It is divided into two sections consisting of the upper and the lower gastrointestinal tract (Smith, Duell & Martin 2008). The upper gastrointestinal tract includes the oesophagus, stomach and duodenum and the major function is food processing. The lower gastrointestinal tract consists of the small and large intestine. The function of this tract is to process and absorb the nutrients.

The Bowel

The terminology used for the intestine is *bowel or gut* (Smith, Duell & Martin 2008).

Anatomy

The bowel is a tube like hollow structure that extends from the stomach to the anus (McFerran 2004). The small intestine is composed of the duodenum, jejunum and ileum (Smith, Duell & Martin 2008). The large intestine is composed of the caecum, colon and rectum (Smith, Duell & Martin 2008). The caecum includes the ileo-caecal valve and the appendix (Smith, Duell & Martin 2008). The colon is divided into ascending, transverse, descending and sigmoid (Smith, Duell & Martin 2008). The distal end of rectum, called the anal canal, contains the internal and external sphincter muscles (Smith, Duell & Martin 2008).

Physiology of the bowel

The longitudinal and circular muscles along with the peristaltic activity help to mechanically churn the food bolus (Urden, Stacy & Lough 2010). The muscular sphincters and valves

located at strategic points through the intestinal tract prevent reflux of contents. The peristaltic waves along with rhythmic segmentation allow maximum contact between the food and the bowel wall initiating chemical reactions resulting in digestion and absorption (Smith, Duell & Martin 2008).

The peristaltic activity and the secretory functions are controlled by the sympathetic and parasympathetic nerve fibres (Smith, Duell & Martin 2008). Sympathetic stimulation inhibits colonic activity and constricts the anal sphincters. The internal sphincter is stimulated by the sympathetic nerve fibres with the external anal sphincter under voluntary control (Smith, Duell & Martin 2008). The parasympathetic system innervation increases the activity and secretion of the colon and relaxes the anal sphincters allowing for defecation (Urden, Stacy & Lough 2010).

Functions of the bowel

The four major functions of the bowel include digestion, absorption, storage and excretion (Urden, Stacy & Lough 2010).

The process of digestion takes place by breaking down the large molecules into smaller ones which enhance intestinal absorption (Fulbrook & Grealy 2007; Smith, Duell & Martin 2008). The bowel absorbs the nutrients from the food into the body (Fulbrook & Grealy 2007; Smith, Duell & Martin 2008).

The waste products are stored in the bowel until they are emptied from the body in the form of faeces or stool (Smith, Duell & Martin 2008). The act of defecation is that the waste

products are emptied and excreted from the digestive tract via the bowel (Smith, Duell & Martin 2008). This process is a result of controlled and uncontrolled series of complex physiological processes. The pattern of defecation varies from person to person and can occur from several times each day to two to three times a week (Hurnauth 2011).

Acuity of patients in ICU

Patients are admitted to the intensive care unit (ICU) in order to be treated for their serious to life threatening conditions. These patients encompass different background in terms of their age, past medical history, current health status, reason for admission and the severity of their illness. In order to standardize the physiological variables, predictive scoring systems are used (Celinski & Jonas 2004). These systems measure the severity of disease and the prognosis of patients in the ICU. At the same time, these systems help in clinical decision making – to predict outcome, cost-benefit analysis, withdrawal of treatment, to monitor and assess the effectiveness of new therapies; population sample comparison in research studies and for the comparison between different ICUs. One of the most popular acuity scoring systems in the intensive care unit is Acute Physiology and Chronic Health Evaluation (APACHE) version II (Bouch & Thompson 2008; Miller et al. 2011).

APACHE II was revised by Knaus et al. (1985) and has four main components – acute physiology score, chronic health evaluation, age of patient and urgency of admission to the ICU. The acute physiology score is based on twelve physiological variables – 'temperature, mean arterial pressure, heart rate, respiratory rate, oxygenation, arterial pH, serum sodium, serum potassium, serum creatinine, haematocrit, white blood cell count and Glasgow Coma Score' (Celinski & Jonas 2004, p. 95). Each of the variables attracts points depending on the range outside the normal values. The measurement is carried out during the first 24 hours of

admission to the ICU. The higher the score the higher the risk of hospital death (Hashem et al. 2008).

Patient Population in ICU

The patients in the ICU suffer from various conditions and are treated differently based on their presenting complaints and physiologic abnormalities. Patients admitted to ICUs are generalised critically ill patients such as shocked patients, septic, trauma, post-surgical recovery, single or multi-organ failure and poisoning (Department of Health 2013). They also include patients with spinal injury and elderly patients. Patients from each of these categories face different problems regarding their bowel functioning.

Critically ill patients

Patients in the intensive care unit are generally critically ill, hemodynamically unstable and have multiple organ dysfunction (Li, Wang & Ma 2012). They are supported by various lifesaving high technology machines such as ventilators, renal dialysis units, pacemakers; medications and other major high risk procedures. Treatment is based on the presenting signs and symptoms, and may involve complex activities like assisting patients to breathe and ventilate via mechanical ventilation, administration of inotropes to improve the blood pressure and contraction of the heart, replacement of electrolytes and the use of renal replacement therapies such as dialysis (Asai 2007; Ritchie et al. 2008). Subsequently, bowel management can often be overlooked (Ritchie et al. 2008).

Stroud (2007) describes how acute illness increases the metabolic rate and impairs the utilisation of nutritional substrates thus exacerbating the patient's poor nutritional status. Critically ill patients often have a decreased oral food intake before the ICU admission due to decreased appetite, gastrointestinal symptoms, anxiety, or other medical and surgical

factors. In addition, restricted dietary intake secondary to ‘nil by mouth’ status for different diagnostic and therapeutic procedures or the non-commencement of nasogastric feeds exacerbates the problem (Singer et al. 2009). Good bowel care improves patient comfort and helps in reducing nausea and vomiting (Fulbrook & Grealy 2007).

The frequent use of specific drugs such as corticosteroids and neuromuscular blockade to treat critically ill patients increases skeletal-muscle breakdown and wasting (Singer et al. 2009). Diuretics cause increased urinary loss of electrolytes, water-soluble vitamins and minerals. The side effects of antibiotics to treat infection and the use of opioids and analgesia for pain and discomfort can affect the bowel, leading to either constipation or diarrhoea (Brock et al. 2012). Vasopressor therapy such as use of inotropes and vasopressors to increase blood pressure reduces blood flow to the splanchnic system and can cause stress ulcers, ileus, malabsorption and bowel infarction in hypotensive and shock patients (Hollenberg 2011). Patients in the intensive care setting generally have limited mobility or no mobility at all, reducing gut motility.

Despite bowel care being one of the essential aspects of nursing care of intensive care patients, it appears that much of the time it is neglected as the focus is primarily on the haemodynamic stability of the patients. It has been reported that bowel assessment is inadequately performed due to its low priority in the workload of the nurses working in the intensive care unit (Bayliss & Salter 2004). Nursing interventions for bowel care are based mostly on routines and practices in critical care setting and there is very little research evidence to support efficient bowel care (Rogers 2008).

Elderly patients

Elderly patients quite frequently suffer from intestinal complaints which can impact the quality of their life (Spinzi 2007). Older people experience a decline in the enjoyment of food due to loss of teeth, ill-fitting dentures and decreased taste sensation which can lead to poor nutrition (Reginelli et al. 2008). There is decreased gastrointestinal motility due to degeneration of the gastric mucosa with resultant decreased secretion of the enzymes leading to decreased absorption of food and vitamins (King 2005; Reginelli et al. 2008). Due to all these changes elderly patients complain of loss of appetite, nausea, vomiting and constipation (Reginelli et al. 2008). These patients should be encouraged to follow pharmacological and non-pharmacological measures. Pharmacological measures include use of laxatives and aperients (Spinzi 2007). Non-pharmacological measures include exercise, increased intake of a high fibre diet, encouragement of a bowel routine and increasing fluid intake (Spinzi 2007). Even though non-pharmacological measures seem difficult to be carried out in an ICU setting there can be areas of improvisations such as administration of feeds containing high fibre and fluids.

Spinal injury patients

The spinal cord injury patients often confront problems with eliminating waste products from the intestine. Damage to the spinal cord at a particular level may result in an inability to control the bowel reflex when the rectum is full, or the reflex to empty the bowel may be totally lost. This results in a reflexive or a flaccid bowel (Ash 2005).

When the spinal cord injury is above the level of 12^{th} thoracic vertebra (T_{12}), the patient may no longer be able to detect a full bowel (Ash 2005). The anal sphincter remains closed but will open when the rectum is full. When the spinal cord injury is below the level of T_{12}, there may be damage to the defecation reflex (Ash 2005). The anal sphincter muscle stays relaxed and thus the sphincter remains open.

In both these cases, it is important to assist regular emptying of the bowel to prevent constipation and impaction. This may be seen as a low priority in patients admitted to the ICU. Hence, spinal injury patients need to have a set bowel management programme that assists in regular emptying of the bowel (Ash 2005).

Importance of bowel care in ICU patients

Worsening APACHE scores and failure of one or more organ in the critically ill patients; often leads to the improper functioning of other organs, one of which is the bowel. The role of bowel care varies according to the different population groups in the ICU. Patients are sedated, paralysed, immobile and malnourished secondary to the treatment given in the ICU. To improve the nutritional status they are usually fed via nasogastric or enteric tubes (Griffiths & Bongers 2005). The normal mechanism of digestion is affected and results in a negative effect causing further bowel problems. The non-functioning of the bowel can also be due to paralytic ileus, bowel surgery and gastro-intestinal abnormalities (Kattoda 2013, pers. comm. 12 January).

Common problems faced by the intensive care patients

Critically ill patients often experience bowel problems secondary to the physiological processes, therapeutic and pharmacological measures used during the critical phase of their life. Constipation and diarrhoea are the most common and present major problems for intensive care patients. At the same time, critically ill patients may also confront faecal incontinence and non-defecation despite the administration of enteral nutrition, prokinetics and laxatives (Bishop et al. 2010).

Constipation

One of the most common problems facing the patients in the intensive care unit is constipation. Constipation may be defined as a decrease or absence of bowel movement for days, where the dry and hard stool is usually very painful or difficult to expel (Fulbrook & Grealy 2007).

Immobility is one of the causes of constipation in critically ill patients. Patients in the intensive care are generally bed-ridden due to their unconscious state, haemodynamic instability, dependence on medications controlling their blood pressure and heart rate, attachment of various monitoring lines and cables and decreased muscle power and strength due to sedatives and analgesics. Nursing patients in supine position also nullifies the impact of gravity on faecal evacuation (Bishop et al. 2010). Regular and timely positioning of the patients is encouraged for critically ill patients.

During the period of critical illness there is an increase in the capillary permeability with the leakage of albumin to the extravascular space and with alterations in the electrolytes, there is thus an increased retention of salt and water causing dehydration in these patients. (Cereda et al. 2010). A cautious correction of the fluid imbalances is necessary.

Lack of fibre is another cause of constipation in this group. Critically ill patients have increased energy requirements due to protein breakdown and synthesis secondary to their disease processes (Griffiths & Bongers 2005). It is therefore necessary to support the patient's nutritional requirements by feeding them either through an enteral feeding tube or through the parenteral route (Ferrie & East 2007). Enteral feeding is the preferred method as

it is the normal physiological process for the critically ill patients (Sekino et al. 2012). There are various methods of enteral feeding techniques used depending on the need of patients such as nasogastric, post-pyloric, gastrostomy and jejunal feeding. In the intensive care unit, the types of enteral feed depend on the calorie requirements of the patients and are suggested by the dietician of the unit. Enteral feeds are promoted for critically ill patients to meet the nutritional requirements and to enhance normal bowel functioning but these feeds lack fibre (Ferrie & East 2007).

Hence, immobility, dehydration and lack of fibre in their diet increase the risk of constipation in intensive care patients. Opioids have a marked effect on the gastrointestinal motility and delay the return of gastrointestinal function and gastric emptying (Miedema & Johnson 2003; Sawh et al. 2012). Use of various categories of drugs like sedatives and analgesics administered to relieve pain and discomfort is known to induce constipation in critically ill patients (Lat, Foster & Erstad 2010). The use of diuretics, calcium channel blockers, analgesics and anticonvulsants also significantly increase the risk of constipation (Fulbrook & Grealy 2007; Lat, Foster & Erstad 2010).

Effects of constipation in the critically ill patients

Constipation can cause various effects on the respiratory, cardiovascular, gastrointestinal and neurological systems of the body.

The effects of constipation in critically ill patients are inter-related. The signs and symptoms affecting the gastrointestinal system are abdominal distension, nausea, vomiting and feed intolerance. Abdominal distension affects the normal respiratory mechanism by splinting the diaphragm which prevents inadequate expansion of the lungs, increasing the respiratory

rate resulting in ineffective gas exchange. Decreased oxygen supply to the cardiovascular system results in tachycardia (increased heart rate) and hypertension (increased blood pressure). Constipation also affects the neurological status causing restlessness, agitation and confusion (Masri, Abubaker & Ahmed 2012; Mostafa et al. 2003). Studies have found that constipation may result in failure to wean from mechanical ventilation, prolonged ICU stay and increased mortality (Mostafa et al. 2003; van der Spoel et al. 2007). The incidence of constipation in intensive care patients is reported to be between 16% and 83% (McPeake, Gilmour & MacIntosh 2011).

Diarrhoea

Diarrhoea is quite commonly seen in critically ill patients and often affects the fluid and electrolyte balance in the patients leading to the deterioration in their physical condition (Wiesen, Gossum & Preiser 2006). There is no general consensus of diarrhoea definition is used in the clinical setting (Lebak et al. 2003; Martin 2007; Sabol & Carlson 2007; Whelan, Judd & Taylor 2003). Definitions of diarrhoea currently used are based on the frequency, consistency, weight and volume of the stool (Wiesen, Gossum & Preiser 2006).

According to Wiesen, Gossum and Preiser (2006, p. 149), diarrhoea is defined as '… having three or more loose or liquid stools per day with a stool weight greater than 200-250 ml per day'.

Diarrhoea in critically ill patients can be due to various factors like drugs, antibiotics, enteral feeding, infection due to *clostridium difficile* and physiological factors associated with stress (McPeake, Gilmour & MacIntosh 2011). The co-morbidities, severity of illness and diagnosis can also be contributing factors for diarrhoea in the critically ill patients.

Diarrhoea in intensive care patients can be crucial as it causes fluid and electrolyte imbalances. Fluid and electrolyte imbalances of ICU patients secondary to diarrhoea often result in haemodynamic instability. Impaired skin integrity is one of the most common effects of diarrhoea in the critically ill patients. Frequent cleaning of the skin removes the normal flora present on the skin resulting in skin excoriation and delays the wound healing process. As nutrients are not absorbed, malnutrition is noted in ICU patients (Ferrie & Daley 2011; Ferrie & East 2007; Rees & Sharpe 2009; Wiesen, Gossum & Preiser 2006; Yassin & Wyncoll 2005).

Faecal incontinence

Faecal incontinence is one of the other problems faced by the critically ill patients. Faecal incontinence can be defined as an involuntary release of bowel products or gas through the anus (Beitz 2006; Hurnauth 2011).

Faecal incontinence is quite common in the general population (Hurnauth 2011). There is at least one episode of faecal incontinence among patients during their stay in the critical care unit (Beitz 2006; Hurnauth 2011).

Faecal incontinence may be caused by any of the following: structural ano-rectal abnormality, neurologic disorders like spinal cord injury or disease, multiple sclerosis and stroke, constipation secondary to diet and medications, behavioural or cognitive dysfunction like dementia or learning disabilities, gastrointestinal disorders like Crohn's disease and irritable bowel syndrome and acute medical illness (National Collaborating Centre for Acute

Care 2007). For ICU patients sedation, nasogastric feeding, antibiotic therapy and mechanical ventilation increase the incidence of faecal incontinence (Hurnauth 2011).

Non-defecation

Bowel sounds are an indicator of gastrointestinal motility. Normal bowel sounds may vary between five and 35 sounds/min (Bickley & Syilagyi 2009; Li, Wang & Ma 2012). The clinical significance of abnormal bowel sounds is not clear. Many critically ill patients have decreased bowel activity due to their disease processes. Use of sedatives and opioids result in gastric dysmotility and delay gastric emptying (Herbert & Holzer 2008).

Some critically ill patients may not have any bowel motions despite enteral nutrition, frequent use of laxatives and prokinetics (Bishop et al. 2010).

Many patients are unwell for several days before they are admitted to the hospital. During this period they often have limited oral intake due to decreased appetite, stress and the physiological processes of their illness (Bishop et al. 2010). Malnutrition occurs in 40% of patients admitted to the intensive care unit (Barr et al. 2004). In some of the cases, patients have to undergo bowel preparation as a part of an elective procedure or surgery. As a result, in the post-operative phase, they may not have anything to evacuate (Bishop et al. 2010). Non-defecation in critically ill patients was determined by Bishop et al. (2010) in a pilot observational study of patients (n= 44) who were mechanically ventilated for more than 24 hours in a tertiary intensive care unit. The results showed that in a total of 274 ventilation days, there were 168 days with no defecation and 101 days with loose stools.

Due to all factors presented, it is important to acknowledge that it is the responsibility of the intensive care nurses to alleviate those complications that can be controlled and prevented to

a greater extent. Various research conducted has proven that implementation of a bowel protocol in the intensive care unit can reduce the mortality and morbidity of the patients. However, in reality the bowel problems of the intensive care patients are often neglected or overlooked (Ritchie et al. 2008). The reasons that are presumed to be the cause of bowel negligence is inadequate knowledge and awareness, lack of staff motivation, time constraints or an absence of a bowel management guideline or protocol (Dorman et al. 2004; McPeake, Gilmour & MacIntosh 2011).

Research indicates that there is a need for set guidelines for bowel care. Dorman et al. (2004) conducted a study in an intensive care unit related to bowel care. They conducted an audit to discover whether problems with bowel care existed. The researchers found that the assessment of bowel sounds was very poorly structured; there was a lack of appropriate documentation and poor bowel management prevailed. A bowel protocol was formulated and implemented by nurses with medical staff and within a period of six months, nursing staff were educated regarding its implementation. A copy of the bowel protocol was made available at each bedside. After the period of six months, an audit was conducted by these researchers who found that the assessment skills had improved and the bowel management in that unit had become properly structured. These results were supported by a more recent study by McPeake, Gilmour and MacIntosh (2011) who conducted a three phase triangulation study, added that the introduction of a Bowel Management Protocol can increase documentation of bowel care and reduces the complications of constipation and diarrhoea in critically ill patients. However, the literature does not indicate if such a change is maintained in the longer term.

It is suggested by researchers that the existence of a Bowel Management protocol in critically ill patients could assist the clinicians in reducing the incidence of complications associated with poor bowel management (Dorman et al. 2004; Knowles et al. 2010). There are very limited studies focussing on the bowel management systems in the critically ill patients. All of these studies were based on an individual hospital or a specific intensive care unit so the results are variable. The studies were not nationally conducted hence the results and conclusions cannot be generalised.

With experience it is noted that the existence of a bowel protocol itself is insufficient for good practice. In order for the implementation to take place appropriately, it is important that the nurses working in the ICU are aware of the factors causing constipation and diarrhoea. They also need to be aware of the complications arising if these symptoms are not appropriately identified and treated.

Since patients in the intensive care unit are generally intubated and dependent on mechanical ventilation, the communication process is interrupted. Patients who are conscious and awake during their period of mechanical ventilation are unable to verbalise their feelings and experiences and often seem to be restless, agitated and uncomfortable. In reality, it was noted that nurses may misinterpret these signs as a side-effect of non-effective sedation or analgesia (Wilson & Robinson 2013, pers. comm., 16th March). It may be that these patients are experiencing discomfort secondary to constipation or diarrhoea.

There appears to be a gap in the literature regarding the attitudes, knowledge and awareness of nurses working in the intensive care unit (Wilson, Ward & Buttery 2013, pers. comm., 21

June). It is important for intensive care nurses to be aware of the bowel regime, and to recognise the need to initiate and adhere to bowel management as they are the ones working most closely with the patients. In doing this there could be a decrease in the mortality and morbidity of the intensive care patients. Intensive care nurses must have a comprehensive knowledge of the consequences of inappropriate and inadequate bowel management in the critically ill patients. In addition, they may not be aware of whether the ways they manage bowel dysfunction are best practices or are the most appropriate method for their patient. It is the responsibility of the intensive care nurse to assess and determine the patient's bowel habits and provide bowel care based on the needs of the patient (Ward, Wilson & Kattoda 2013, pers. comm., 5th June). There is no research investigating the nurses' knowledge and attitude regarding the bowel protocol used for intensive care patients. Understanding the knowledge and attitudes of the nurses regarding the bowel protocol would guide the Intensive Care nurses in taking appropriate steps and measures to enhance and improve the quality of nursing care and treatment provided to the critically ill patients.

Hence, this research study aimed to investigate the attitudes and awareness of bowel protocol amongst nurses based in the intensive care unit in order to improve practice and prevent complications in critically ill patients.

