Patient and staff nurse’s experiences of the 30 degree tilt reposition technique, for the prevention of pressure ulcers, in an elderly care unit.

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Citation
Victor U. Patient and staff nurse's experiences of the 30 degree tilt reposition technique, for the prevention of pressure ulcers, in an elderly care unit. [MSc Thesis]. Dublin: Royal College of Surgeons in Ireland; 2013.
Patient and staff nurse’s experiences of the 30 degree tilt reposition technique, for the prevention of pressure ulcers, in an elderly care unit.

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A DISSERTATION SUBMITTED IN PART FULFILMENT OF THE DEGREE OF MASTERS OF SCIENCE IN NURSING.

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STUDENT ID: 09107053
DATE OF SUBMISSION: 25-06-2013
WORD COUNT: 23,141
SUPERVISOR: DR. ZENA MOORE
Abstract:

This study set out to explore the experiences of patients and staff nurses using the 30° repositioning technique for the prevention of pressure ulcers, within an elderly Irish health care setting. Ethical approval was received. A qualitative descriptive approach was used to answer the research question. Data were collected by conducting a focus group with 8 staff nurses and in-depth interviews with 6 patient participants. To select participants’ purposive sampling was used for the patients and for staff nurses’ convenience sampling was used. The Colaizzi’s framework (1978) was adopted for data analysis. The study findings suggest that both the patient and nurse participants understood the benefits of using the 30° repositioning technique, in that it relieved pain and promoted comfort, further, for those with existing ulcers some were reduced in size and some healed. The staff nurses found that repositioning promoted standardization of care and enabled early detection of pressure damage. The study highlights the role of nurses as patient advocates in implementing best practice concerning the repositioning needs of patients. Further, the study suggests that involving patients in shared decision making will enable nurses gain patient cooperation and also provide opportunities to promote health literacy.
Dedication

To Maria Daly

It's because of you I am in wound care and I have reached thus far. I thank you and dedicate this work to you.
Acknowledgements

The completion of this thesis was not achieved alone. I would like to sincerely thank all the lecturers in the Royal College of Surgeons who offered guidance and support throughout the process. With special thanks going to Dr. Zena Moore who supervised this work offering her support, encouragement and advice, without your guidance it would have been impossible to achieve this. I am grateful for the time and energy you have given me in completing this work.

I wish to acknowledge and thank The Medical Superintendent Dr Shea O’ Dea, The Director of Nursing Ms Fiona Cleary, Assistant Directors of Nursing and Clinical Nurse Managers for their encouragement and the time given to embark on this course.

I would like to especially thank the study participants and nursing staff for their cooperation without whom, this study would not have been possible.

I wish to express my sincere gratitude to the Nursing and Midwifery Planning and Development board for funding me.

I would also like to thank my work colleagues Shirley and Mary for their support, understanding and kindness over the past year.

To my family, my husband Victor and children Aaron and Aidan, thank you for your love, patience and understanding while I lost myself in this work. To my mom and brother Steve thank you for always believing in me. I thank Victor’s parents, Lizzyma and Backiapa for their blessings and prayers.

To Ms Grace Oduwole and Mr Varghese Joy, I am grateful to you for reading my thesis and the advice and the support you offered. My special thanks to Mr Daniel Stroe for your continued assurance and support throughout the practical work.

To My friends, Dikkey and Roselyn, thank you for always listening to me most patiently and keeping me on the track. I will always be grateful for your support and encouragement.

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CHAPTER 1: INTRODUCTION AND SIGNIFICANCE OF THE STUDY

1.1 Introduction
This chapter sets out an introduction to pressure ulceration, the 30 degree repositioning for the prevention of pressure ulcers and the importance of patient and staff experiences as service providers and consumers. In doing so the writer has divided this chapter into an introduction that addresses the problem of pressure ulcers and repositioning as the recommended intervention. This is followed by a background that gives a overview of the literature pertaining to the proposed study. This is followed by a discussion of the significance of the study. Finally a summary is presented that captures the salient points raised within the preceding sections.