Conclusion

This chapter provided a brief description of the anatomy, physiology and functions of the gastrointestinal tract as an aid to understanding the normal functioning of the bowel. An explanation of the acuity of patients and the population groups admitted to the ICU, importance of bowel care and the common problems faced by these groups with a detailed description on the studies conducted on bowel protocols is discussed. The literature review

identified a gap in the literature and focused on the aspect of the background information the nurses should be aware of in regards to the existence, importance, need and regularity of bowel protocol in the Intensive Care Unit.

The following chapter will discuss the methods used to conduct the study including research design, sample recruitment, ethics, data collection and analysis.

Methods

Introduction

A research design guides the researcher by answering the questions 'when?', 'how?' and 'where?' (Roberts & Taylor 1999). This chapter explains the research design and the reason why this particular design was chosen. It details information regarding the study setting, participants and recruitment, ethical considerations, analysis of the results and will includes the issues of reliability and validity.

Study plan and design

Design

A descriptive study describes, observes and documents the aspects of a situation as it naturally occurs (Boswell & Cannon 2007; Roberts & Taylor 1999). These types of studies are often considered weak but are appropriate when studying an area where limited research has been done (Boswell & Cannon 2007).

A survey is one of the types of the non-experimental strategies used in research. Survey design is used to establish, measure and study the characteristics of a population (DePoy & Gitlin 2005; Polgar & Thomas 2008). One of the ways of conducting surveys is by the use of questionnaires which are a form of self-reporting method. Surveys are commonly used in health related research studies as one can obtain information about people's actions, knowledge, opinions, attitudes and intentions by self-reporting techniques (Polit & Beck 2010). This was the most appropriate method in this study which aimed to explore and investigate the attitudes and awareness of the intensive care nurses regarding bowel regime in critically ill patients, limited evidence in this area was found. A questionnaire was designed to explore these elements as shown in Appendix 2.

Study population

The participants involved in this study were nurses working in the intensive care units of three different hospitals who met the inclusion and exclusion criteria.

Inclusion criteria

Nurses of different levels working in the intensive care unit for more than three months were included in the study.

The nurses who provided direct nursing care to the critically ill patients were included in the study.

Exclusion criteria

Some groups were excluded from the study as identified below.

- **Transition to Professional Practice Nurses (TPPN)** are those nurses working in a specific area within their first year of experience post-graduation from the University. They were formally called Graduate Nurses. Due to their inadequate exposure to the patients in the intensive care unit and being in their learning phase of getting to know the routines, protocols and guidelines, they were excluded from the study.
- **Student nurses** as they were supernumerary and not directly responsible for the care of the intensive care patients.
- **Agency nurses** as they were not familiar with the routines and protocols of the ICU.
- **Nurse Management Facilitators** as they do not provide direct nursing care to the intensive care patients.

Ethical issues

A research proposal (Appendix 3) was submitted for the approval for the study obtained from each of the Hospital Research Ethics Committee included in the study (Appendix 4). Each Site Coordinator was informed about this study and gave their verbal support and written consent for the study before each Ethics Committee was approached for their approval. Once the approval from Hospital Research Ethics Committees was obtained, approval was also gained from the University of Adelaide Ethics Committee (Appendix 4).

The participants were given an information sheet (Appendix 5) about the study to help them make an informed decision as to whether participate. The information sheet contained details of the study's purpose, methods and risks, and also included contact names and telephone numbers of the investigators. Participation in the survey was considered as consent. Participants were not impelled to participate in the study and had the right to withdraw from the study by not completing the survey.

No information was collected that would identify any individual. Only information needed to accomplish the study was recorded. Data will be retained in a digital file on the Nursing Server in a password protected file for a period of 15 years as per the terms and conditions of clinical research data retention by Human Research Ethics Committees of all the three hospitals involved in this study.

Recruitment strategies

After receiving approval from the University of Adelaide and Human Research Ethics Committee (HREC) of the three hospitals, the researcher met the Clinical Service

Coordinators (CSC) of the Intensive Care Unit from all the three hospitals to discuss how the unit could help in the recruitment process. The Clinical Service Coordinators assisted by providing the names of the nurses working in the unit as per the eligibility criteria. The names were written on a sealed envelope which included the information sheet. These envelopes were then distributed to the nurses working in the units through their local mailing networks, for example pigeon holes.

A participant information sheet containing detailed information of the study and the link to complete the survey was used for this study (Appendix 5). The Clinical Service Coordinators reminded nurses to participate in the survey during their timely staff meetings, clinical update sessions, handover sessions and reminder column in the timely newsletter published within the unit to increase the response rate. Moreover, flyers were placed on the staff information notice boards two weeks after the distribution of the information sheet as a reminder.

Study Setting

The study was conducted in three different tertiary, general Intensive Care Units of metropolitan, public, tertiary teaching hospitals in Adelaide. These units have capacity to accommodate patients up to 24, 14 and 12 beds respectively. One of the Intensive Care Units is an acute trauma centre as well as providing care for the adult patients post brain and abdominal surgeries, trauma cases, retrievals from other hospitals, dialysis patients, long term ventilated patients, burns and spinal injury and multi organ failure patients and APACHE scores varied from zero - 74. The other two units dealt with general medical and surgical patients and APACHE scores varied from zero - 30. The patients admitted to these

units were respectively 1,600, 1,100 and 800 patients per year (Grealy & Pannell 2013, pers. comm., 22nd June).

Sampling

Sampling is a process where the researcher selects a proportion of the target population, as the study population to represent the whole unit. It is practical and economical to work with samples than with large target population (Polit & Beck 2010). Convenience sampling is one of the types of nonprobability sampling and uses accessible and available persons who fit in the eligibility criteria as sample (Roberts & Taylor 1999; Schneider et al. 2008b). This was the most appropriate sampling technique as the study aimed to identify the attitudes and awareness of nurses working specifically in the Intensive Care Unit (ICU). Due to time constraints and based on the objective of the study, all nurses working in the three ICUs who met the inclusion criteria were included in the study.

Data collection

A questionnaire was the tool used for data collection (Appendix 2). This was accessible online using Survey Monkey©. The link to this online questionnaire was stated in the information sheet that was given to the nurses who met the inclusion criteria. A period of four weeks was given to the respondents in order to complete the questionnaire.

Formation of the questionnaire

The questionnaire was the instrument tool for data collection (Appendix 2). A questionnaire is a self-reporting data collection tool where the participant provides their views, opinions, beliefs and knowledge about a specific item (Boswell & Cannon 2007). Questionnaires are quick to administer, not time consuming, economical, offer complete anonymity that enables the respondents to answer truthfully and has the ability to obtain larger samples (Polit & Beck 2008, 2010; Roberts & Taylor 1999). The questionnaire enables the

researcher to collect the information in a standardised manner (Rattray & Jones 2007). Disadvantages of questionnaires include sampling problems, ambiguity, misinterpretation of questions used, inappropriate for certain population (illiterate, confused, elderly and children) and a low response rate (Burn 1997; Polit & Beck 2010; Roberts & Taylor 1999).

There were two types of questions used in the questionnaire, open and close-ended questions (Polgar & Thomas 2008). The open ended question can be answered by the respondent in their own words with no restrictions enabling richer and thoughtful responses in highly sensitive issues (DePoy & Gitlin 2005; Polgar & Thomas 2008; Polit & Beck 2008).

The closed response questions have a limited range of answers, are tightly structured which may force inappropriate and superficial responses (DePoy & Gitlin 2005; Polgar & Thomas 2008). Examples of closed ended questions include dichotomous, multiple choice and Likert-type. The dichotomous is a yes/no type question where one of the two factual questions have to be answered (Polit & Beck 2008; Schneider et al. 2008a). The multiple choice questions enables the respondent to choose from the alternative options provided by the researcher (Polit & Beck 2008). The Likert-type questions are a set of respondent's response to the varying degrees of agreement or disagreement to a certain aspect (Burn 1997; Polgar & Thomas 2008).

While formulating the questionnaire, the language used should be clear, easily read and understood by the respondent and grammatically correct (Schneider et al. 2008a).

A questionnaire was formulated specifically for this study as there was no suitable data collection tool available in the searched literature. Several types of questions were developed by the researcher. These questions included open and closed end questions based on the literature. Multiple choice questions were used to identify the opinion of nurses in relation to the person to be approached to make a decision in case the patients have bowel problems. Likert scale with ratings from 1 (strongly agree) to 4 (strongly disagree) were used in order to identify the nurses' perception towards bowel care in the intensive care unit. The questionnaire started with employment details followed by nurses' perception, importance and awareness of the Bowel Protocol and opinion regarding methods of improvement. The questionnaire was finalised after the supervisors and the expert panel reviewed it. The questionnaire was reviewed by the Clinical Service Coordinators in the three Intensive Care Units included in the study. It was then modified as per the feedback received from these experts in the area. This strategy was used to help ensure content and face validity of the questionnaire.

Piloting of questionnaire

Once the approval from the Ethics Committee of the hospitals and University of Adelaide was received, the questionnaire was pilot tested. Pilot testing helps the researcher in finding problematic, confusing and irrelevant questions that may exist in the questionnaire, again assessing face and content validity (Burn 1997; Schneider et al. 2008b). A group of ten respondents were chosen for the pilot study including two Enrolled nurses, two Level 1 Registered Nurses with no specific critical care qualification, two Level 1 Registered Nurses with specific critical care education and four Level 2 Registered Nurses (two were Clinical Nurses and the others were Associate Clinical Service Coordinators) with critical care education. The reason for selecting these nurses was to test the tool with a group which reflected the expected profile of the target population and to identify any confusing and

irrelevant questions. These nurses were asked to provide feedback and comments about the questionnaire. According to the feedback obtained, there were a few changes made to the final questionnaire. Some questions required rewording to reduce ambiguities.

The final questionnaire

The final questionnaire included a total of sixteen questions (Appendix 2). The questionnaire included three questions related to demographic background, two closed ended, four open ended, four multiple choice and three Likert scale questions. The three demographic questions included level of employment, specific qualification and years of experience. Thereafter steps were taken to proceed with the data collection.

Issues of validity and reliability

Reliability and validity are the two important concepts used in the decision making within a study process (Boswell & Cannon 2007).

Validity

The validity of an instrument is defined as the accuracy of the instrument and whether it measures what it is expected to measure (Boswell & Cannon 2007; Polit & Beck 2008). The main types of validity are content validity, criterion-related validity and construct validity (Schneider et al. 2008a). The ways to improve validity are by consultation with the experts, undertaking a literature review and use the findings of quantitative studies (Polit & Beck 2008). As discussed above, the researcher conducted a literature review, discussed the questionnaire with the supervisors, consulted an expert panel and pilot tested the questionnaire.

Reliability

The reliability of an instrument is based on the consistency, stability and accuracy of the measurement of results (DePoy & Gitlin 2005; Schneider et al. 2008a). There are three

aspects of reliability – stability, internal consistency and equivalence (DePoy & Gitlin 2005). The stability aspect of reliability is measured when a test is administered twice to the same person under the same circumstances and the results when compared should be the same, also called as test-retest reliability (Boswell & Cannon 2007; DePoy & Gitlin 2005; Roberts & Taylor 1999). Internal validity is measured by correlation coefficient (Cronbach alpha) between zero (0) and plus one (+1.00), the closer the coefficient value to one (+1) the higher the internal consistency (DePoy & Gitlin 2005; Polgar & Thomas 2008; Polit & Beck 2008). Internal validity is most commonly used by nursing researchers (Polit & Beck 2008). Equivalency is an aspect of reliability in order to report whether one test is equivalent to the other (Boswell & Cannon 2007; Polit & Beck 2008).

Consistency was checked using Cronbach's alpha as described by Polit and Beck (2010). Cronbach's alpha was calculated using SPSS statistics for similar questions such as importance, understanding and implementation of the bowel protocol and grouped as 'attitudes'. The alpha score was 0.74 which is acceptable as a score above 0.7 is reliable according to Polgar and Thomas (2008).

Data analysis

Simple descriptive and content analyses were used to analyse the data obtained from the questionnaire (Harwood & Garry 2003; Polgar & Thomas 2008).

Once the data collection period was completed, the researcher analysed the responses from the questionnaires received. The data was coded for data analysis. Each participant was given a number and completed questionnaires were considered for analysis. The researcher

and one other person entered the responses checking for accuracy of data entry. The responses were entered into a spread sheet format using Statistical Package for Social Sciences© (Student version) (SPSS).

Descriptive statistics are used to demonstrate the characteristics of the data. Simple descriptive statistics were used to report the responses depending upon the type of data yielded by the questionnaire. These data included nominal, ordinal, scale or ratio data (Polgar & Thomas 2008). Data were presented using graphs where appropriate along with textual explanation.

Content analysis was used to analyse the data obtained from the open ended questions in the questionnaire. Content analysis is a type of data analysis, a method that can be used to combine the elements for both qualitative and quantitative data (Polgar & Thomas 2008). It is used to analyse a variety of written, verbal or visual content (Harwood & Garry 2003).

Content analysis helps the researcher to convert the open ended data to a structured one. The advantages of content analysis include flexibility in terms of research design, useful to develop an understanding of the meaning of communication and to identify the critical processes (Elo & Kyngäs 2008).

There are two types of approach in content analysis - inductive and deductive. In inductive content analysis the data moves from specific to general and in deductive content analysis

the data moves from general to specific (Elo & Kyngäs 2008). Inductive content analysis is used when the knowledge about a phenomenon is fragmented whereas a deductive content analysis is used for testing a theory in different situation or to compare categories at different time periods (Elo & Kyngäs 2008).

Since there was no previous study regarding the phenomenon, inductive content analysis was used in this study.

Process of content analysis

The three processes of inductive content analysis are preparation, organising and reporting. Preparation is the selection of the unit of analysis which can be a word or a theme; organising means making sense of the data and reporting includes analysing the process and providing the results (Elo & Kyngäs 2008; Polit & Beck 2004).

In inductive content analysis, organising processes include coding themes, creating categories and developing themes. Open coding is a process where headings and notes are written while the data is being read and the information is classified into themes, concepts and issues (Burn 1997; Elo & Kyngäs 2008).

Categorising data means grouping the similar items. This step provides information, increases understanding and provides knowledge about the phenomenon (Elo & Kyngäs 2008). The process of abstraction involves formulation of general description of a research topic (Elo & Kyngäs 2008).

In this study, headings and words were created as the responses were read. These were then classified into concepts and issues, similar ideas were grouped and a general description of the research was formulated.

Conclusion

This section focussed on the purpose of the study, described the research design, discussed ethical issues, presented validity and reliability issues and outlined the statistical analysis. A detailed description of the inclusion and exclusion criteria and recruitment strategies were covered in this section. An explanation of ethical issues was provided along with the maintenance of confidentiality of the participants. This chapter discussed the data analysis for quantitative data.

The following chapter will report the findings of this study. It will also present the response rate and findings. The findings of the study will be represented using bar diagrams and will be reported in narrations.

Results

Introduction

This chapter reports on the response rate and the findings of the study, investigating the attitudes and awareness of intensive care nurses regarding bowel protocol in the critically ill patients.

In order to summarise the data, the findings from the questionnaire were reported using graphs.

Data analysis

Frequency statistics along with graphical presentation were used to analyse and present the responses from the respondents. These included different level of nurses who responded to the questionnaire with their years of experience and specific qualification. Also frequency statistics were used to find out about the awareness, source and location of information and importance of the Bowel Protocol; who should be approached and who is responsible to commence it; when should it be commenced in the critically ill patients and the ease of understanding and implementing the Bowel Protocol that is currently used in the ICU.

Content analysis was used for the open-ended questions such as problems faced by the critically ill patients due to improper management of bowels, barriers and reluctance to implement the Bowel Protocol and opinions on better implementation of the Bowel Protocol.

Response rate

The total sample was 375 (n = 375), of which a total of 144 responded (n = 144) a response rate of 38.4%.

Level of employment

Of the total population included in the study, 73% (n = 105) were Level 1 Registered nurses and 23% (n = 33) were Level 2 Registered nurses and a minority where Level 3 Registered nurses (2%, n = 3) and Enrolled nurses (1%, n = 2) respectively (Figure 1).

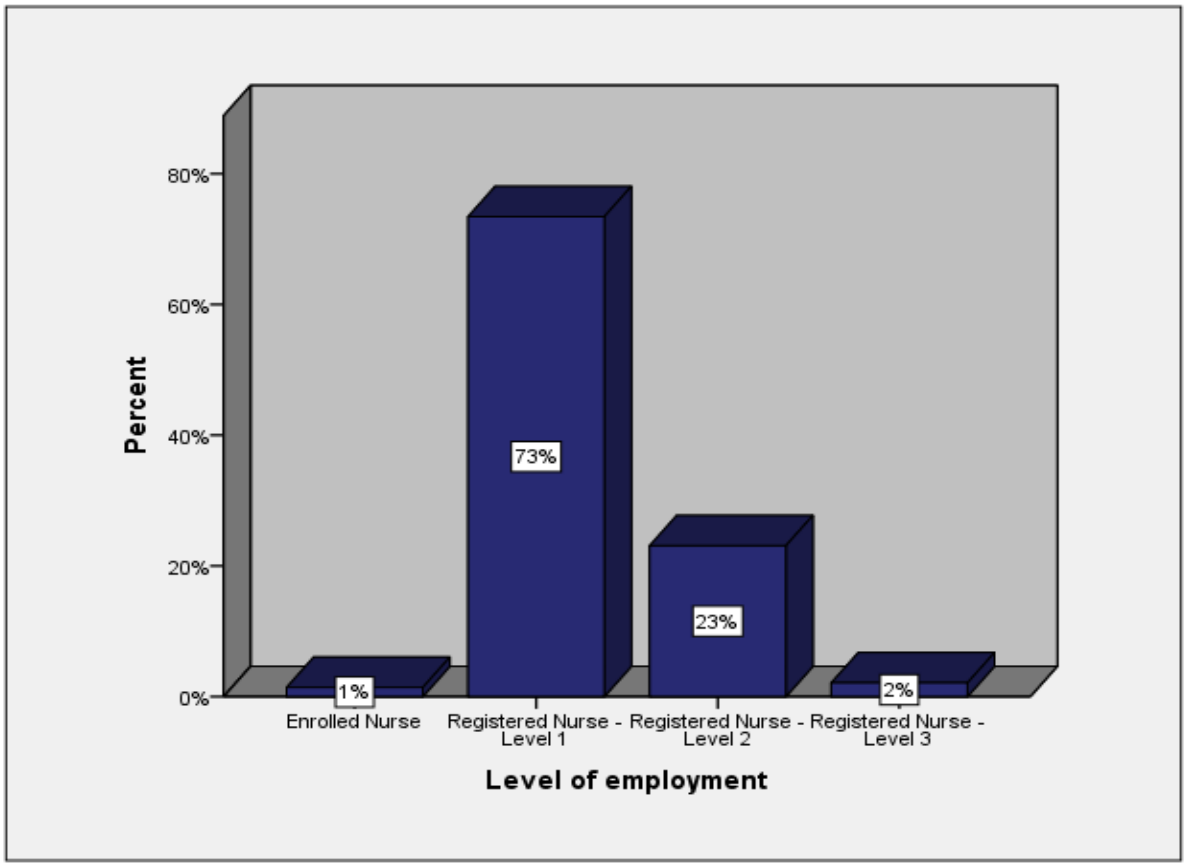

Figure 1 Level of employment

Critical care qualification and experience

About 39% (n = 56) nurses did not have any specific critical care qualification whereas 58% (n = 84) nurses had either a Critical Care Certificate (29%, n = 42) or a Graduate Diploma (ICU) (29%, n = 42) with a 2% (n = 3) nurses had a Masters level qualification (Figure 2). Twenty nine percent of nurses (n = 41) were very experienced in the ICU (>10 years to < 20 years), 27% (n = 38) had > 1 year to 5 years of experience and >5 years to < 10 years were

23% (n = 32). Only 12% (n = 17) of nurses had experience 3 months to 1 year and only 10% (n = 14) nurses had >20 years' experience (Figure 3).

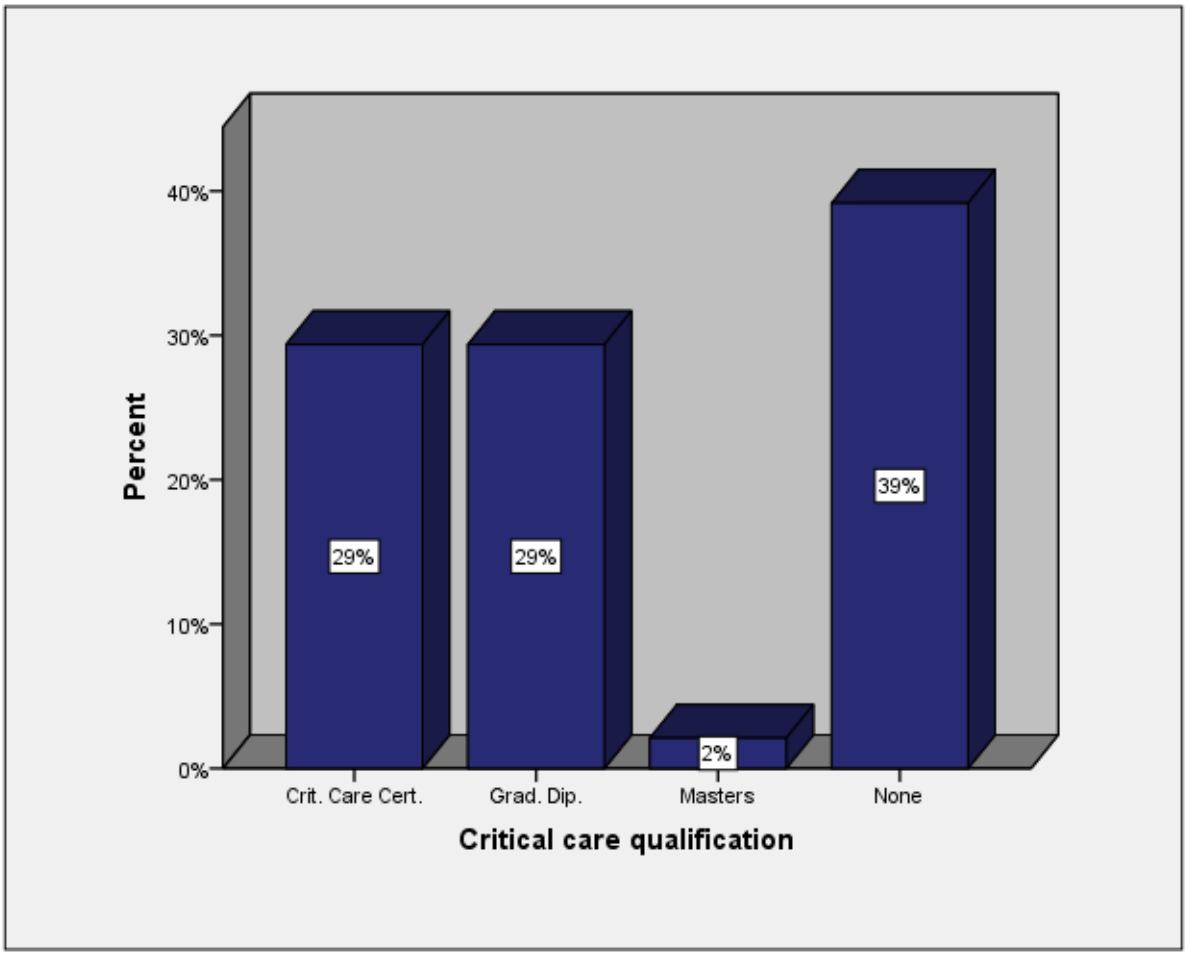

Figure 2 Critical Care qualifications

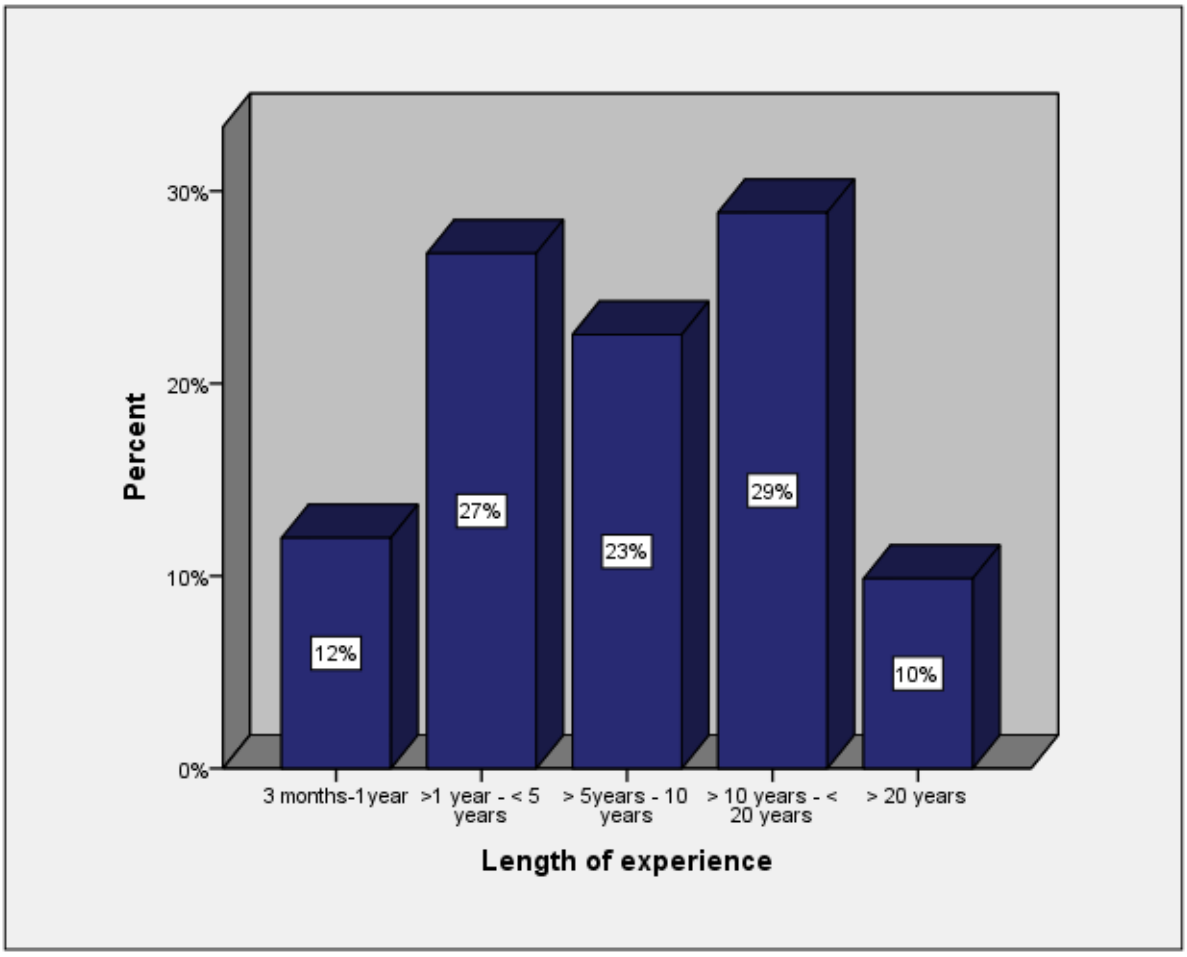

Figure 3 Length of experience

Awareness

It was also noted that 99% (n = 140) of nurses working in the intensive care unit were aware of the bowel protocol used in their respective units whereas only 1% (n= 2) were unaware (Appendix 1).

Analysis on awareness and attitudes of staff could not be measured based on their level of employment, specific qualifications and years of experience because there was no enough variation to allow analysis.

Source of information

The source of information regarding the Bowel Protocol differed as 55% (n = 77) were made aware during their orientation program, 13% (n = 19) from the ICU Chart. Less than 5% (n = 27) had a combination of single and multiple resources such as Hospital Website, Information sessions, Nursing care plan, ICU Manual, Senior Nursing Staff, Orientation and ICU Chart. But 11% (n = 16) of the nurses mentioned 'Other' but had not specified the source of information and 1% (n = 2) of the nurses were unable to recollect or remember the source of information (Figure 4).

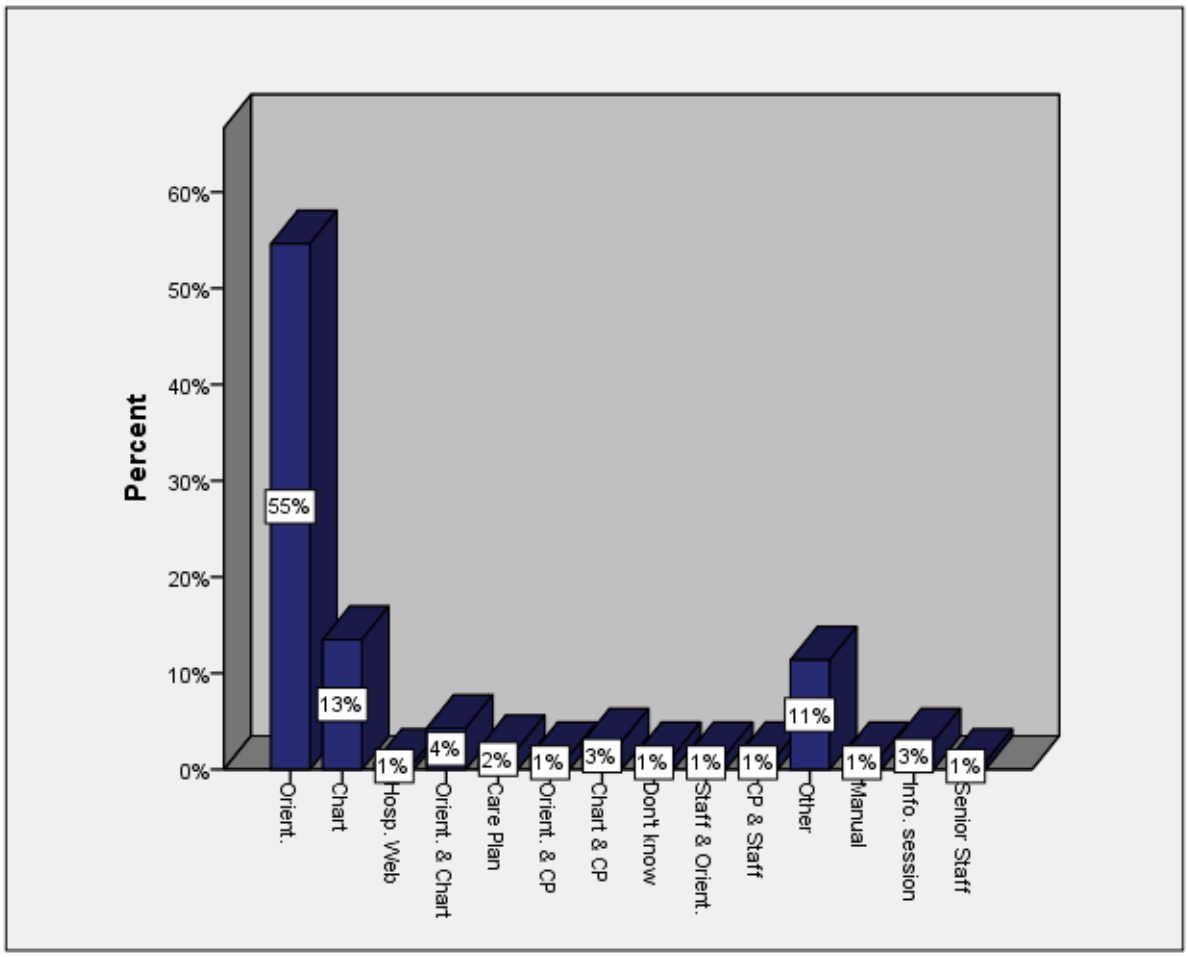

Figure 4 Source of Bowel Protocol knowledge

Location of information regarding Bowel Protocol

In all units the Bowel Protocol in ICU is located on the ICU Chart and Patient data folder. The majority of the nurses (60%, n = 85) identified that Bowel Protocol is located on the ICU chart. Of the remaining 39% (n = 53) nurses' responses indicated that hospital website, data folder, ICU care plan and nurses' station whereas 1% (n = 4) of nurses did not know where they could find the information (Figure 5).

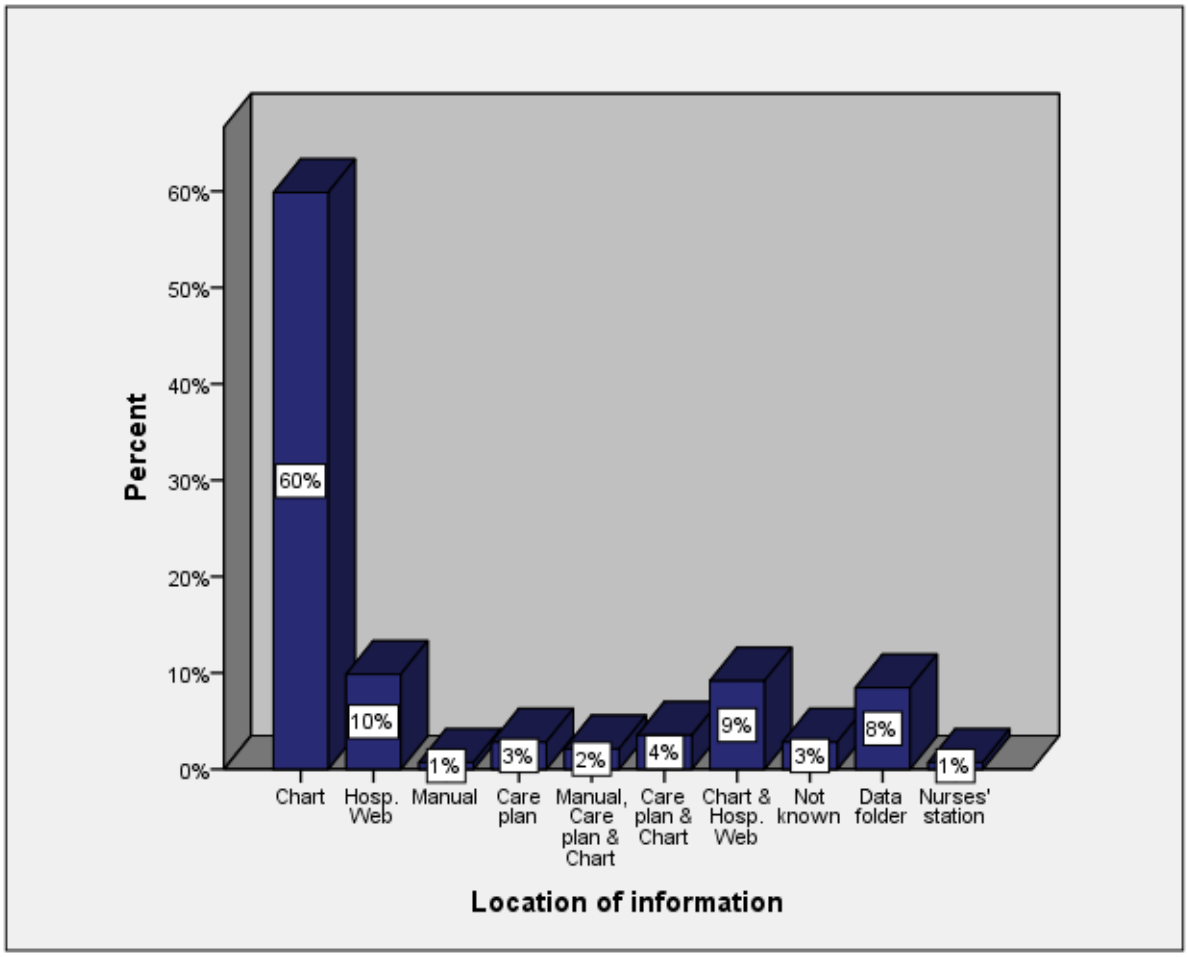

Figure 5 Location of information

Person to approach regarding bowel management in patients

Forty seven percent (n = 67) nurses indicated that ICU doctor and the Team leader were the people to be approached if there were any problems experienced to carry out the Bowel

Protocol. Twenty one percent (n = 30) responded that the Team leader was to be approached followed by 18% (n = 26) who mentioned that ICU doctor was the person to approach.

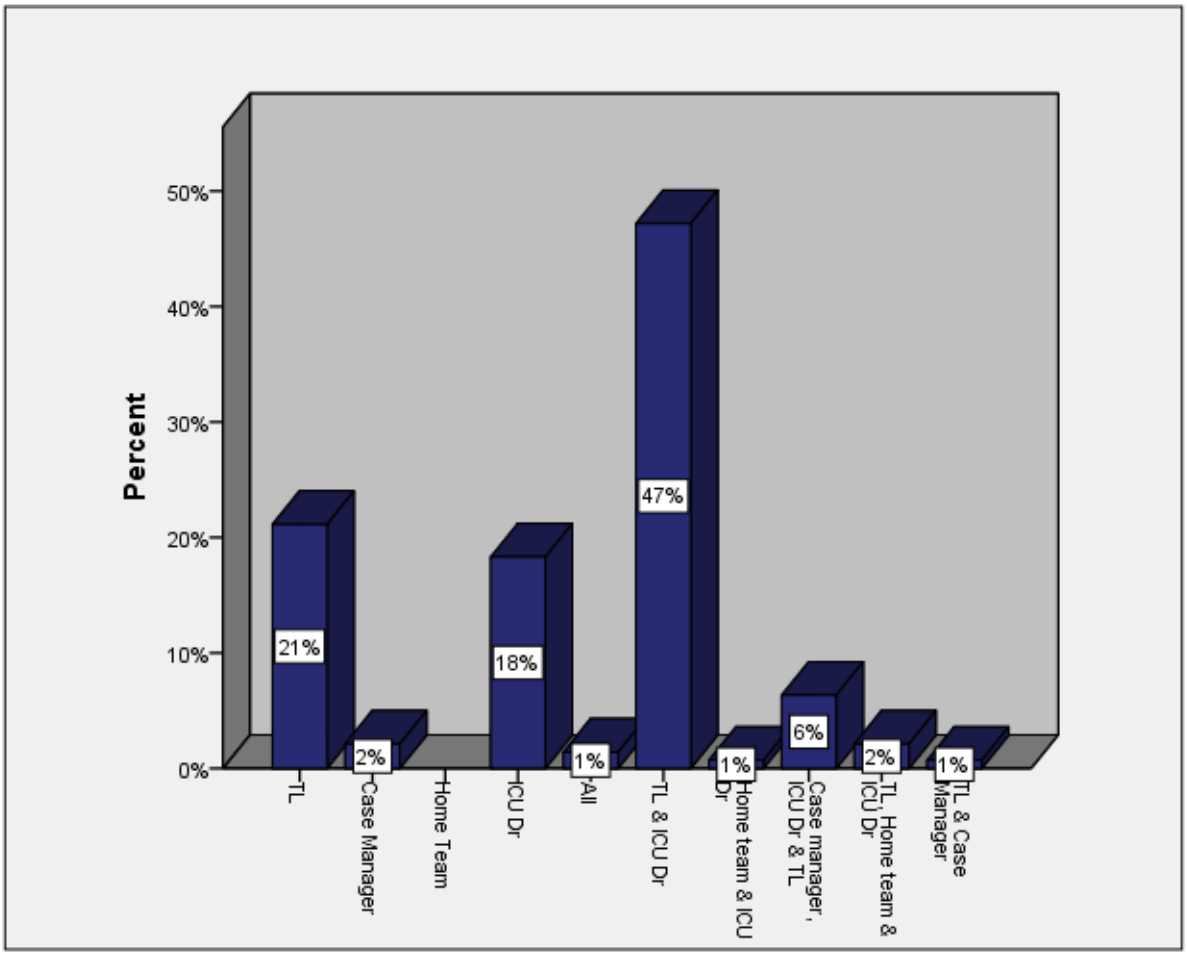

Figure 6 Person to approach

Importance of bowel management

All the nurses (100%) indicated that bowel management plays an important role in the progress of critically ill patients with a response of 79% (n = 112) as very important and 21% (n = 30) as important respectively.

When to commence the Bowel Protocol

There were variation in the responses as to when the Bowel Protocol has to be commenced in the patients admitted to the ICU, 42% (n = 60) indicated 'as soon as practical', followed by 27% (n = 38) who responded 'on admission', 17% (n = 24) thought 'within 24 hours' and 14% (n = 20) agreed to '24 – 48 hours' post admission to the ICU (Figure 7).