1.1.1 Pressure ulceration and its impact:

Pressure ulcers are localised areas of skin and tissue damage caused by pressure or shearing forces (Bouten et al., 2003, Stekelenburg et al., 2006, Moore et al., 2011). Pressure ulcers usually occur over bony prominences because they have insufficient tissue to spread the pressure (Defloor 2005, Krapfl 2008, Moore et al., 2011). Shear is soft tissue stretch deformation that occurs when skin stays in place but the bony structures move, as in when a seated individual slides forward (Bouten et al., 2003, Stekelenburg et al., 2006, Moore et al., 2011). Pressure ulcers will only occur due to prolonged unrelieved pressure or compression forces and therefore pressure ulcers are most likely to occur in the elderly people with poor mobility, malnutrition, and those with acute illness (Defloor 2004, Moore et al., 2011). Pressure ulcers can occur superficially or in the deeper tissues (Stekelenburg et al., 2006). The level of tissue damage is assessed and graded using a grading system such as that of EPUAP (1999). The impact of pressure ulcers on the individual is extensive; indeed, they affect all domains of the activities of daily living (Spilsbury et al., 2007, Gorecki et al., 2009). The ulcers are painful, costly, challenging to treat and impact negatively on health and
social gain (EPUAP 2002). According to a European national survey 23% of all hospitalised patients have pressure ulcer (EPUAP 2002, Bours et al., 2004). It is estimated that in Australia $296.05 million (AUD) as the mean hospital costs for pressure ulcer (Gethin et al., 2005, Moore et al., 2012). In the UK £1.8 - £2.8 billion is estimated as the costs for pressure ulcer management and 41% of this budget is accounted for nursing time alone (Posnett & Franks 2008). Pressure ulcers contribute to an increased risk of mortality associated with fatal infections such as cellulites, infections of the bone and septicaemia (Seiler et al., 1986).

The changing population demographics predict the rise in the number of the elderly people and thus the rise in the magnitude of the problem (Moore et al., 2011). The presence of pressure ulcers are considered as one of the quality indicators in health care and therefore huge pressures are placed on health care providers to prevent pressure ulcer occurrence (Paquay et al., 2010). Although most pressure ulcers can be prevented by implementing proper prevention strategies, the process involves a myriad of different interventions including nutritional, skin and wound care (Moore et al., 2011). Pressure ulcers are common in patients with limited mobility and activity (Young et al., 2004, Defloor et al., 2005, Moore et al., 2011). Therefore interventions need to be offered to those with low mobility and activity scores. Indeed, Bergstorm et al., (1996) identified repositioning and provision of pressure relieving support surfaces as methods for pressure ulcer prevention.

1.1.2 30 degree repositioning best recommended Intervention for the prevention of pressure ulcers:

Repositioning is not a novel concept, and is recommended as an intervention in the prevention of pressure ulcers (EPUAP 1999). However, the 90 degree lateral position
has been shown to decrease blood flow and transcutaneous oxygen tension (TcPO2) to near anoxic levels (Defloor et al., 2000). Conversely, the 30 degree position is suggested to be most appropriate for the patient, as there is less pressure applied to bony prominences and therefore blood supply to the weight bearing area is not completely occluded (Defloor et al., 2000). The 30 degree tilt is a patient repositioning technique that can be achieved by rolling the patient 30 degree to a slightly tilted position with pillow support at the back (Seiler et al. 1986). A recent RCT by Moore et al., (2011) identified that the 30 degree tilt technique used 3 hourly was effective in prevention of pressure ulcers. Thus, this method of repositioning appears to be a ‘low technological’ yet effective method of pressure ulcer prevention (Moore et al., 2011).

The findings from the Moore et al., 2011 study have significance for clinical practice; in that, they support the recommendations of the EPUAP/NPUAP 2009 pressure ulcer prevention guidelines.