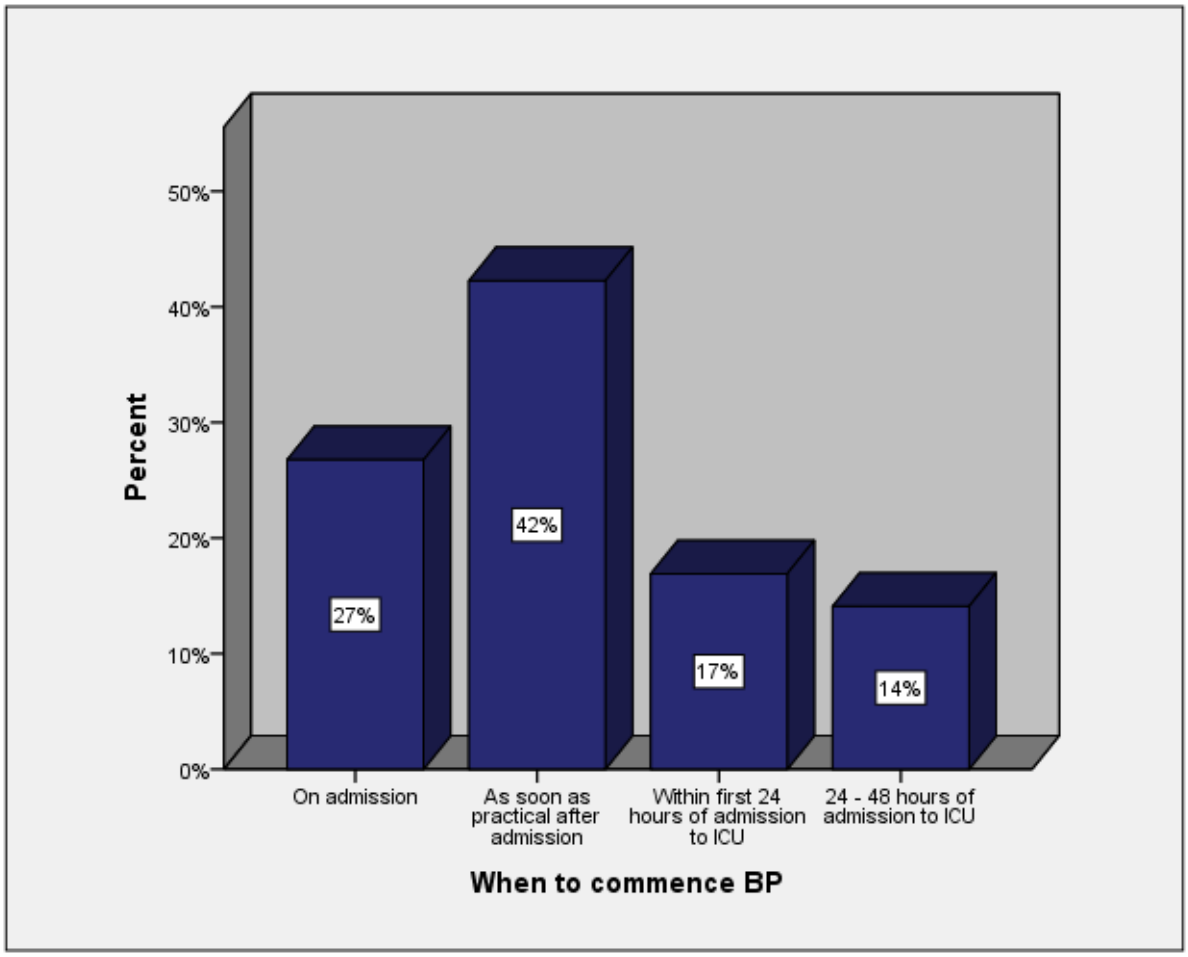

Figure 7 When to commence the Bowel Protocol

Who should commence the Bowel Protocol

Most of the nurses (40%, n = 57) thought that the patient care nurse should commence the Bowel Protocol whereas 13% (n = 19) thought that the ICU doctor should commence the protocol. There were multiple groups of people included as being responsible for

commencing the Bowel Protocol such as ICU doctor and Patient care nurse (15%, n = 21), ICU doctor, Patient care nurse and Team leader (14%, n = 20) and Patient care nurse and Team leader (6%, n = 8).

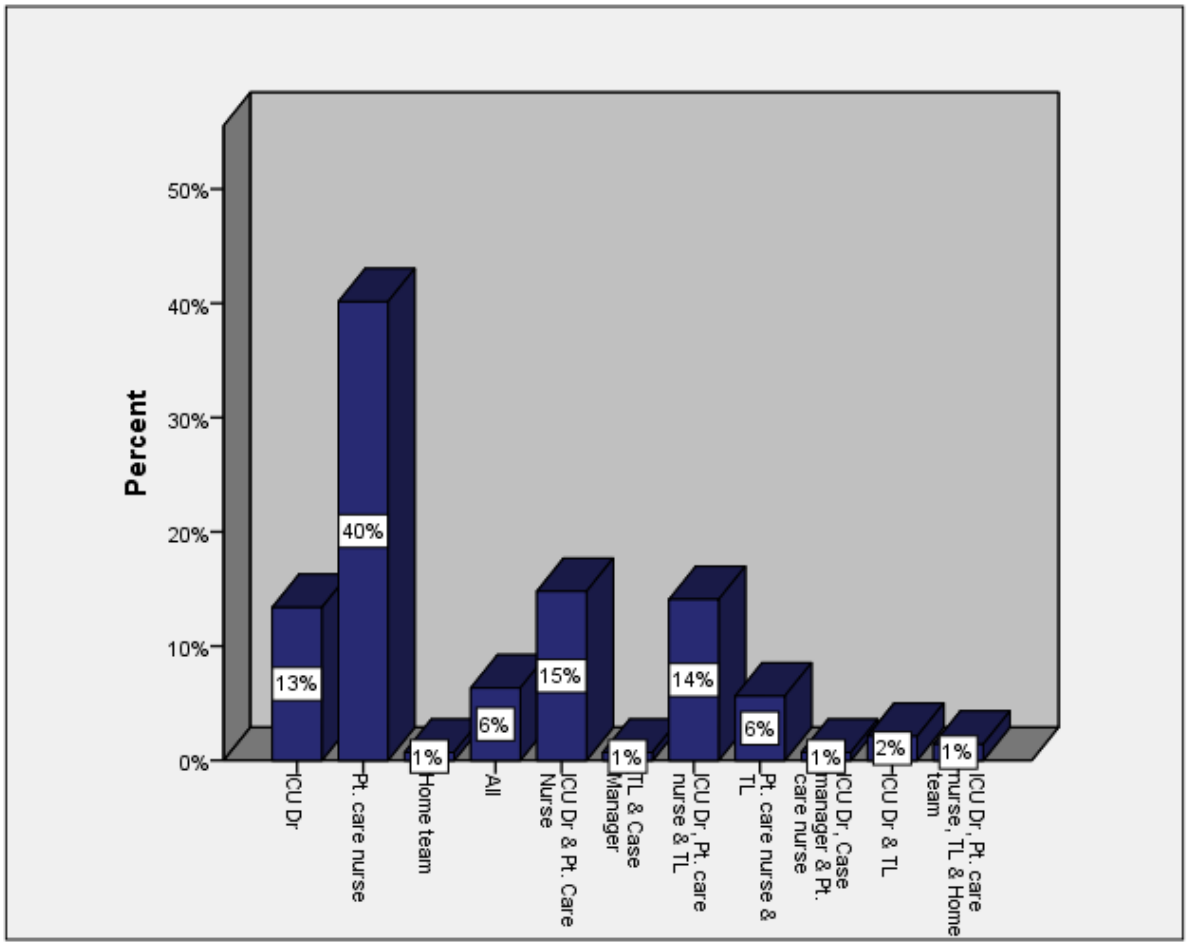

Figure 8 Who should commence the Bowel Protocol?

Bowel Protocol - easy to understand

The majority of the nurses (96%, n = 133) of which 44% (n = 62) (Strongly agree) and 50% (n = 71) (Agree) responded that the Bowel Protocol currently used in the ICU was easy to understand, whereas 6% (n = 9) disagreed with the statement.

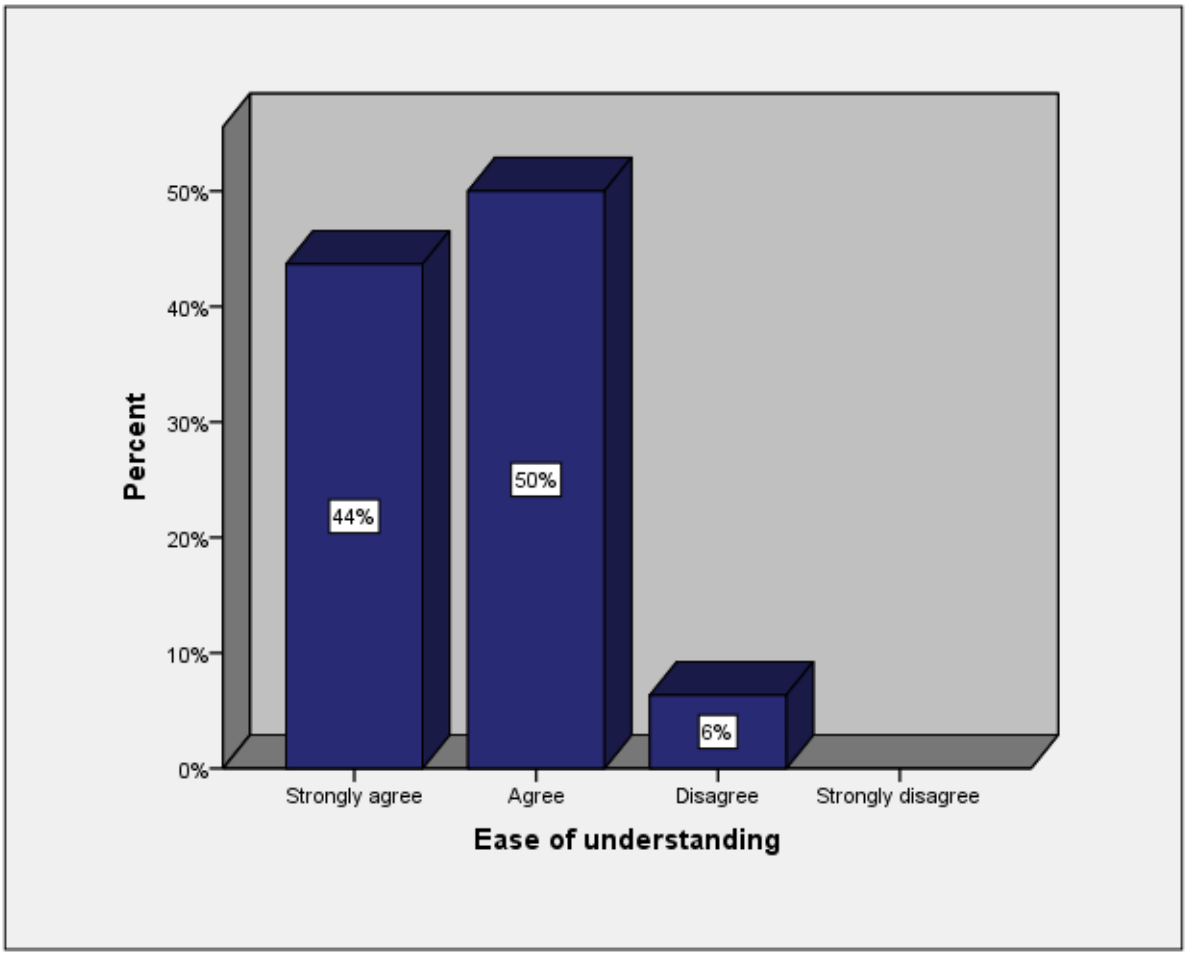

Figure 9 Ease of understanding

Bowel Protocol - easy to implement

Of the respondents, overall 96% (n = 136) agreed that the Bowel Protocol was easy to implement with 49% (n = 67) (Agree) and 47% (n = 69) (Strongly agree) only 4% (n = 6) disagreed with this statement (Figure 10).

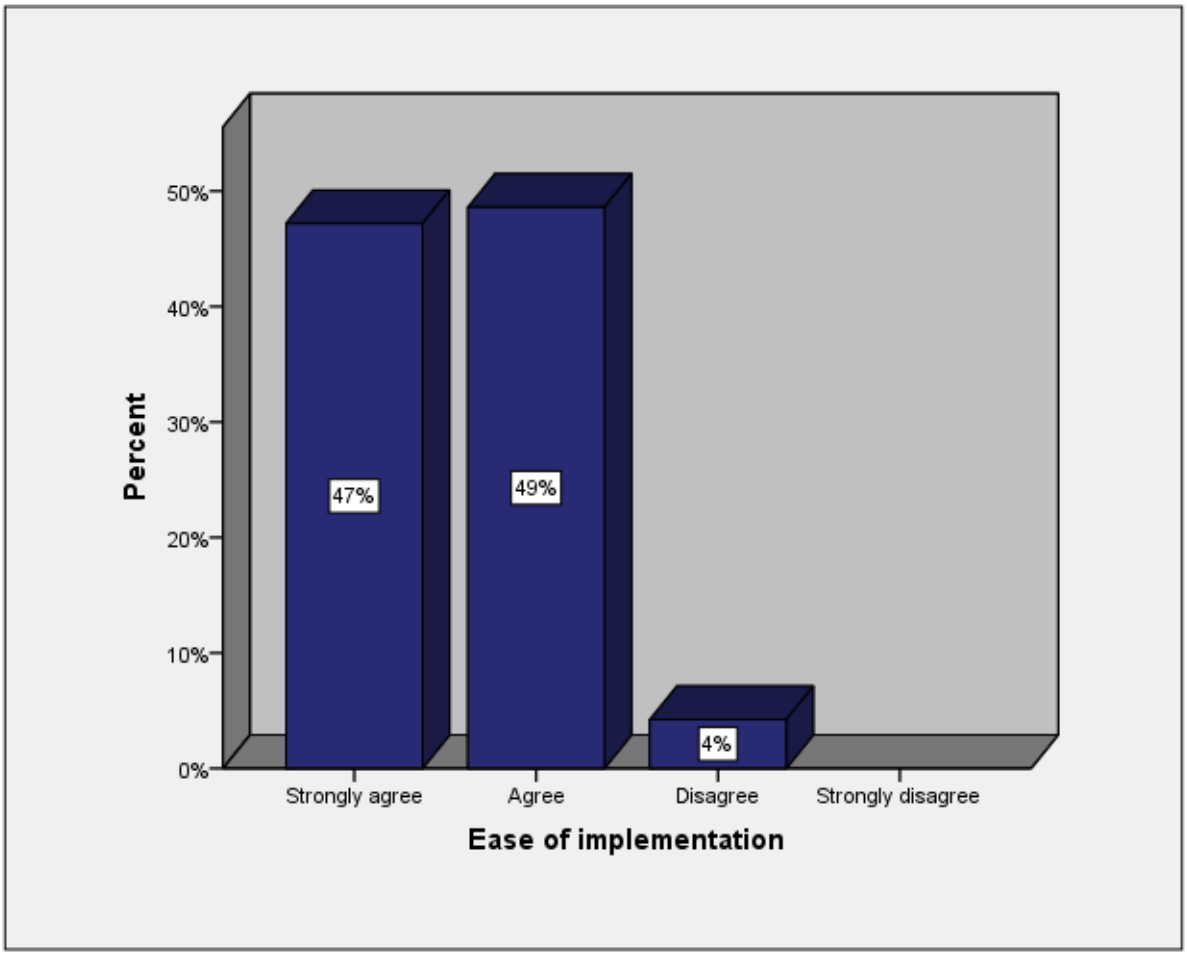

Figure 10 Ease of implementation

Content analysis

Content analysis was done on the four open ended questions. The four questions were:

- Comment on the problems that may occur if an ICU patient's bowel is not managed properly?
- What are the barriers to implementation to the Bowel Protocol in ICU patients?
- Why some nurses are reluctant to implement the Bowel Protocol?
- How can the Bowel Protocol be implemented more effectively?

Problems with improper bowel management in ICU patients

Certain categories were formed based on the respondents' listed significant and important problems that may occur in ICU patients if there is improper bowel management (Figure 11). They were:

Gastrointestinal problems

Constipation was listed as one of the main problems in patients followed by faecal impaction, bowel obstruction and abdominal discomfort and pain. Diarrhoea leading to electrolyte imbalances and skin excoriation with delayed wound healing was another concern mentioned by the respondents. Also mentioned were symptoms of nausea and vomiting, faecal overflow, decreased gut motility, dehydration and ulcers.

Respiratory problems

Difficult and prolonged ventilation with difficulty in breathing were some of the problems listed by the respondents, leading to extended ICU stay. Compromised haemodynamic status was another concern. Prolonged ICU admission results in increased expenses and costs.

Nutritional problems

Feed intolerance, malabsorption of feeds, aspiration and loss of appetite leading to poor nutritional status of ICU patients were respondents' areas of concern.

General problems

Agitation, restlessness, pain issues were other concerns. It was also indicated that if the bowel was not managed properly some patients required bowel surgery with death occurring as a result.

Barriers to implementation

The respondents' responses concepts on barriers to implementation of the Bowel Protocol were grouped under specific headings indicated below (Figure 12).

Attitudes of nurses

The respondents indicated that there were concerns of laziness, poor nursing care, and unwillingness of staff to administer aperients, non-compliance and incompetence of staff, along with lack of initiation, apathy and leaving the job to the next nurse.

Particular responses were

> *'No barriers just incompetence'* (Respondent 58)

and:

> *'Nurses not initiating or concerned with appropriate care, lack of attention to fundamental nursing care'* (Respondent 82)

and:

> *'Nurses not checking with doctor if they have forgotten to sign'* (Respondent 97)

Respondents also reported forgetfulness, being busy and no time to administer aperients as barriers to proper implementation.

Lack of accountability

Lack of education, awareness and understanding regarding the Bowel Protocol, inadequate supervision of the staff by the team leader and case manager, poor documentation and handover were other barriers listed by the respondents.

Some of the supporting statements were

> *'Different nurse in each shift hence level of understanding varies'* (Respondent 129)

and:

> *'Not knowing when to begin'* (Respondent 142)

Procedures

Some of the responses indicated that patients often go for procedures such as Computerised Tomography (CT) and Magnetic Resonance Imaging (MRI) scans of different parts of the body and therefore are kept fasting.

Also, patients in the post-operative phase after bowel surgery are not allowed to eat and drink or have enteral feeding either due to their clinical condition or the surgeons' preferences. Some of the ventilated patients may not have any access route for administration of oral laxatives.

Some respondents indicated that often bowel management is not the priority in relation to airway and haemodynamic management of patients.

Some of the responses were

> *'When patient is very sick (sic), need to prioritise other needs'* (Respondent 109)

and:

'Condition of the patient very unstable when turned' (Respondent 153)

and:

'Impossible to turn patients due to poor ventilation and gas exchange' (Respondent 151)

There was also a concern that the Bowel Protocol was inappropriate for patients who were awake as they were reluctant, uncooperative and did not consent for the administration of the aperients.

Lack of responsibility

The Medical officer or doctor not signing the aperients in the chart and unclear orders were the few barriers to implementation of the Bowel Protocol. One of the responses was

'Some nurses have said if it is not signed by the doctor then can't be administered' (Respondent 150).

Other

There were some respondents who indicated that there were no barriers to implementation whereas some were unsure of the barriers.

Reluctance to implement the Bowel Protocol

The themes of reluctance to implement the Bowel Protocol were similar to the barriers, but there were a few concerns about the consequences of aperients and cleaning up faeces, inadequate staff to turn in order to administer the aperients and the attitudes of nurses (Figure 12).

Consequences of aperients

One of the major concerns indicated by the respondents was laziness and a reluctance to clean up the mess or the 'gross factor' due to the consequences of aperients. The responses were

> *'Cleaning up poo can be disgusting'* (Respondent 39)

and:

> *'They don't want their patient using their bowels whilst they are looking after them 'NO POO IS GOOD POO' attitude'* (Respondent 102)

and:

> *'Do not want a volcanic explosion during their shift'* (Respondent 119)

and:

> *'Inconvenience and unpleasant'* (Respondent 140)

Attitudes of staff

Attitudes of staff were the most commonly indicated reluctance factor of implementation of the protocol. These included laziness, forgetfulness, lack of concern, lack of confidence, lack of documentation and apathy.

Inadequate staffing numbers

In order to administer the aperients there is a requirement of at least three staff to turn a ventilated patient for safety purposes, as per the hospital policy. It was indicated by many respondents that there were not enough staff to turn the patients and this is an important factor in reluctance to implement the Bowel Protocol for ICU patients. It was also indicated

that time constraints and busy shifts also contributed to the reluctance to implement the Bowel Protocol.

Effective implementation of the Bowel Protocol

The respondents indicated different ways for effective implementation of the Bowel Protocol. Most of them focused on increasing education and awareness, correct documentation, staff supervision, change of the times of administration of enema and a combined effort of the multidisciplinary team (Figure 14).

Increasing education and awareness

Increasing education and awareness was one of the most popular methods opted by the respondents for an effective implementation of the Bowel Protocol. It was indicated that all nurses involved including the inexperienced nurses should be educated regarding the importance of bowel management in critically ill patients, the requirement for regular assessment of the bowel function. Some of the responses were

> *'Part of nursing care and not to be ignored'* (Respondent 22)

and:

> *'Understanding patient health outcomes if Bowel Protocol is not managed properly'* (Respondent 122)

and:

> *'Regular in-service'* (Respondent 124)

Correct documentation

Improving the documentation of bowel movements, improved handover systems and a guideline to record the bowel movements were initiative suggested by the respondents. One of the suggestions were

> *' ...proper handover of bowel care during ISBAR (an acronym identify, situation, background, assessment and recommendation as a part of effective hand over system) so all are aware'* (Respondent 69)

and:

> *'More accurate recording A section on chart relating to daily bowel movements (similar to Bristol stool chart)'* (Respondent 134)

Staff supervision

It was also suggested that team leaders and case managers should be involved and needs to be more vigilant in checking the patient charts for bowel movement and appropriateness of the patient for the Bowel Protocol. Few of the responses were

> *'..TL checking when they do their 'round' of checking patients at the start of the shift...'* (Respondent 13)

and:

> *'....I think team leaders could take more responsibility in implementing the protocol and assessing it's effectiveness for short term patients. I understand that they have a lot to do some shifts but unfortunately they are the supervisors and should be making sure that bed side nurses don't forget about the bowel protocol. -Case managers should then look at the bowel protocol for long term patients and assess effectiveness.'* (Respondent 42)

Also the team leader could remind the bed-side nurses while conducting their patient checks. Suggestions were made to improve the actual bowel protocol by either highlighting it on the chart or by making protocol charts that can be easily accessed by the staff.

Combined effort

It was proposed that implementation of the Bowel Protocol in ICU patients should be a combined effort and that patient care nurse, team leader, ICU doctor and dietician should be involved. There was also a suggestion that the patient care nurse should be more proactive and take initiative in the implementation of the Bowel Protocol.

Other

Some respondents indicated that they did not find any problems whereas others suggested that there should be some kind of reward or competition. One of the respondents refused to comment as they indicated they did not want to be rude.

Conclusion

This chapter has presented the analysis of the data generated by the questionnaire. Statistical analysis was performed for the closed ended and scale questions in the questionnaire. Content analysis was used for the four open ended questions. The questionnaire was sent to 375 nurses and 144 (38.4%) answered the questionnaire.

The majority of the respondents were Level 1 Registered Nurses and did not have any specific qualification specific to the area of critical care. But most of them had experience of more than 10 years and 58% (n = 84) of the respondents had either Critical care certificate or a Graduate Diploma in ICU.

Even though majority (99%, n = 140) of the nurses were aware of the Bowel Protocol, the source and location of information varied.

All of the respondents agreed that bowel care was important in critically ill patients and majority of them mentioned that it should be commenced as soon as practical. It was suggested that the team leader and the ICU doctor were the most appropriate persons to approach if the patient were having bowel problems. There was also an indication that patient care nurse should be the one to commence the protocol in patients. The majority of the respondents found that the Bowel Protocol used in their unit was easy to understand and implement.

The content analysis of the open ended questions raised some important themes, issues and recommendations. The problems that may result if bowel care is not implemented were mainly classified into gastro-intestinal disturbances, poor respiratory functions, altered nutrition and general health problems based on the responses.

The barriers to implementation of the Bowel Protocol included attitudes of nurses, lack of accountability, lack of responsibility and procedures. The reluctance included the consequences of aperients, attitudes of staff and inadequate staffing levels.

The suggestions for effective implementation of the Bowel Protocol were to increase the education and awareness, correct documentation, and provide staff supervision and a combined effort.

The following chapter will discuss the study findings in relation to the literature. It will also discuss limitation and implications of the study and the recommendations for further research.

Discussion

Introduction

The previous chapter elaborated the findings of this study. This final chapter discusses the findings of the study in relation to the literature. Limitations of the study are discussed in this chapter with a conclusions and recommendations for further research.

Restatement of the problem

The Bowel management protocol is used for the patients admitted to the ICU to promote recovery, maintain normal functions of the gastrointestinal system and prevent complications in critically ill patients. The literature review highlighted the importance of bowel management in critically ill patients but is often overlooked and ignored (Ritchie et al. 2008). There is no study based on the reasons for non-compliance and the nurses' opinion and views regarding the Bowel Protocol. These gaps in the literature have given the researcher a focus for this particular study.

A questionnaire was formulated to assess the awareness and attitudes of nurses working in the intensive care regarding the Bowel Protocol used in the critically ill patients. Specifically, the aim of this study was to answer the question 'Are nurses working in the ICU aware of a bowel protocol available in their working environment and what their attitudes are concerning this protocol?' The study attempted to explore the attitudes of the nurses. The reasons to why the bowel management protocol was ignored on daily basis were identified. The findings of this study have identified certain issues and concerns that can be improved.

Summary description of procedure

The study used a descriptive design in the form of a survey and used a questionnaire for data collection. The design allowed the researcher to explore and investigate the attitudes and awareness of nurses working in the Intensive care unit towards the Bowel Protocol used in their area for critically ill patients. The study started with the formation of a research protocol and sought ethical approval from the University of Adelaide Ethics Committee and Human Research and Ethics Committee (HREC) of three hospitals.

The questionnaire was developed as no suitable data collection instrument was identified during the literature review. The draft of the questionnaire was developed by the researcher and was improved following discussion with the supervisors. The draft was then reviewed by the Clinical Service Co-ordinators of all the three hospitals for their opinion. Once the approval of the proposal was confirmed, pilot testing of the questionnaire was undertaken. This was done by distributing the information sheet along with the link to the online survey to the different level of nurses working at one hospital. After the questionnaire was edited, the information sheets were then distributed to the nurses as per the eligibility criteria. Reminders were posted in the form of flyers, information sessions and inclusion in the timely newsletter.

Data from the questionnaire were then analysed based on the type of question. Closed ended and scale questions were analysed using simple descriptive statistics and content analysis used for open ended questions.

Major findings and their significance to clinical practice

The finding of this study indicated that most of the nurses working in the Intensive Care Units of the three specific hospitals were experienced and qualified in this specialty. The respondents' indicated good knowledge regarding the problems secondary to improper bowel management in critically ill patients. However the study highlighted a reluctance to implement the Bowel Protocol, and did suggest methods to ensure effective implementation.

Even though the majority of nurses are aware of the protocol, there was some diversity regarding the location and source of information. The results indicated that all the nurses involved in the study agreed that bowel management was very important for critically ill patients. The majority indicated that the Bowel Protocol should be commenced as soon as practical after admission of the patient to the ICU. Although the results show that the team leader and the doctor were the people who should be approached if the patient experienced bowel problems, the patient care nurse is the one who should commence the protocol for their patients. At the end of the day it is the responsibility of the patient care nurse as they are accountable for all the actions they provide to their patient's care (Australian Nursing and Midwifery Council 2005).

Most of the participants' expressions correlated to the existing literature that gastro-intestinal problems are more common in mechanically ventilated patients (Reintam et al. 2009). An overview of the problems with improper bowel management is shown in Figure 11. Constipation was one of the most common problems mentioned in the questionnaire if the bowel was not managed properly. The effects of constipation results in abdominal distension and pain, failure to wean from mechanical ventilation, prolonged ICU stay and

increased mortality (Masri, Abubaker & Ahmed 2012). Diarrhoea is the other common problem seen in critically ill patients. It can cause fluid and electrolyte imbalances, malnourishment and skin excoriation in critically ill patients (Ferrie & Daley 2011; Rees & Sharpe 2009). All problems are interrelated to each other and one affects other and vice versa (Figure 11).

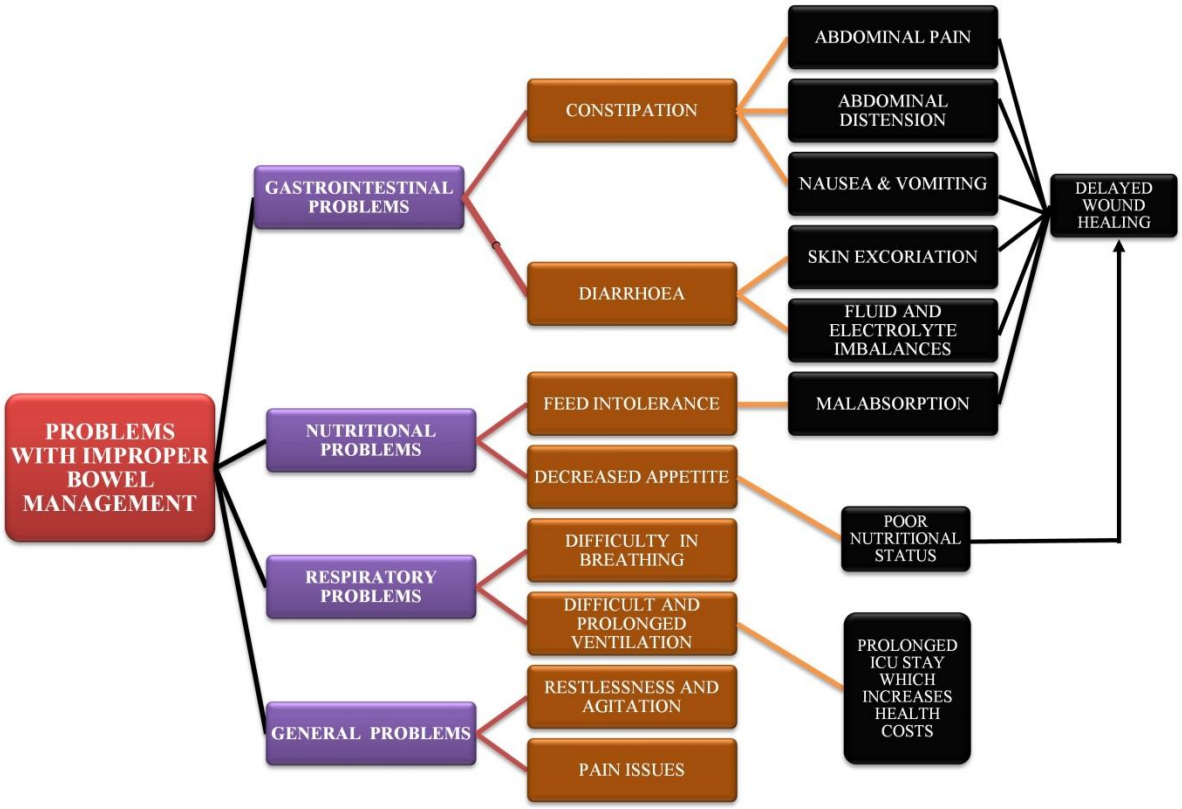

Figure 11 Problems with improper bowel management

Even though the nurses were aware of the protocol that is currently used in their area, the findings of this study have raised some concerns relating to the attitudes of the nurses, and accountability and responsibility. A diagram was drawn stating the reasons for barriers of implementation of bowel protocol as shown in Figure 12. The attitudes of nurses play an

important role in patient care. This study has found that nurses were not enthusiastic when it came to cleaning up the patient after the occurrence of defecation due to the bad smell and most of them perceived it as a ‘disgusting job’. This seems to be a very sensitive but a realistic problem that may result in unwillingness and reluctance to implement bowel care. Since nursing is a profession that cares for the patient in all aspects, the nurse should view bowel management as a professional responsibility irrespective of their personal thoughts.

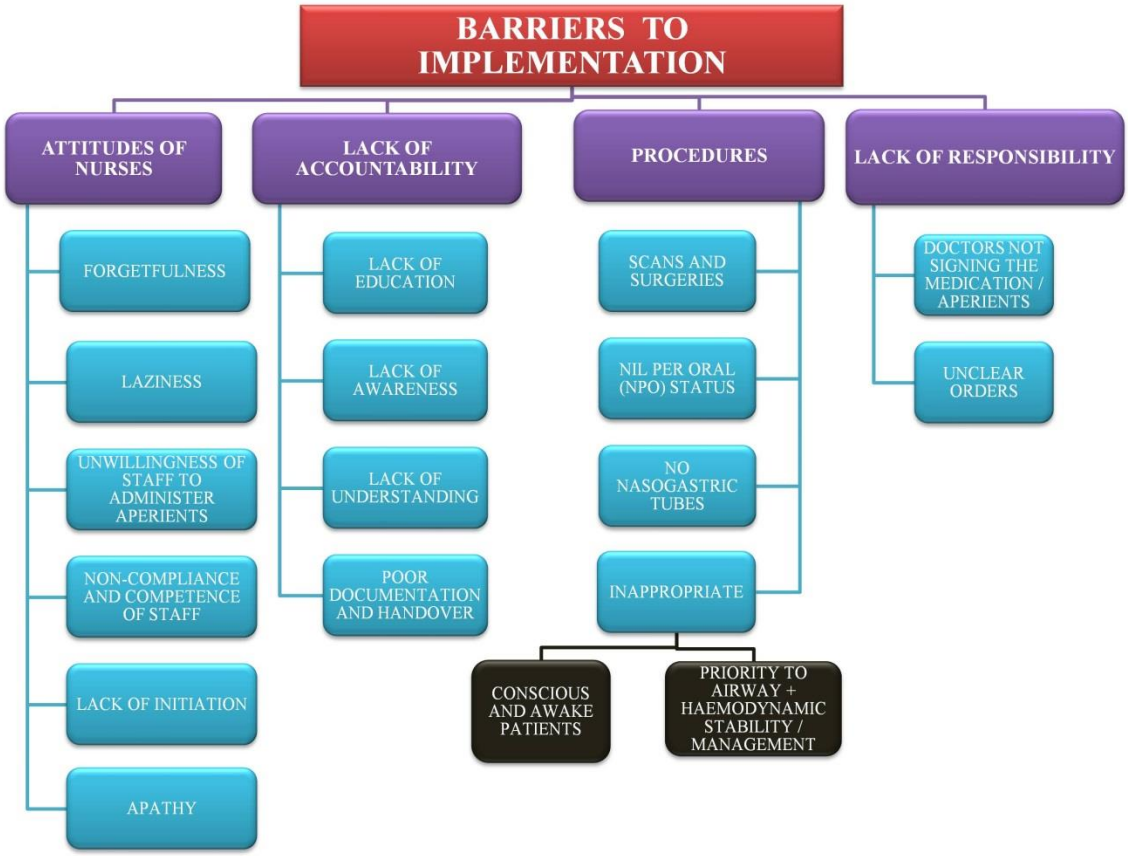

Figure 12 Barriers to implementation

The reluctance to implementing the bowel protocol were due to lack of accountability and responsibility were expressed as areas of concern with issues of time constraints, lack of

staff motivation, negligence and inadequate knowledge and awareness as shown in Figure 13.

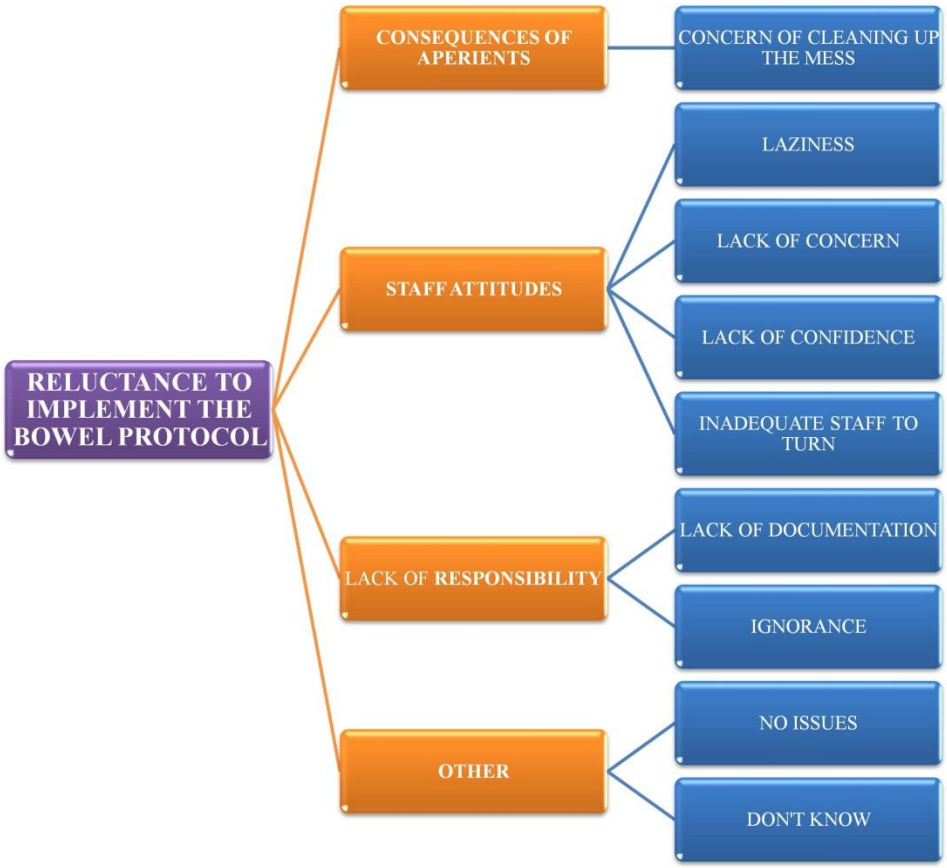

Figure 13 Reluctance to implement the bowel protocol

The findings of this study supports the studies in the literature conducted by two research studies such as Dorman et al. (2004) and McPeake, Gilmour and MacIntosh (2011) . One of the suggestions for effective implementation was educating and creating awareness among nurses regarding the importance of bowel care and encouraging them to religiously follow the bowel protocol would benefit the patient in the long run. Use of education packages along with the Bowel Protocol would benefit the nurses' knowledge and awareness (Ferrie

& East 2007). There is an overview picture drawn on the different methods that can be implemented for effective bowel management in critically ill patients (Figure 14).

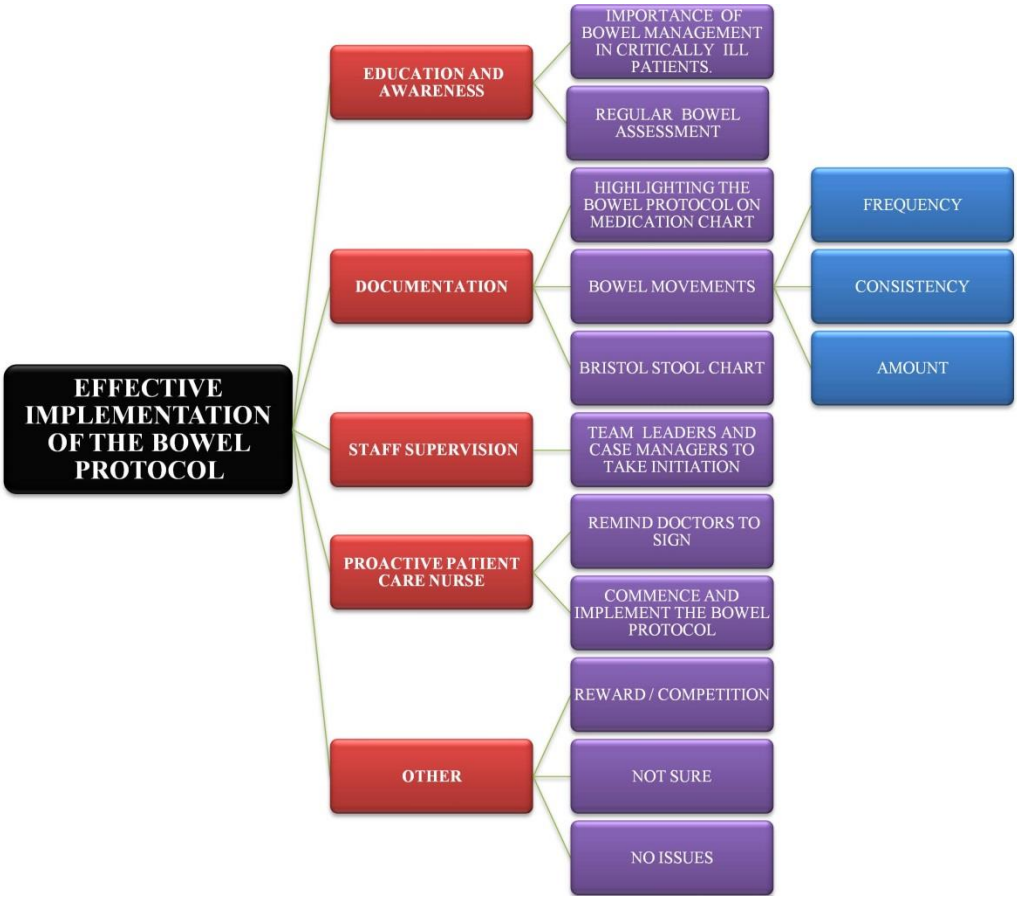

Figure 14 Effective implementation of the bowel protocol

Study limitations

The findings of this study cannot be generalised to all the nurses as the current Bowel Protocol used in the three hospitals included in the study were not the same. A low response rate of the survey indicates that it cannot be generalised to a wider population. It was reported that the respondents found it difficult to access the online survey despite provision of the link to the survey via an information sheet.

It was also reported by some nurses that if the survey was already completed by a person on a computer then the computer system would not allow the second person to do the survey in the same computer at work. This meant the nurses either had to use their own personal computer in order to complete the survey. This could not be guaranteed as they might have other commitments and may tend to forget about the survey.

Due to delayed approval from the ethics committees, the time frame given to the participants to complete the survey may have been inadequate.

In addition, no other studies were found similar to this study. So it was difficult to compare and contrast the results of this study to the previous one. There is also a need for the replication of this study in another setting.

Recommendations for further investigation

Recommendations for future study are as follows:

- Research should be conducted to investigate this problem further with an observational method to observe actual practice relating to bowel care and add clarity to the barriers impacting on implementation of the bowel protocol.
- To repeat this study after a period of time to assess any increase in the level of knowledge and any improvement in attitude, accountability and responsibility after making the results of this study known to the participants.
- To encourage nurses to attend in-service education and regular updates with evidence based practices related to bowel care.

- A further study could include comparisons of the attitudes and awareness of nurses working in other public and private hospitals and audit the actual compliance.

Conclusion

This chapter has discussed the study findings in the context of the literature. The restatement of the problem and description of the procedures are summarised briefly. In this chapter, intensive care nurses' attitudes and awareness towards the Bowel Protocol in critically ill patients was discussed. The findings were compared in relation to the existing literature as much as possible. Limitations and recommendations were also addressed in this chapter.