A number of studies suggests several strategies and interventions for systematic improvement of pressure ulcer prevention in home care, nursing homes and hospitals by staff, such as education, implementation of evidence based clinical practice guidelines and prevention policies, introduction of pressure redistribution devices and mattresses, financial incentives, internet based survey and feedback, management feedback on staffs adherence to guidelines and internal benchmarking (Young et al., 2004, Defloor et al., 2005, Paquay et al., 2010, Moore et al., 2011). However there is little or no evidence regarding nurse’s adherence of guidelines in the prevention of pressure ulcers (Moore & Cowman 2012). Therefore it is important that adequate nursing education, discussion and reflection should accompany clinical integration of guideline implementation (Moore 2000). Moreover nurses should facilitate and
support patient participation in clinical decision making (Moore 2000). Indeed, nurses gaining understanding of patient experiences is regarded as vital to providing individualised quality care. This can determine nurses to help and identify patient preferences and achieve acceptance and adherence to the planned care in the prevention of pressure ulcers (Paquay 2010).

1.2 Guidelines:
Pressure ulcer prevention is a complex, multifactorial process and although some are unavoidable most pressure ulcers can be prevented (Young 2004). International and National best practice advocates the use of repositioning as an integral component of pressure ulcer prevention strategies (EPUAP 2009, NPUAP 2009). Despite this, the literature suggests that repositioning is not well integrated within the clinical practice setting, with as little as 4% of immobile patients having a documented repositioning care plan for when seated and lying (Moore & Cowman 2012). Clearly, a lack of adherence to best practice, places vulnerable patients at increased risk of pressure ulcer development. Furthermore, lack of adherence to key quality initiatives impacts negatively on the ability to provide safe, effective care, compounding the challenges in achieving patient safety initiatives (Schoonovan, 2004).

The research literature highlights that the traditional 90 degree lateral position causes decrease tissue perfusion and high risk of pressure damage (Vanderwee et al., 2007). Recent studies on the 30 degree repositioning technique demonstrate reduced skin damage at weight bearing areas (Young 2004, Vanderwee et al., 2007, Moore 2011). Furthermore, the findings of a large RCT of Moore et al., (2011) suggest that 30 degree tilt technique, used 3 hourly at night reduced the occurrence of pressure ulcers
by 85%. However, this study did not elicit patient and staff experiences of the repositioning technique. Eliciting patient and staff experiences is important to ensure that therapies offered are acceptable to those for whom the therapies are intended (Moore et al., 2011). This study therefore, proposes to explore the experiences of patients and staff nurses using the 30 degree repositioning technique for the prevention of pressure ulcers.

1.3 Performing the 30° lateral repositioning:

The following steps are as adopted by Moore et al., 2011 in the RCT study. The 30° tilt can be achieved by rolling the patient to 30° slightly tilted position with pillow support to the back. The 30 degree tilt can be carried out with 1 or 2 health care professionals and 5 comfortable pillows. Positions are alternated between left side, back, right side, back.

**30° tilt Recumbent position**

Step 1: Assess the patient suitability, explain the procedure and reassure regarding safety.

Step 2: Place the patient to the centre of the bed, use 1 or 2 pillows to support the head & neck. Gently roll the patient onto one side.

Step 3: Place a pillow at the back to support the lumbar region, now the patient is tilted and the weight is not resting on the sacrum.

Step 4: Support the leg by placing it centrally onto a pillow. Make sure the heel is clear off the bed.

Step 5: Support the other leg by placing it centrally on a pillow. Make sure the heel is clear off the bed.

**30° tilt Semi-Recumbent position:**
Step 1: Assess the patient suitability, explain the procedure and reassure regarding safety.

Step 2: Position the patient well and make sure that the lumbar spine is well supported.

Step 3: Tilt the body to the side, place an extra pillow to the back in order that the ischial tuberosities and sacrum are free of the bed.

Step 4: Support both legs by placing them centrally onto two pillows. Make sure the heels are clear off the bed.