This study addressed a gap in the literature and has overall identified intensive care nurses' awareness and attitudes towards bowel management in critically ill patients. Major findings from this study indicate that there is a need for further education regarding the importance of bowel management in critically ill patients. Also nurses need to be accountable for their actions. This study has major implications for the overall management and provision of holistic care to the critically ill patients.

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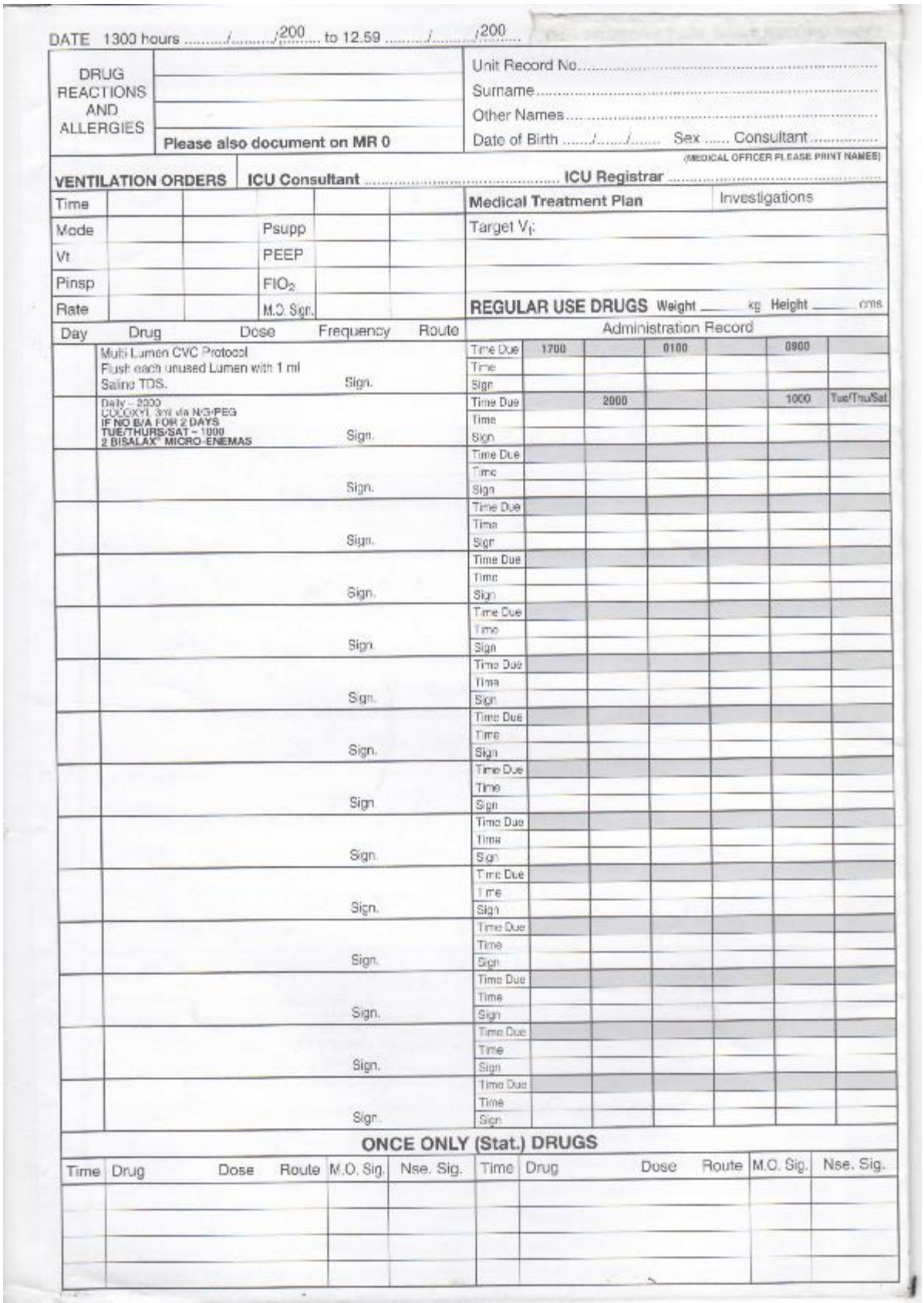
APPENDICES

Appendix 1 Bowel Protocol

Hospital 1



DATE 1300 hours ...../...../200 to 12.59 ...../...../200

DRUG REACTIONS AND ALLERGIES

Please also document on MR 0

Unit Record No.....
Surname.....
Other Names.....
Date of Birth ...../...../..... Sex ..... Consultant.....
(MEDICAL OFFICER PLEASE PRINT NAMES)

VENTILATION ORDERS ICU Consultant ..... ICU Registrar .....

Time					
Mode			Psupp		
Vt			PEEP		
Pinsp			FIO_2		
Rate			M.O. Sign.		

Medical Treatment Plan | Investigations

Target V_i:

REGULAR USE DRUGS Weight ____ kg Height ____ cms

Day	Drug	Dose	Frequency	Route	Administration Record
	Multi Lumen CVC Protocol Flush each unused Lumen with 1 ml Saline TDS.			Sign.	Time Due 1700 / 0100 / 0900 Time Sign
	Daily – 2000 COLOXYL 3ml via NG/PEG IF NO B/A FOR 2 DAYS TUE/THURS/SAT – 1000 2 BISALAX® MICRO-ENEMAS			Sign.	Time Due 2000 / 1000 Tue/Thu/Sat Time Sign
				Sign.	Time Due Time Sign
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				Sign.	Time Due Time Sign

ONCE ONLY (Stat.) DRUGS

Time	Drug	Dose	Route	M.O. Sig.	Nse. Sig.	Time	Drug	Dose	Route	M.O. Sig.	Nse. Sig.

Hospital 2

Government of South Australia
Central Northern Adelaide Health Service

BOWEL REGIME FOR VENTILATED PATIENTS

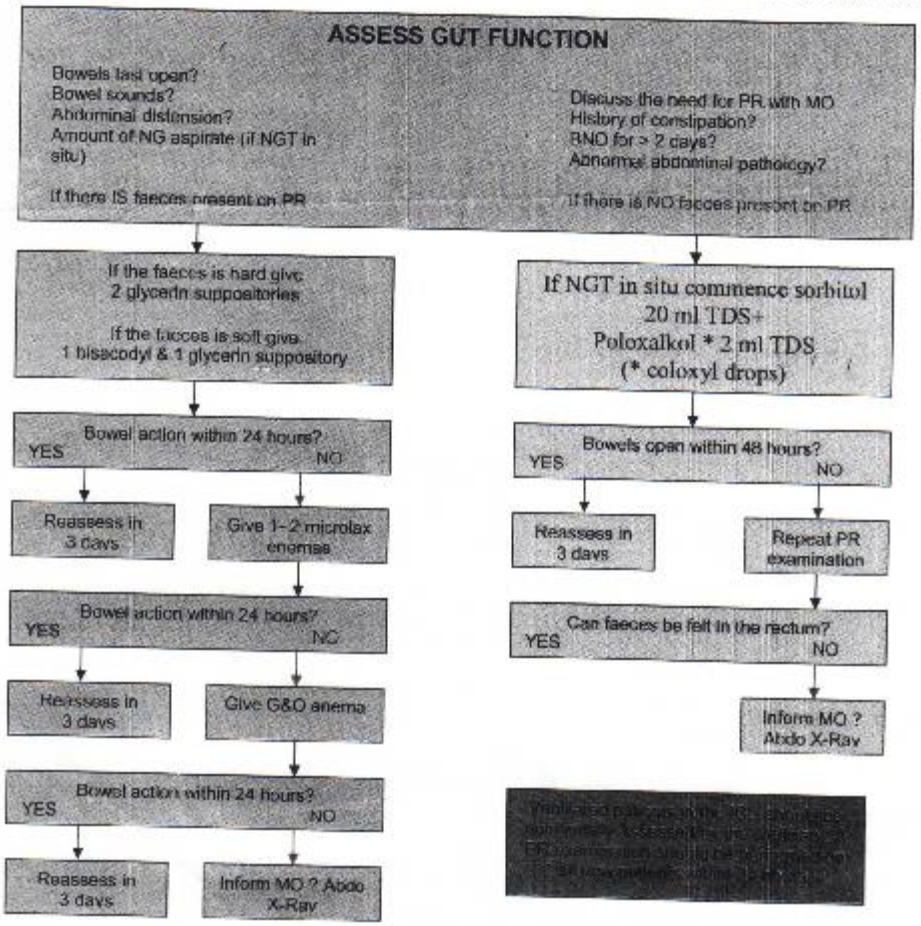
Constipation is defined as infrequent or difficult defecation caused by decreased motility of intestine. As a result, faeces remain in the colon for prolonged periods of time, leading to water absorption and hardening of stool. Critically ill patients require time to stabilise their condition. Time is also needed to establish enteral feeding in the critically ill. Three days to stabilise a patient and to establish enteral feeding is a pragmatic definition of constipation, which is reasonable, practical and workable.

The critically ill patient may become constipated for several reasons. Sedatives, particular opiates, can decrease gut motility, immobility, dehydration, lack of fibre in diet, additionally critically ill patients cannot mobilise to the toilet respond to the urge or strain to defecate.

Constipation can cause abdominal distension, vomiting, restlessness, gut obstruction and perforation. It has also been associated with fatal pulmonary embolism.

Studies have shown that over 40% of constipated patients failed to wean from mechanical ventilation, a figure significantly higher than in similar, non-constipated patients. Distension, discomfort and restlessness from constipation could explain this failure to wean – it could be the inability of the ventilatory muscles to cope with increased workload caused by distension from constipation.

"Constipation and it's implications in the critically ill patient" – S.M. Mostafa, et al: British Journal of Anaesthesia, 2003, Vol 91 No. 6 815-819



Hospital 3

Intensive Care: Clinical Guidelines & Protocols

Bowel Management Guidelines

Bowel & Gastro-intestinal functioning assessment

- Establish what the patients normal bowel habit's are including any use of laxatives
- Monitor bowel function
- Rectal examination for possible constipation if bowels not open for three consecutive days [include days prior to admission to ICU in this calculation]
- Gastric aspirate volumes
- Inspection & palpation of abdomen, noting tenderness, pain or distention
- Presence or Absence of bowels sounds

Stool Assessment

Bristol Stool Form Scale			Bowel Management Protocol
Grade	Description		Stool Description
0	No Bowel movement		Diarrheoa
1	Separate hard lumps; like nuts, hard to pass		
2			Loose
3	Sausage-shaped but lumpy		
4	Like a sausage but with cracks on the surface		Soft / semi-formed
5			
6	Like a sausage or snake but smooth and soft		Hard / formed
7	Soft blobs with clear-cut edges; easily passed		
	Fluffy pieces with ragged edges; a mushy stool		
	Watery; no solid pieces, entirely liquid		

Maintenance of Good Bowel Function

- Minimise sedation, anaesthetic agents and choose analgesics carefully
- Encourage patient general physical movement eg. Sit out of bed when appropriate
- Good hydration
- Implement adequate dietary fibre when possible
- Implement enteral nutrition which increases faecal bulk and provide gastric fluid
- Administer 3mls NGT/oral coloxyl daily, except for patient's with diarrhoea or on established enteral nutrition with normal bowel function.

Constipation Management

- Absence or decrease in bowel movements with decreasing stool's for 2 consecutive days
- Treatment options are; i) Bulk forming agents to increase faecal size, ii) Stimulants to increase peristalsis and iii) Osmotic agents to draw fluid into the gut.
- Remove any faecal impaction through use of enema's prior to treatment with stimulants
- Initial treatment for constipation 2 durolax suppositories or microlax enema's

- If unsuccessful then subsequent treatment is sorbitol 20mls TDS till resolved

Diarrhoea Management

- Check for cause of diarrhoea eg. Infection (E coli) Hepatic failure treatment (lactulose), Constipation treatment (laxatives), Fibre enriched foods / enteral feed
- Rectal examination to eliminate diarrhoea as overflow from faecal impaction
- Test specimen for E coli, clostridium, Norovirus
- Remove cause if able or start treatment of cause if appropriate
- If persistent "grade 7" diarrhoea and / or patient at risk of sacral tissue breakdown then insert faecal management tube system – see procedure for detailed guidelines
- Remove faecal management tube system when stool formation recovers

References; ACCCN's Critical Care Nursing, 1st Edition 2007, Editors Elliott, Aitken & Chaboyer
ConvaTec Flexi-Seal Faecal Management System product information

Appendix 2 Questionnaire

Information sheet

Dear Nurse,
I am currently studying for my Masters of Nursing Science at the University of Adelaide. The title of my research project is:
'Attitudes and awareness of intensive care nurses regarding the bowel protocol for critically ill patients'
Researcher: Rency Varghese, Masters of Nursing Science, University of Adelaide, Adelaide, South Australia 5000.
Telephone Number: 0422037661. Email: rency_varghese@yahoo.com
To be eligible to complete this survey you need to be a nurse employed in the Intensive Care Unit in which you are currently working for more than 3 months.You also need be directly involved in patient care (EN or RN 1 - 3)
The purpose of this research project is to investigate the attitudes of nurses to the bowel regime for critically ill patients.
Participation in the survey will be considered as consent. The questionnaire will take about 15 minutes to complete.
Please understand that participation is not compulsory and you are free to withdraw by not completing the survey. No information will be collected which will identify any individual. All data will be combined and then analyzed.
Any complaint regarding the nature or conduct of this research may be directed to:
Ethics Liaison Officer, Human Research Ethics Committee, University of Adelaide, Adelaide, South Australia, 5000.
Telephone: 8222 3035
Please do not refer to the Bowel Protocol before answering this survey.
It would be greatly appreciated if you could complete the survey as this will provide important information regarding nursing care.
Yours sincerely
Rency Varghese

***1. Please indicate your level of employment**

- ◯ Enrolled Nurse
- ◯ Registered Nurse - Level 1
- ◯ Registered Nurse - Level 2
- ◯ Registered Nurse - Level 3

Other (please specify)

***2. Do you have a specific qualification related to the care of the critically ill?**

- ◯ Critical Care Certificate (Hospital / University)
- ◯ Graduate Diploma
- ◯ Masters of Nursing (ICU/Critical Care)
- ◯ None

***3. How long have you worked in ICU? (in years / months)**

***4. Are you aware of the ICU Bowel Protocol?**

- ◯ Yes
- ◯ No

***5. How did you find out about the Bowel Protocol?**

- ◯ Orientation Program

Other (please specify)

***6. Where is the information regarding the Bowel Protocol located in ICU?**

***7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?**

- ☐ Team leader
- ☐ Case Manager
- ☐ Home Team
- ☐ ICU Doctor

Other (please specify)

***8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?**

***9. How important is good bowel management to the progress of ICU patients?**

- ◯ Very important
- ◯ Important
- ◯ Unimportant
- ◯ Very unimportant

***10. When should the Bowel Protocol be commenced for patients admitted to ICU?**

- ◯ On admission
- ◯ As soon as practical after admission
- ◯ Within first 24 hours of admission to ICU
- ◯ 24 - 48 hours of admission to ICU

Other (please specify)

***11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?**

- ☐ ICU Doctor
- ☐ Patient Care Nurse
- ☐ Team Leader
- ☐ Case Manager
- ☐ Home Team

Other (please specify)

***12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.**

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly disagree

***13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.**

- ◯ Strongly agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly disagree

***14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)**

***15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)**

***16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?**

Thankyou

Thank you for completing the survey

Appendix 3 Research Proposal

RAH Ethics Protocol

1. **Title**
   Attitudes and awareness of bowel regime amongst nurses in intensive care patients

2. **Investigator details and qualifications**
   Rency Varghese, RN, BSc Nursing, Grad Dip in Intensive care nursing.

   Assoc. Prof. Judy Magarey, RN, CCC, DipN, BN, MNurs (Research), DNurs.

   Ms. Philippa Rasmussen, RN, MHN, GradCert CAMHN, GradDip Psych Studies, Cert IV (T&A)

3. **Purpose of the study (general) and Aims (specific)**
   The research question posed is:

   What are the attitudes of nurses working in intensive care unit (ICU) regarding bowel regime for critically ill patients?

   Aim:

   The overall aim of the study is to identify the attitudes and awareness of nurses working in the intensive care unit regarding the bowel regime or management protocol for critically ill patients and to develop an understanding to why nurses do not adhere to the bowel protocol.

   .

   Objectives:

   The objectives of this study is

   - To identify the attitudes of nurses regarding bowel care in intensive care patients.
   - To find out whether the nurses are aware of the bowel protocol or bowel management guidelines used for the patients in the intensive care unit.
   - To recognise the complications associated with poor bowel care in critically ill patients.
   - To identify the importance of bowel protocol in critically ill patients.

- To develop an understanding as to why nurses do not adhere to the bowel protocol.

4. Background and Preliminary studies

Bowel care is one of the essential aspects of nursing care in intensive care patients. Nursing interventions for bowel care are based mostly on customs and practices and there is very little research evidence to support efficient bowel care. Patients in intensive care are treated based on the signs and symptoms they present with that involves complex activities like mechanical ventilation, administering inotropes, replacing electrolytes and carrying out dialysis (Asai 2007; Ritchie et al. 2008). Due to these situations bowel management is often regarded as least important and is mostly ignored (Ritchie et al. 2008). Patients in the intensive care setting have very limited mobility, which decreases the gut motility and have poor dietary intake secondary to nil by mouth status for various different procedures. The frequent use of antibiotics to treat infection and the use of opioids and analgesia for pain and discomfort result in either constipation or diarrhoea. Good bowel care improves patient comfort and also helps in reducing nausea and vomiting (Fulbrook & Grealy 2007).

Constipation and diarrhoea are the most common and present major problems for intensive care patients. Constipation may be defined as a decrease in the bowel movement with a dry, hard stool usually painful or difficult to pass (Fulbrook & Grealy 2007). Immobility, dehydration and lack of fibre in their diet increase the risk of constipation in intensive care patients. Use of drugs like sedatives, opiates, analgesics, diuretics, calcium channel blockers and anticonvulsants also significantly increase the risk. Constipation can cause abdominal distension, pain, nausea, vomiting, anorexia, restlessness and confusion (Masri, Abubaker & Ahmed 2012; Mostafa et al. 2003). Even though the full impact of constipation is not known,

studies have found that constipation resulted in failure to wean from mechanical ventilation, prolonged ICU stay and increased mortality (Mostafa et al. 2003; van der Spoel et al. 2007). The incidence of constipation in intensive care patients is reported to be between 16% and 83% (McPeake, Gilmour & MacIntosh 2011).

Diarrhoea in critically ill patients can be due to various factors like drugs, antibiotics, enteral feeding, infection due to *clostridium difficile* and physiological factors associated with stress (McPeake, Gilmour & MacIntosh 2011). Diarrhoea in intensive care patients can be crucial as it causes fluid and electrolyte imbalances resulting in haemodynamic instability, delayed wound healing processes, impaired skin integrity and malnutrition (Ferrie & Daley 2011; Ferrie & East 2007; Wiesen, Gossum & Preiser 2006; Yassin & Wyncoll 2005).

Research indicates that there is a need for a set guideline for bowel care. It also identifies a gap in the study. Intensive care nurses spend most of their time with the patients and therefore are aware of the bowel regime and need to initiate adherence to bowel management, which can help reduce the mortality and morbidity in intensive care patients. Intensive care nurses should be aware of the consequences of inappropriate and inadequate bowel management in intensive care patients. In addition, they may not be aware of whether the ways they manage bowel dysfunction are best practice or is the most appropriate method for their patient. It is the responsibility of the intensive care nurse to assess and determine the patient's bowel habits and provide bowel care based on the needs of the patient.

Hence this research study aims to investigate the attitudes and awareness of bowel protocol amongst nurses based in the intensive care unit in order to improve practice and prevent complications in critically ill patients.

5. Participants

All of the samples will meet the inclusion and exclusion criteria and the hospital where the researcher works will be included. Currently there are 225 nurses and it is hoped to get a response rate of at least 40% (90 respondents).

Inclusion criteria:

All nurses of different levels working in the intensive care unit for more than three months will be included in the study.

The nurses who provide direct nursing care to the critically ill patients will be included in the study.

Exclusion criteria:

Graduate nurses as they are in their learning phase and have not had adequate exposure to the patients in intensive care unit.

Student nurses as they are not responsible for the care of the intensive care patients.

Agency nurses as they are not familiar with the routines and protocols of the intensive care unit.

Nurse Management Facilitators as they do not provide direct nursing care to the intensive care patients.

Recruitment:

Information sheet regarding the study will be placed in the pigeon holes of the nurses that meet the inclusion criteria. Information about this study will be passed on to the nurses during group handover and education sessions. Flyers regarding the study will be placed on the notice boards in the tea room and information session board.

6. Study Plan and Design

Design: A simple descriptive design will be used in the study as it focusses on the attitudes and awareness of intensive care nurses regarding bowel regime in critically ill patients. The questionnaire is being looked at by the panel of experts in the Intensive Care Unit.