**Research Question:**

The research question for this project is: What are the experiences of patients and staff nurses using the 30 degree repositioning technique for the prevention of pressure ulcers, within an elderly care unit?

**Aims:**

The aim of this project is to explore the experiences of patients and staff nurses using the 30 degree repositioning technique for the prevention of pressure ulcers, within an elderly care unit

**Objectives:**

The objectives of this study are to:

- Explore the experiences of patients nursed using the 30 degree tilt repositioning technique for the prevention of pressure ulcers
- Identify experiences of staff nurses using the 30 degree tilt repositioning technique for the prevention of pressure ulcers
1.4 Significance of the study

Pressure ulcers can be prevented by determining those who are most at risk and the implementation of effective prevention strategies (Defloor et al., 2005). Staff nurses need to have greater understanding about the consequences of poor seating, poor positioning and sitting for longer periods without repositioning. Indeed, pressure ulcers will continue to remain a significant problem unless investment is placed in prevention. However, eliciting patient and staff experiences of the use of recommended practice is of importance in order to ensure acceptability of interventions employed. This study will contribute to patient centred care through eliciting patient and staff experiences of the recommendations of best practice in pressure ulcer prevention within the clinical setting. In turn, the study will also contribute to the health and social gain of one of the most vulnerable populations in our society.

1.5 Summary

Changing population demographics and the predicted rise in the number of the older people in the future suggests that there will be an increase in the magnitude of the problem with pressure ulcers unless effective preventable measures are put in place. Having pressure ulcers do impact negatively on all domains of an individuals’ life. Improving practice and implementing change based on available evidence can be achieved by proper assessment of the needs of the patients. Nurses, as primary care providers, have a major role in the assessment and prevention of pressure ulcers It is also a concern that many affected by pressure ulcer may not be able to express their feelings, therefore increasing our understanding of the patient experience can assist
towards developing better patient care. One of the keys to pressure ulcer prevention lies in repositioning patients at risk of pressure ulcer development. Having an understanding of patient experiences of pressure ulcer can assist in the development of care plans that focus on pressure ulcer prevention more than treatment. However this also requires management support in providing the necessary equipment and access to training all of which will create an impetus for change. Understanding patient experiences will add to the body of knowledge and enable nurses to have insight for those patients who cannot articulate them clearly. In turn this will contribute to health and social gain by decreasing the health budget cost, needless suffering and reduce the incidence of pressure ulcers.
CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature surrounding the impact of repositioning for the prevention of pressure ulcers. In doing so the writer has divided the chapter into separate segments, the first segment addresses the epidemiology of pressure ulcers.
The second section addresses the pathophysiology of pressure ulcers. This is followed by a discussion of the risk factors and risk assessment of pressure ulcers. The next section addresses the role of repositioning in the prevention of pressure ulcers and is followed by a discussion of the importance of the experiences of the patient. Finally a summary is provided capturing the salient points raised within the preceding sections.

2.1.1 Prevalence & Incidence survey of long term care facilities

Prevalence refers to the number of people with a pressure ulcer at a point in time (Casimiro et al., 2002, Keelaghen et al., 2008). Incidence refers to the rate at which new pressure ulcers develop in a defined population in a specific time period (Davis & Caseby 2001). The main goal of a prevalence and incidence survey is to assess the magnitude of the problem. There are many studies on prevalence of pressure ulcers but less is known regarding pressure ulcer incidence (Keelaghen et al., 2008). Prevalence data can be used to identify if a pressure ulcer problem exists within a health care setting or institution (Defloor et al., 2005). Incidence data can also be used to assess adherence with clinical guidelines and the effectiveness of such guidelines (Defloor et al., 2005). More importantly, in incidence studies, following patients over a period of time allows for gathering of rich data related to the individuals risk status and therefore the reasons why the pressure ulcers develop, thereby providing a more appropriate assessment of the problem (Mino et al., 2001).

Prevalence figures in Canada were reported in a study in long term care setting by Davis and Caseby in (2001) as between 53% and 36.8%. In the US a study conducted by Keelaghan et al., 2008 noted that the prevalence of pre-existing pressure ulcers was 26.6% among those patients that were transferred from long term care setting to a
hospital setting. In Ireland prevalence studies conducted in the long stay setting suggest figures between 12 to 18.8% (Moore & Pitman 2000, Gethin 2005).

In a study conducted by Davis and Caseby (2001) in Canada, incidence is reported at 11.7%. Incidence studies conducted in Belgium report figures between 15.3% - 38.1% (Defloor et al., 2005, Vanderwee et al., 2007).

Although the studies have all been undertaken in long term care and included older populations, there are many confounding variables such that the populations may not be similar. The variables influencing the development of pressure ulcers, homogeneity, risk factors, underlying disease condition, the nature of care provided cannot be assumed to be similar (Keelaghan et al., 2008). The under reporting of the pressure ulcers in records can bring a vast difference in the incident figures and as such the reliability of some studies is questionable (Moore and Pitman 2000). The classification of pressure ulcers is important but we cannot be sure if the assessment and grading is accurate. (Defloor et al., 2004). The validity and reliability of the studies should also be taken into consideration while analysing such data.

2.1.2 Cost and impact of pressure ulcer:
Pressure ulcers represent a major burden to patients specifically due to the impact on physical, social, psychological and financial well being (Moore et al., 2011). Studies have shown that patients experience debilitating pain, restricted mobility, social restrictions due to malodour, feeling of worthlessness and loss of independent lifestyle, requiring assistance with activities of daily living due to pressure ulceration (Nixon et al., 2004, Stekelenburg et al., 2006, Krapfl and Gray 2008). Although mainly a preventable problem, according to Bennett et al., (2004) pressure ulcers are a very significant cost burden to the government. Indeed, in an attempt to study the
estimate annual cost of treating pressure ulcers in UK, Bennett et al. (2004) derived a bottom up methodology. They developed care protocols for treating different pressure ulcer grades. These protocols defined the resources required to provide care on a daily basis. Based upon this the unit costs were assigned to the NHS. Resources included nurse time, dressings, antibiotics, diagnostic tests, support surfaces (equipments) and inpatient days with complications like cellulites. The result showed a state matrix of 4 x 4 with 16 different daily treatment costs for different ulcer grades. Furthermore, estimates of the mean expected time to heal and the incidence of complications were derived. According to the study the grade distribution of prevalent cases provides a more accurate reflection of annual treatment cost. This study suggested the estimated annual cost ranged from £ 1.4 - £ 2.1 billion, which indicates a significant cost burden to both the patient and the health care system. A more recent study in UK by Posnett & Franks (2008) estimated £1.8 - £2.8 billion as the costs for pressure ulcer management. Further 41% of this budget is known to be accounted for nursing time alone (Posnett & Franks 2008).

An Ireland survey conducted by Gethin et al., 2005 in an acute care setting determined that the cost of treating one patient with grade 4 pressure ulcer was €119,094. It is suggested that most pressure ulcers are hospital acquired (Posnett et al., 2009), with the estimates for an increase in the older person population it is likely that cost will rise simultaneously (Moore & Cowman 2009). Therefore, it is important now more than ever to adopt interventions that are not only effective but also efficient (Posnett et al., 2009).

### 2.2 Pressure ulcer development:
The head, shoulders, elbows, pelvis and heels are most common sites for pressure ulcer to develop (Ganz et al., 2004). It is postulated that there are four mechanisms within three functional units which leads to pressure ulcer development (Stekelenburg et al., 2006). The functional units are capillaries, interstitial space and cells. The mechanisms are Local ischemia, Reperfusion injury, impaired interstitial fluid flow and lymphatic drainage and Sustained deformity of cells (Bouten et al., 2003, Stekelenburg et al., 2006, Moore et al., 2011). The external forces that cause internal effects are vertical force or pressure deformation, horizontal force or shear deformation and microclimatic factors as a build up of body temperature and humidity (Bouten et al., 2003, Stekelenburg et al., 2006, Moore et al., 2011).