Setting: The study will be conducted in a 24 bed adult Intensive Care Unit of a major metropolitan referral and teaching hospital. There are a total of 1400 patients per year. The patients admitted to this unit is a combination of patients post brain surgeries, abdominal surgeries, trauma cases, retrievals from other hospitals, patients who require dialysis, long term ventilated patients, spinal injury and multi organ failure patients. There are a total of 84 Registered Nurses, 66 Critical Care Nurses, 64 Clinical Nurses, 4 Clinical Service Coordinators and 7 Enrolled Nurses.

Population: The population will involve nurses working in intensive care unit who meet the inclusion criteria.

Sampling techniques: The study will include convenience sampling as the study is based on the nurses working in the intensive care unit.

If more than one hospital intensive care unit is considered then multistage sampling will be used.

Method of data collection: Data will be collected by an online survey. The questionnaire will include open and closed end questions.

7. **Outcomes**
8. **Ethical Considerations**

The principles of ethical conduct will be based on the requirements by the Royal Adelaide Hospital Ethics Committee. The study will not be commenced until the approval is granted. Participants will be given an information sheet about the study in order to finalise their decision for the participation. The information sheet will contain details of the study's purpose, methods and risks, and will also include

contact names and telephone numbers of the investigators. Participation in the survey would be considered as consent. Participants will not be forced to participate in the study and have the right to withdraw from the study by not completing the survey.

9. Specific safety considerations

Not applicable.

10. Drugs / Devices

No drugs or devices will be used in this study.

11. Analysis and Reporting of results

Data analysis: This will be conducted by use of Statistical Package for Social Sciences (SPSS) system and descriptive statistics with use of graphics to show sum and percentages. Also chi square will be used to analyse between nominal data such as category of nurses and attitudes.

Reporting of results: The results will be reported to the nurses of that hospital by conducting in-service education, reporting at a conference and plan to publish in a peer reviewed journal.

The research report will be in the form of thesis or dissertation.

12. References

Asai, T 2007, 'Constipation: does it increase morbidity and mortality in critically ill patients?', *Critical Care Medicine*, vol. 35, no. 14, pp. 2861-2862.

Ferrie, S & Daley, M 2011, 'Lactobacillus GG as treatment for diarrhoea during enteral feeding in critical illness: Randomized controlled trial', *Journal of Parenteral and Enteral Nutrition*, vol. 35, no. 1, pp. 43-49.

Ferrie, S & East, V 2007, 'Managing diarrhoea in intensive care', *Australian Critical Care*, vol. 20, no. 1, pp. 7-13.

Fulbrook, P & Grealy, B (eds) 2007, *Essential nursing care of the critically ill patient*, ACCCN's Critical Care Nursing, 1 edn, Mosby Elsevier, Australia.

Masri, Y, Abubaker, J & Ahmed, R 2012, 'Prophylactic use of laxative for constipation in critically ill patients', *Annals of Thoracic Medicine*, vol. 5, no. 4, pp. 228-231.

McPeake, J, Gilmour, H & MacIntosh, G 2011, 'The implementation of a bowel management protocol in an adult intensive care unit', *Nursing in Critical Care*, vol. 16, no. 5, pp. 235-242.

Mostafa, SM, Bhandari, S, Ritchie, G, Gratton, N & Wenstone, R 2003, 'Constipation and its implications in the critically ill patient', *British Journal of Anaesthesia*, vol. 91

no. 6, pp. 815-819.

Ritchie, G, Burgess, L, Mostafa, S & Wenstone, R 2008, 'Preventing constipation in critically ill patients', *Nursing Times*, vol. 104, no. 46, pp. 42-44.

van der Spoel, J I, Oudemans-van Straaten, H M, Kuiper, M A, van Roon, ENP, Zandstra, D F & van der Voort, P H 2007, 'Laxation of critically ill patients with lactulose or polyethylene glycol: A two-center randomized, double-blind, placebo-controlled trial', *Critical Care Medicine*, vol. 35, no. 12, pp. 2726-2731.

Wiesen, P, Gossum, AV & Preiser, J 2006, 'Diarrhoea in the critically ill', *Current Opinion in Critical Care*, vol. 12, no. 149-154.

Yassin, J & Wyncoll, D 2005, 'Management of intractable diarrhoea in the critically ill', *Care of the Critically Ill*, vol. 21, no. 1, pp. 20-24.

13. Other relevant information

Not applicable.

14. Other ethics committees to which the protocol has been submitted

The specific hospital ethics committee from where the participants will be recruited.

15. Date of proposed commencement and duration

16. Signature of investigators

17. Appendices

- Information Sheet
- Questionnaire

Appendix 4 Ethics approval from hospitals and University of Adelaide

Government of South Australia
SA Health

Central Adelaide Local Health Network
ROYAL ADELAIDE HOSPITAL
North Terrace
Adelaide SA 5000
Tel: +61 8 8222 4000
Fax: +61 8 8222 5939
ABN 80 230 154 545
www.rah.sa.gov.au

Research Ethics Committee
Level 3, Hanson Institute
Tel: (08) 8222 4139
Fax: (08) 8222 3035
Email: rah.ethics@health.sa.gov.au

14 January 2013

Rency Varghese
Masters of Nursing Science
University of Adelaide
Intensive Care Nursing
ROYAL ADELAIDE HOSPITAL

Dear Ms Varghese,

Re: "Attitudes and awareness of bowel regime amongst nurses in intensive care patients."
RAH PROTOCOL NO: 130107.

I am pleased to advise that Research Ethics Committee APPROVAL is granted to the above project on the above date. The following have been reviewed and approved:

- **Protocol (6 December 2012)**
- **Information Sheet – Advancing Practice Clinical Impact (9 January 2013)**
- **Questionnaire**

Please quote the RAH Protocol Number allocated to your study on all future correspondence.

Research Ethics Committee deliberations are guided by the NHMRC National Statement on Ethical Conduct in Human Research 2007.

GENERAL TERMS AND CONDITIONS OF APPROVAL OF AUDIT:

- Adequate record-keeping and data security is important. The duration of record retention for all clinical research data is 15 years.
- Confidentiality is important. The data collected should as much as possible protect the identity of individuals. Where this is not possible, a separate file of subject identifiers should be maintained such that clinical information is kept separately from subject identifiers.
- You must notify the Research Ethics Committee of any changes which might warrant review of the approval.
- The REC must be advised when this study is complete so that the file can be closed. (if given number)
- Approval is ongoing. Annual reports are ***not*** required.

Yours sincerely,

A/Prof B Chatterton
DEPUTY CHAIRMAN
RESEARCH ETHICS COMMITTEE

Government of South Australia
SA Health

Human Research Governance Office (TQEH/LMH/MH)
Basil Hetzel Institute
DX465101
The Queen Elizabeth Hospital
28 Woodville Road
Woodville South SA 5011
Telephone: 08 8222 8019

24 May 2013

Mrs Rency John Varghese
1/13 Aragon Street
61422037661
Fullarton
SA 5063

Dear Mrs Varghese

HREC reference number: HREC/13/RAH/121
SSA reference number: SSA/13/TQEHLMH/71
Project title: Attitudes and awareness of bowel regime amongst nurses in intensive care unit.

RE: Site Specific Assessment Review

Thank you for submitting an application for authorisation of this project. I am pleased to inform you that authorisation has been granted for this study to commence at the following site:

- **Lyell McEwin Hospital**

The following conditions apply to the authorisation of this research project. These are additional to those conditions imposed by the Human Research Ethics Committee that granted ethical approval to this project:

1. Notification of extensions to ethics approval granted by the lead HREC are to be provided to the LMH Research Governance Officer.
2. Notification of completion of the study at LMH is to be provided to the Research Governance Officer, LMH.
3. Confidentiality of the research subjects shall be maintained at all times as required by law.

Should you have any queries about the consideration of your Site Specific Assessment form, please contact me on 08 8222 8019 or geh.ethics@health.sa.gov.au
The SSA reference number should be quoted in any correspondence about this matter.

Yours sincerely

ALISON BARR
A/Research Governance Officer (TQEH/LMH/MH)

Government of South Australia
SA Health

Human Research Governance Office (TQEH/LMH/MH)
Basil Hetzel Institute
DX465101
The Queen Elizabeth Hospital
28 Woodville Road
Woodville South SA 5011
Telephone: 08 8222 8019

07 June 2013

Mrs Rency John Varghese
1/13 Aragon Street
61422037661
Fullarton
SA 5063

Dear Mrs Varghese

HREC reference number: HREC/13/RAH/121
SSA reference number: SSA/13/TQEHLMH/70
Project title: Attitudes and awareness of bowel regime amongst nurses in intensive care unit.

RE: Site Specific Assessment Review

Thank you for submitting an application for authorisation of the above project. I am pleased to inform you that authorisation has been granted for this study to commence at the following site:

- The Queen Elizabeth Hospital (TQEH)

The following conditions apply to the authorisation of this research project. These are additional to those conditions imposed by the Human Research Ethics Committee that granted ethical approval to this project:

1. Notification of extensions to ethics approval granted by the lead HREC are to be provided to the Research Governance Officer.
2. Notification of completion of the study at TQEH is to be provided to the Research Governance Officer.
3. Confidentiality of the research subjects shall be maintained at all times as required by law.
4. Researchers are required to immediately report to the Research Governance Officer anything which might warrant review of site approval of the protocol including serious or unexpected adverse effects on TQEH participants;

The following documents were received by the governance office:

- Site Specific Assessment
- RAH Ethics approval
- SA Health Indemnity
- Patient Information Sheet
- Survey Monkey questionnaire
- Resume of Rency Varghese

From: **Sabine Schreiber** <sabine.schreiber@adelaide.edu.au>
Date: 13 March 2013 14:30
Subject: RE: Ethical approval from RAH
To: Rency Varghese <rency.varghese@student.adelaide.edu.au>

Dear Rency
We did receive the online notification and you can proceed with the research.
Regards
Sabine

Sabine Schreiber
Secretary, Human Research Ethics Committee
Office of Research Ethics, Compliance and Integrity
Research Branch, Level 7, 115 Grenfell St
The University of Adelaide, AUSTRALIA 5005
Ph : 8313 6028
Fax : 8313 7325
e-mail: sabine.schreiber@adelaide.edu.au
http://www.adelaide.edu.au/ethics/human/
CRICOS Provider Number 00123M

Appendix 5 Participant information sheet

THE UNIVERSITY of ADELAIDE

SCHOOL OF NURSING

JUDY MAGAREY
ASSOCIATE PROFESSOR
FACULTY OF HEALTH SCIENCES
THE UNIVERSITY OF ADELAIDE

SA 5005
AUSTRALIA

TELEPHONE +61 8 8303 3595
FACSIMILE +61 8 8303 3594
judy.magarey@adelaide.edu.au
CRICOS Provider Number 00123M

9th March 2013

INFORMATION SHEET

Dear Nurse,
I am currently studying for my Masters of Nursing Science at the University of Adelaide. The title of my research project is:
'Attitudes and awareness of intensive care nurses regarding the bowel protocol for critically ill patients'
Researcher: Rency Varghese, Masters of Nursing Science, University of Adelaide, Adelaide, South Australia 5000. Telephone Number: 0422037661. Email: rency_varghese@yahoo.com
The purpose of this research project is to investigate the attitudes of nurses to the bowel regime in critically ill patients.

Participation in the survey will be considered as consent. The questionnaire will take about 15 minutes to complete.

Please understand that this questionnaire is not compulsory and you are free to not participate or to withdraw by not completing the survey. No information will be collected that will identify any individual. All data will be combined and then analysed.

Any complaint regarding the nature or conduct of this research may be directed to:
Ethics Liaison Officer, Human Research Ethics Committee, University of Adelaide, Adelaide, South Australia, 5000. Telephone: 82223035.

To complete this survey, please see the URL link below:
https://www.surveymonkey.com/s/FJPPDCV

It would be greatly appreciated if you could complete the survey as this will provide important information regarding nursing care.

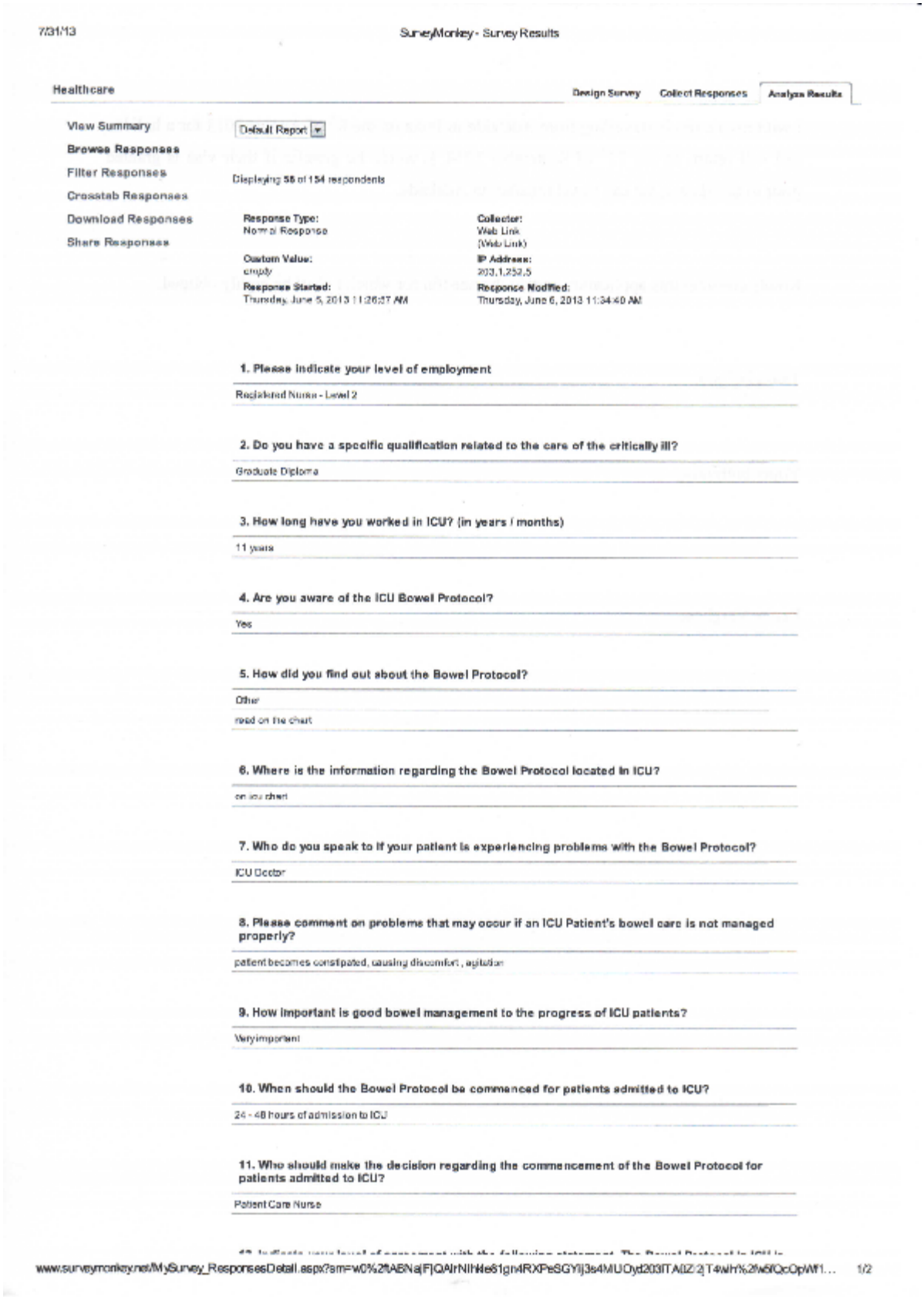
Yours sincerely

Rency Varghese

Advancing Practice. Clinical Impact.

Appendix 6 Respondents' completed questionnaires

Respondent 58



7/31/13 SurveyMonkey - Survey Results

Healthcare

Design Survey | Collect Responses | Analyze Results

View Summary
Browse Responses
Filter Responses
Crosstab Responses
Download Responses
Share Responses

Default Report

Displaying 58 of 154 respondents

Response Type: Normal Response
Collector: Web Link (Web Link)
Custom Value: empty
IP Address: 203.1.252.5
Response Started: Thursday, June 6, 2013 11:26:27 AM
Response Modified: Thursday, June 6, 2013 11:34:40 AM

1. Please indicate your level of employment

Registered Nurse - Level 2

2. Do you have a specific qualification related to the care of the critically ill?

Graduate Diploma

3. How long have you worked in ICU? (in years / months)

11 years

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Other

read on the chart

6. Where is the information regarding the Bowel Protocol located in ICU?

on icu chart

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

patient becomes constipated, causing discomfort, agitation

9. How important is good bowel management to the progress of ICU patients?

Veryimportant

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

24 - 48 hours of admission to ICU

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

Patient Care Nurse

www.surveymonkey.net/MySurvey_ResponsesDetail.aspx?sm=w0%2fABNa[F]QAlrNIhHe61gn4RXPeSGYIj3s4MUOyd203ITA(IZ2jT4wlh%2fw6fQcOpWf1... 1/2

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Strongly agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

no barriers just incompetence

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

not sure maybe very busy with critically ill patient, maybe just lazy and dont want to clean up the mess

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

more vigilant team leaders and case managers

Respondent 82

7/31/13 SurveyMonkey - Survey Results

Healthcare

Design Survey | Collect Responses | Analyze Results

- View Summary
- Browse Responses
- Filter Responses
- Crosstab Responses
- Download Responses
- Share Responses

Default Report

Displaying 82 of 154 respondents

Response Type:
Normal Response

Collector:
Web Link
(Web Link)

Custom Value:
empty

IP Address:
203.1.252.5

Response Started:
Saturday, June 15, 2013 10:15:17 PM

Response Modified:
Saturday, June 15, 2013 10:24:10 PM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

5

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Orientation Program

6. Where is the information regarding the Bowel Protocol located in ICU?

patient data folder

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

faecal impaction, nausea & vomiting, pain & abdo distention escalation to more invasive interventions

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

On admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

Patient Care Nurse

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

www.surveymonkey.net/MySurvey_ResponsesDetail.aspx?sm=w0%2fABNajFjQAlrNihkle81gn4RXPeSGYlj3s4MUOyd2031TA0Zi2jT4wih%2fw5lQOUUlwE... 1/2

Strongly agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

misunderstanding, unaware of protocol, nurses not initiating or concerned with appropriate care, lack of attention to fundamental nursing care

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

fear of adverse reactions, fear opf causes diarrohea, think the problem will resolve by itself

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

sticker on each chart with tick boxes

Respondent 97

7/31/13 SurveyMonkey - Survey Results

Healthcare

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Displaying 97 of 154 respondents

Response Type:
Normal Response

Collector:
Web Link
(Web Link)

Custom Value:
empty

IP Address:
203.1.252.5

Response Started:
Sunday, June 23, 2013 5:44:30 PM

Response Modified:
Sunday, June 23, 2013 6:07:56 PM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

14 year 2 mths

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Other

Inernal education

6. Where is the information regarding the Bowel Protocol located in ICU?

on patient chrt

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

severe constipation, leading 2 bowel obstruction, ruptured colon, surgery possible sepsis death

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

As soon as practical after admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

ICU Doctor

Patient Care Nurse

www.surveymonkey.net/MySurvey_ResponsesDetail.aspx?sm=w0%2fABNajFjQAIrNIhNe81gnMRXPeSGYj3s4MUOyd203TA02I2jT4wIh%2fw6fCIiqtlbtlre0... 1/2

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Strongly agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

doctors not signing order, nurses not checking with doctor if they have forgotten to sign

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

I dont really know...could it be (god forbid) they are indifferent or are lazy and dont want to clean it up!

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

the doctors need to sign the order for the bowel regime as it seems that unless there is a definite order and signature some nurses wont use their initiative and either get the doctor to sign it

Respondent 129

7/31/13 SurveyMonkey - Survey Results

Healthcare

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Response Type:
Normal Response

Collector:
Web Link
(Web Link)

Custom Value:
empty

IP Address:
203.25.122.8

Response Started:
Friday, July 5, 2013 7:10:03 AM

Response Modified:
Friday, July 5, 2013 7:21:55 AM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

Critical Care Certificate (Hospital / University)

3. How long have you worked in ICU? (in years / months)

5 years

4. Are you aware of the ICU Bowel Protocol?

No

5. How did you find out about the Bowel Protocol?

Other

senior nurses on the same shift

6. Where is the information regarding the Bowel Protocol located in ICU?

computer desktop

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

compromising haemodynamic status, etc.

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

As soon as practical after admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

Patient Care Nurse

www.surveymonkey.net/MySurvey_ResponseDetail.aspx?sm=w0%2fABNajFjQAIrNihMe81gn4RXPeSGYij3e4MUOyb203ITA0Zi2jT4wlh%2fw6fQeeVp%2b... 1/2

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

each shift with different nurse. The level of understanding the protocol varies.

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

could be a busy shift.

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

As part of nursing routine assessment each shift.