Pressure ulcers range in severity from irritation of superficial tissues to deep muscle necrosis (Ganz et al., 2004). Colin et al., (1996) agrees with Kosiak (1961) who suggested that the main factor for pressure ulcer occurrence is the intensity and duration of pressure applied on the skin. Furthermore the higher the pressure, the shorter the time required to induce a cutaneous lesion (Colin et al., 1996).

2.2.1 Local ischemia

Most investigators agree that duration of the pressure applied was of greater significance than the amount of pressure applied (Ganz et al., 2004, O Callaghan et al., 2007). In the study by Ganz et al., 2004 who explored the effects of externally applied pressure on legs of rats and computer models, the authors found that prolonged compression significantly increased muscle stiffness & injury in all the rats were exposed to compression for < 2 hours. Furthermore, it was noticed that altering the microstructure of the muscles, resulted in loss of muscle fibre and infiltration of inflammatory cells, both indicating wide spread necrotic cell death.
The same amount of force applied to a small area when compared to that of a bigger area will result in greater pressure (O Callaghan et al., 2007). Thus, bony prominences are susceptible to increased pressure, because of the body structure, the weight is not evenly distributed resulting in diverse pressure across the interface between the individual and the bed (Defloor et al., 2004). An example is when the amount of pressure is applied to the buttocks and to the heel, because the heel has less fat and muscle padding the pressure is greater (Bouten et al., 2003). Therefore it is concluded that the prolonged excessive compression causes local tissue ischemia and irreversible cellular changes.

2.2.2 Reperfusion Injury
Reperfusion injury is defined as defined as injury to cells as a result of the restoration of blood supply to tissues which have been previously devoid of blood (O’ Callaghan et al 2007). A study of rates by Peirce et al.,(2000) explored the role of reperfusion in pressure ulcer development, the authors noted that as the number of ischemia and reperfusion cycles were increased there was reduction in blood flow and oxygen to the skin. Furthermore continuous ischemia caused 8 % of the tissue to become necrotic, compared to 13 % of the tissues exposed to the cycles of ischemia/reperfusion. These findings conclude that reperfusion causes harm due to production of toxic oxygen that are damaging to cells, increased tissue oedema and decreased tissue viability (Peirce et al.,2000).

2.2.3 Impaired interstitial fluid flow.
The balance between the production of interstitial fluid and the re absorption of this fluid is important in order to maintain osmotic pressure and thereby the diffusion of substances to and from cells (Ganz et al., 2004). Diffusion is the mechanism for macromolecular transport and cell proliferation is dependent on adequate nutrient supply (Ganz et al., 2004). Direct compression occludes the lymphatic & blood flow resulting in accumulation of waste products, proteins, enzymes and finally tissue damage (Ganz et al., 2004). This led to the conclusion that compression leads to impaired osmosis and diffusion and further impaired interstitial flow leads to pressure ulcer development (Ganz et al., 2004).

2.2.4 Sustained deformity of cells

It is postulated that deep lesions develop in the muscles first and then appear outward on the skin (Bouten et al., 2003). Deformity of cells results in immediate cell death, an irreversible damage caused by rupturing the cell, unlike ischemia that causes localised hypoxia which can be reversed on improving the blood supply (Stekelenburg et al., 2006, Bouten et al., 2003). Furthermore the longer the duration of compression the greater the evidence of cell death suggesting that time under the compression is an important variable (Bouten et al., 2003). However this will only occur if the patient is exposed to sustained external mechanical forces (Moore et al., 2011).

2.3 Risk factors of pressure ulceration:

Pressure ulcers can be prevented by determining those at risk of developing pressure ulcers. Following this assessment, effective prevention and interventions may be considered and implemented. There are many risk assessment tools in current use
however, the Waterlow and the Braden are the most popular risk assessment tools (Moore & Cowman 2009). Tissue tolerance to withstand shearing forces and pressure is what predisposes patient to the risk of pressure ulcer (Defloor et al., 2000). It has been postulated that age, nutrition and mobility are the specific risk factors that contribute to pressure ulcer development (Nixon 2004).