Respondent 142

7/31/13 SurveyMonkey - Survey Results

Healthcare

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Response Type:
Normal Response

Collector:
Web Link
(Web Link)

Custom Value:
empty

IP Address:
203.1.252.5

Response Started:
Saturday, July 6, 2013 8:27:47 PM

Response Modified:
Saturday, July 6, 2013 8:33:06 PM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

3

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Orientation Program

6. Where is the information regarding the Bowel Protocol located in ICU?

yellow folder

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

constipation

9. How important is good bowel management to the progress of ICU patients?

Important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

24 - 48 hours of admission to ICU

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

ICU Doctor

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

www.surveymonkey.net/MySurvey_ResponsesDetail.aspx?sm=w0%2ftABNajFjQAlrNIhNe81gn4RXPeSGYij3s4MUOyt203ITA0ZI2jT4wm%2fw6fQx%2bYK... 1/2

Disagree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Disagree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

knowing when to begin

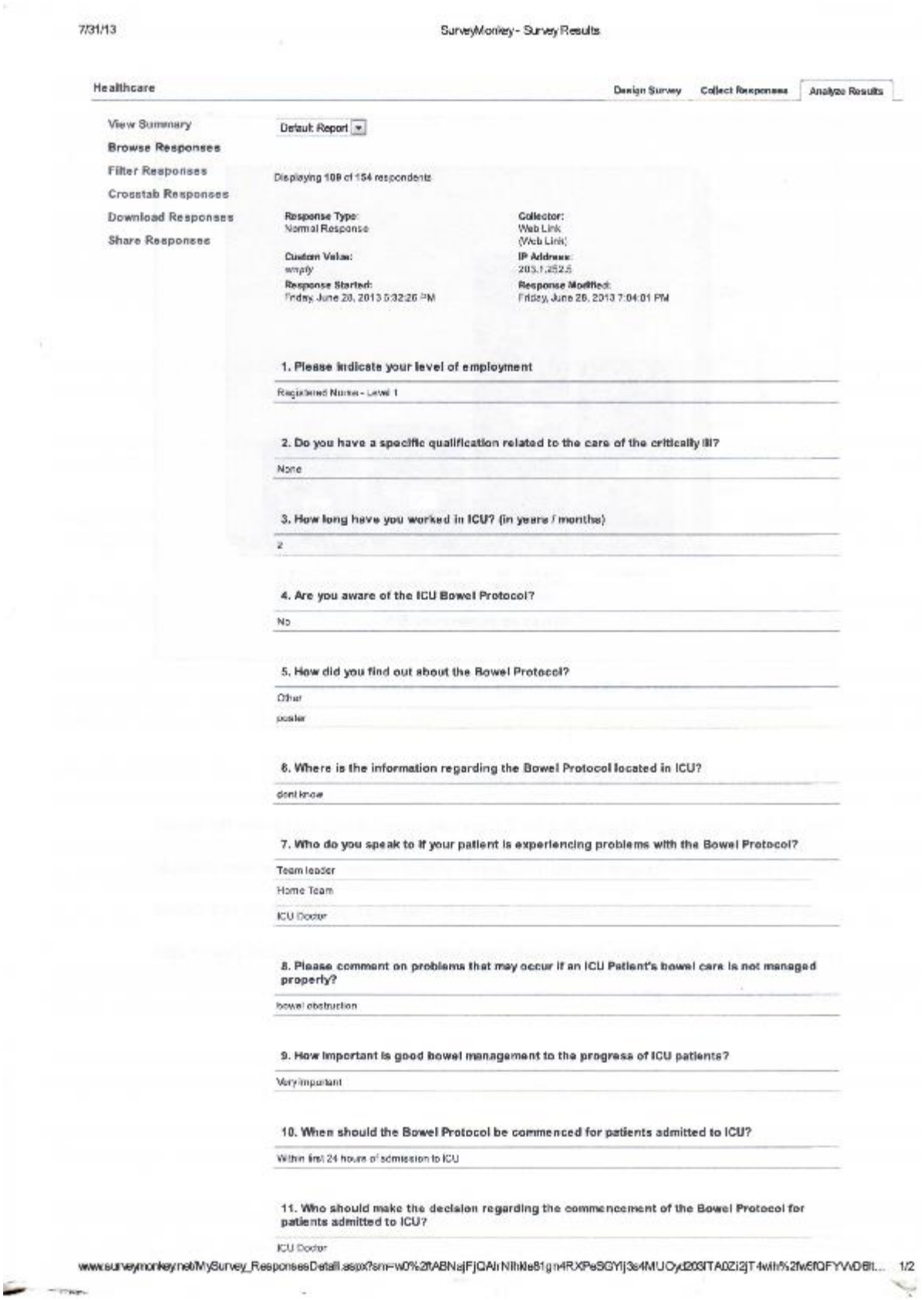
15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

Lazy

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

Dr's should implement regime like other meds

Respondent 109



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Response Type:
Normal Response

Collector:
Web Link
(Web Link)

Custom Value:
empty

IP Address:
203.1.252.5

Response Started:
Friday, June 28, 2013 5:32:26 PM

Response Modified:
Friday, June 28, 2013 7:04:01 PM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

2

4. Are you aware of the ICU Bowel Protocol?

No

5. How did you find out about the Bowel Protocol?

Other

poster

6. Where is the information regarding the Bowel Protocol located in ICU?

dont know

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

Home Team

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

bowel obstruction

9. How important is good bowel management to the progress of ICU patients?

Very Important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

Within first 24 hours of admission to ICU

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

ICU Doctor

www.surveymonkey.net/MySurvey_ResponsesDetail.aspx?sm=w0%2fABNajFjQAIrNIhNe81gn4RXPeSGYIj3s4MUOyt203TA0Zi2jT4wlh%2fw6fQFYVvDBtI... 1/2

Patient Care Nurse

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

when patient is very sick, need to prioritise other areas

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

dont get enough staff for cleaning up i think

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

fairly

Respondent 153

7/31/13 SurveyMonkey - Survey Results

Healthcare

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Response Type: Normal Response
Collector: Web Link (Web Link)
Custom Value: [illegible]
IP Address: 203.1.203.6
Response Started: Sunday, July 14, 2013 2:28:03 AM
Response Modified: Sunday, July 14, 2013 2:34:27 AM

1. Please indicate your level of employment

Registered Nurse - Level 2

2. Do you have a specific qualification related to the care of the critically ill?

Graduate Diploma

3. How long have you worked in ICU? (in years / months)

11 years

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Orientation Program

6. Where is the information regarding the Bowel Protocol located in ICU?

yellow folder and on icu chart

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

Impaction, diarrhoea, electrolyte imbalance, raised intracranial pressure, arrhythmia

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

Within first 24 hours of admission to ICU

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

ICU Doctor
Patient Care Nurse
Team Leader

www.surveymonkey.net/MySurvey_ResponsesDetail.aspx?sm=w0%2fiABNajFjQAIrNihkle91gn4RXPeSGYlj3s4MUOyd208ITA0ZI2jT4wih%2fw5fQ5yvN0SE... 1/2

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

condition of the patient very unstable when turned

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

not wanting to clean the patient, apathy, too busy doing other bits of care

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

more emphasis

Respondent 151

Healthcare

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Response Type:
Normal Response

Collector:
Web Link
(Web Link)

Custom Value:
empty

IP Address:
203.1.252.5

Response Started:
Wednesday, July 10, 2013 7:23:00 AM

Response Modified:
Wednesday, July 10, 2013 7:40:11 AM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

Graduate Diploma

3. How long have you worked in ICU? (in years / months)

10

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Orientation Program

6. Where is the information regarding the Bowel Protocol located in ICU?

detailed on icu chart

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

constipation

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

As soon as practical after admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

ICU Doctor

Patient Care Nurse

home team on specific pts re trauma

www.surveymonkey.net/MySurvey_ResponsesDetail.aspx?sm=w0%2fvABNajFjQAlrNlhKe81gn4RXPeSCYIj3e4MUOyd200ITA0Zi2jT4wwh%2fw5fQBh4Dem... 1/2

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

Possibly level of critical condition but on rare cases is not possible to turn pt's due to poor ventilation/gas exchange

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

as above, critical condition of pt

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

A bowel board!

Respondent 150

Healthcare

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Response Type:
Normal Response

Collector:
Web Link
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Custom Value:
empty

IP Address:
203.1.252.5

Response Started:
Wednesday, July 10, 2013 6:07:27 AM

Response Modified:
Wednesday, July 10, 2013 5:26:20 AM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

2years 6 months

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Other

Don't remember

6. Where is the information regarding the Bowel Protocol located in ICU?

on the drug chart portion of the ICU chart

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

Case Manager

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

faecal impaction, bowel perforation, malabsorption of nutrients

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

As soon as practical after admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

Patient Care Nurse

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

Some nurses have said if it's not signed, they can't administer it.

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

laziness; also, the administration of bisalax needs to happen on the night shift so that cleanup can happen during morning washes.

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

the administration of bisalax needs to happen on the night shift so that cleanup can happen during morning washes.

Respondent 39

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Healthcare

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Response Type: Normal Response
Collector: Web Link (Web Link)
Custom Value: empty
IP Address: 101.113.3.222
Response Started: Monday, June 3, 2013 1:17:01 AM
Response Modified: Monday, June 3, 2013 1:23:31 AM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

1 year 4 months

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Other

Team Leader, senior staff

6. Where is the information regarding the Bowel Protocol located in ICU?

Icu chart

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

constipation, unwell = faecal compaction. This could lead to increased intrabdo pressure/intra thoracic pressure, influence recovery and treatment

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

As soon as practical after admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

ICU Doctor

www.surveymonkey.net/MySurvey_ResponsesDetail.aspx?sm=w0%2fABNaFjQAlrNIhNe81gn4RXPeSGYij3s4MUOyd203ITA02I2jT4wlh%2fw9tQ%2bPnK... 1/2

Patient Care Nurse

nurse usually has to tell the Dr to sign for it or write up apperients

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

need a Dr to sign their 'consent' before commencing Pt very unstable

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

Gets overlooked too easily, extra work, lazy, cleaning up poo can be a disgusting job i guess!

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

it should be a group effort with the bedside nurse and Drs

Respondent 102

Healthcare

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Response Type:
Normal Response

Custom Value:
empty

Response Started:
Thursday, June 27, 2013 6:15:08 AM

Collector:
Web Link
(Web Link)

IP Address:
203.1.252.5

Response Modified:
Thursday, June 27, 2013 6:26:56 AM

1. Please indicate your level of employment

Registered Nurse - Level 2

2. Do you have a specific qualification related to the care of the critically ill?

Critical Care Certificate (Hospital / University)

3. How long have you worked in ICU? (in years / months)

24years

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Other

helped develope it

6. Where is the information regarding the Bowel Protocol located in ICU?

ICU chart Med orders, intranet - ICU page

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

constipation impaction metabolic derangement feeding intolerance abdominal compartment syndrome

9. How important is good bowel management to the progress of ICU patients?

Veryimportant

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

As soon as practical after admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

ICU Doctor

Patient Care Nurse

Team Leader

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Strongly agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

apathy knowledge deficit NO POO IS GOOD POO

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

they dont want their patient using their bowels whilst they are looking after them 'NO POO IS GOOD POO' attitude

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

better education (medical & nursing staff) better monitoring of implementation and progress

Respondent 119

Healthcare

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Response Type:
Normal Response

Collector:
Web Link
(Web Link)

Custom Value:
empty

IP Address:
203.1.252.5

Response Started:
Wednesday, July 3, 2013 12:21:32 AM

Response Modified:
Wednesday, July 3, 2013 12:26:02 AM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

1 yr

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Orientation Program

6. Where is the information regarding the Bowel Protocol located in ICU?

Yellow Folder

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

Impaction, pain, etc.

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

As soon as practical after admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

ICU Doctor

Patient Care Nurse

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

Actual counting of days of BNO and unaware of pts actual bowel status

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

Don't want a patient to have a volcanic explosion on their shift

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

More awareness

Respondent 140

Healthcare

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Response Type: Normal Response

Collector: Web Link (Web Link)

Custom Value: empty

IP Address: 203.1.262.5

Response Started: Saturday, July 6, 2013 7:02:12 PM

Response Modified: Saturday, July 6, 2013 7:24:22 PM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

18 years

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Other

ICU chart bowel regime

6. Where is the information regarding the Bowel Protocol located in ICU?

? in nurses station B nd as well

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

Case Manager

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

pt. becomes unwell in every way e.g. affecting resp.staues, inability to absorb feeds, elevated BP and discomfort, can also cause inestinal damage like pockets, impacted

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

24 - 48 hours of admission to ICU

It depends on reason for admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for

patients admitted to ICU?

ICU Doctor

Patient Care Nurse

Team Leader

Case Manager

Home Team

home team if e.g. laparotomy

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Strongly agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

nursing awareness! willingness poor assessment

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

inconveinience? unpleasant?

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

education re complications, overall pretty well implemented

Respondent 22

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Healthcare

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Response Type:
Normal Response

Collector:
Web Link
(Web Link)

Custom Value:
simply

IP Address:
203.26.122.8

Response Started:
Monday, May 27, 2013 8:00:32 AM

Response Modified:
Monday, May 27, 2013 8:12:04 AM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

Critical Care Certificate (Hospital / University)

3. How long have you worked in ICU? (in years / months)

20 Years

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Orientation Program

It suddenly appeared on the chart board some years ago!

6. Where is the information regarding the Bowel Protocol located in ICU?

On the ICU medication chart

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

Constipation, impaction, decreased resp. function (splinting), pain

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

As soon as practical after admission

Exceptions may be postop major bowel surgery/major abdominal trauma

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

Patient care nurse may need to remind doctor to sign for protocol on drug chart

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Strongly agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

Some critically ill patients may not be able to be turned to administer Bisalax. Absence of NGT.

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

Laziness?

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

It should be remembered that bowel care is part of basic nursing care and cannot be ignored

Respondent 122

Healthcare

Design Survey | Collect Responses | Analyze Results

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Response Type: Normal Response

Collector: Web Link (Web Link)

Custom Value: empty

IP Address: 1.124.42.139

Response Started: Thursday, July 4, 2013 4:21:03 AM

Response Modified: Thursday, July 4, 2013 6:46:09 AM

1. Please indicate your level of employment

Registered Nurse - Level I

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

3years

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Orientation Program

6. Where is the information regarding the Bowel Protocol located in ICU?

Icu chart

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

Death Perforation of bowel Constipation Compaction

9. How important is good bowel management to the progress of ICU patients?

Veryimportant

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

24 - 48 hours of admission to ICU

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

ICU Doctor

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Strongly agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

Time Bowel regulation charting

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

Addition to workload "Gross" factor

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

More education Understanding pt health outcomes if bowel care is not carried out

Respondent 124

Healthcare

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Response Type:
Normal Response

Custom Value:
empty

Response Started:
Thursday, July 4, 2013 8:57:35 AM

Collector:
Web Link
(Web Link)

IP Address:
203.28.122.8

Response Modified:
Thursday, July 4, 2013 9:06:46 AM

1. Please indicate your level of employment

Registered Nurse - Level 2

2. Do you have a specific qualification related to the care of the critically ill?

Critical Care Certificate (Hospital / University)

3. How long have you worked in ICU? (in years / months)

10 yrs

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Orientation Program

6. Where is the information regarding the Bowel Protocol located in ICU?

drug chart

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

ICU Cordr

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

patient may continue with constipation or end up with diarrhoea

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

24 - 48 hours of admission to ICU

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

Patient Care Nurse

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

www.surveymonkey.net/MySurvey_ResponsesDetail.aspx?sm=w0%2fABNajF]QAlrNlhMe81gn4RXPeSCYIj3e4MUDyd203ITA0Z/2jT4wh%2fw5lQGXVtWr... 1/2

Strongly agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

Some nurses are not aware of the protocol laziness to clean up patients after bowel action

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

To avoid cleaning patients after bowel opening Knowledge deficit

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

Regular inservices on the importance of it

Respondent 69

Healthcare

Design Survey | Collect Responses | Analyze Results

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Response Type:
Normal Response

Collector:
Web Link
(Web Link)

Custom Value:
empty

IP Address:
203.1.252.5

Response Started:
Wednesday, June 12, 2013 11:57:45 AM

Response Modified:
Wednesday, June 12, 2013 12:04:04 PM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

Critical Care Certificate (Hospital / University)

3. How long have you worked in ICU? (in years / months)

4

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Orientation Program

6. Where is the information regarding the Bowel Protocol located in ICU?

chart

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

constipation GNO

9. How important is good bowel management to the progress of ICU patients?

Important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

As soon as practical after admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

Patient Care Nurse

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

follow up of the protocol

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

see it as too much work

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

more emphasis on prompt care proper hand over of bowel care during ISBAR so all are aware

Respondent 134

Healthcare

Design Survey | Collect Responses | Analyze Results

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Response Type:
Normal Response

Collector:
Web Link
(Web Link)

Custom Value:
empty

IP Address:
203.1.252.5

Response Started:
Friday, July 5, 2013 9:00:38 PM

Response Modified:
Friday, July 5, 2013 9:08:38 PM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

8

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Other

Implementation of new protocols

6. Where is the information regarding the Bowel Protocol located in ICU?

Yellow protocol folder

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

Constipation Abdo distention pain paralytic ileus

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

On admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

Patient Care Nurse

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Strongly agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

Ignorance of staff not identifying or recording when patients bowels last open

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

I dont think it is about reluctance but more about ack of knowledge or poor recording

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

More accururate recording A section on chart relating to daily bowel movements (similar to Bristol Stool Chart)

Respondent 13

7/31/13 SurveyMonkey - Survey Results

Healthcare

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Response Type:
Normal Response

Collector:
Web Link
(Web Link)

Custom Value:
empty

IP Address:
203.26.122.6

Response Started:
Tuesday, May 21, 2013 8:19:24 AM

Response Modified:
Monday, July 29, 2013 8:01:46 PM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

~4 years

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Orientation Program

on nursing chart (didn't find this out on orientation, but your survey wouldn't finish without this box being ticked!)

6. Where is the information regarding the Bowel Protocol located in ICU?

In the 'regular use drug' chart on ICU chart

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

pt gets constipated, bloated,abdo pain, becomes a bigger problem to solve.

9. How important is good bowel management to the progress of ICU patients?

Very important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

On admission

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

ICU Doctor

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Strongly agree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Strongly agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

laziness, forgetfulness.

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

no one really wants to clean up poo...if you give the pt enemas in the morning, it's like you're leaving the next shift to clean up poo...once again, laziness.

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

pt nurses being more proactive about bowel care...TL checking when they do their 'round' of checking patients at the start of the shift...

Respondent 42

Healthcare

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Response Type: Normal Response

Collector: Web Link (Web Link)

Custom Value: empty

IP Address: 60.240.73.194

Response Started: Monday, June 3, 2013 5:48:33 PM

Response Modified: Monday, June 3, 2013 6:11:20 PM

1. Please indicate your level of employment

Registered Nurse - Level 1

2. Do you have a specific qualification related to the care of the critically ill?

None

3. How long have you worked in ICU? (in years / months)

4

4. Are you aware of the ICU Bowel Protocol?

Yes

5. How did you find out about the Bowel Protocol?

Orientation Program

6. Where is the information regarding the Bowel Protocol located in ICU?

Pre-written order on the medication list (front of ICU chart)

7. Who do you speak to if your patient is experiencing problems with the Bowel Protocol?

Team leader

ICU Doctor

8. Please comment on problems that may occur if an ICU Patient's bowel care is not managed properly?

-If diarrhoea the patient can have loss of fluid and electrolytes. -If constipation, the overdistension of the abdomen can impact on surgical sites, drains, interfere with proper breathing, It could also lead to perforation of bowel, infection and surgery.

9. How important is good bowel management to the progress of ICU patients?

Important

10. When should the Bowel Protocol be commenced for patients admitted to ICU?

24 - 48 hours of admission to ICU

11. Who should make the decision regarding the commencement of the Bowel Protocol for patients admitted to ICU?

Patient Care Nurse

12. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to understand.

Disagree

13. Indicate your level of agreement with the following statement. The Bowel Protocol in ICU is easy to implement.

Agree

14. In your experience, what are the barriers to implementation of the Bowel Protocol for patients in ICU? (Please comment)

-The orders states that senekot granules be given to the patient yet the unit doesn't stock them! -Finding the staff to turn patients onto for a enema and again for the clean up is difficult. -Sometimes transports to diagnostics are a priority. -An early shift is always a difficult time of day with medical and allied health assessments, visitors, diagnostics tests etc.

15. Why do you think some nurses may be reluctant to implement the Bowel Protocol? (Please comment)

-business -lack of education regarding implications of poor bowel care management -lack of time, especially within the first few days post admission

16. How do you think that the Bowel Protocol could be implemented more effectively in your unit?

-On the chart we should have a space to document the patients regular bowel patterns. -Unfortunately its not easy to administer enemas and 'clean up' during any shift. I do think that the early shift is the worst time to be doing this in due to assessments and visitors etc. I think that the admin of enemas should be designated one shift and the clean up to another. For exampe: the late shift could admin the enema and the night shift 'clean up' or the night shift could admin the enema before the end of their shift and the early shift 'clean up'. -I think team leaders could take more responsibility in implementing the protocol and assessing its effectiveness for short term patients. I understand that they have a lot to do some shifts but unfortunately they are the supervisors and should be making sure that bed side nurses don't forget about the bowel protocol. -Case managers should then look at the bowel protocol for long term patients and assess effectiveness.