### 2.3.1 Ageing effects on skin

According to US census bureau (2004) predicts a global rise in the older population by 17% in 50 years compared to 7% in 2002; therefore it is of value to understand age as a risk factor in pressure ulcer development. The older population appears to be at greater risk of pressure ulcer development due to the likelihood of underlying neurological and cardiovascular problems (Nixon 2004). Furthermore ageing alters the skin by reducing collagen and causing inelasticity and the tissues easily breakdown to pressure and shearing forces (Defloor et al., 2000, Nixon et al., 2004). Casimiro et al., (2002) identified that the probability of a 60 year old hospitalised patient developing an ulcer was 17% compared to a 90 year old in similar health care setting where the probability rose to 43%. Therefore age related changes and confounding variables of skin integrity and the presence of co morbidities are considered influencing factors (Nixon et al., 2004). This leads to the conclusion that elderly population are vulnerable to pressure ulcers.

### 2.3.2 Malnutrition and pressure ulcer

Nutrition as a risk factor for pressure ulcer development and much discussed about nutrition within the literature (Moore & Cowman 2009). The role of malnutrition in pressure ulcer development has also been explored by Baumgarten et al., (2003). In
their study of 9,400 older persons with hip fracture 6% were noted to be suffering from chachexia and malnutrition. Among them, 19.6% developed pressure ulcer compared to 8.1% in the group who were nutritionally stable (Baumgarten et al., 2003). The findings of Casimrio et al., (2002) suggested that weight loss and poor nutritional intake were problems associated with greater likelihood of pressure ulcer development. Clearly there is evidence that adequate oral intake of food and fluids can prevent adverse effects of pressure ulcer among the vulnerable population. Therefore it is important to assess and monitor food and fluid intake. Further to promote well being and prevent pressure ulcer development.

### 2.3.3 Immobility and pressure ulcer development

Pressure from lying or sitting on a particular part of the body results in oxygen deprivation to the affected area (Defloor et al., 2005). Repositioning is affected by the individual’s ability to feel pain and the individual’s actual physical ability to move or reposition themselves (Defloor et al., 2005). Repositioning is advocated as one of the interventions needed for the management of pressure ulcers and involves moving the individual into a different position in order to remove or redistribute pressure from a particular part of the body (Krapfl and Gray 2008).

Fundamentally, the primary cause of pressure ulcer development is prolonged unrelieved pressure, an individual needs to be exposed to causative factor to develop pressure ulcer and tissue breakdown to occur. Therefore the level of activity and mobility are important factors to consider in assessing an individual’s risk of pressure ulcer development. In the UK a study among the post operative patients showed 15.6% had pressure ulcers and further, the Braden mobility scores were predictive of
pressure ulcer development Nixon et al., 2000). Mino et al., (2001) reported a four-fold greater relative risk for the development of pressure ulcers among patients with inability to move in bed. This concludes that immobility is a risk factor for pressure ulcer development.

2.3.4 Risk assessment tools

Pressure ulcer risk assessment is a component of the assessment process used to identify individuals at risk of developing a pressure ulcer (EPUAP 2002). Risk assessments provide checklists for nurses to identify the most common risk factors the patients are predisposed to develop pressure ulcers (Moore et al., 2011). There are many risk assessment tools used for example Norton scale, Braden Scale and Waterlow risk assessment tool (Moore et al., 2011). Risk factors vary from patient to patient and therefore designing a risk assessment tool that fits all patients not a possibility (Defloor et al., 2004). But it is important that risk assessment tool must accurately identify the patient at risk and those not at risk (Defloor 2004). National and International guidelines suggest use of risk assessment tool to identify patient at risk. However the accuracy of the information gathered depends on the assessment and the validity and reliability of the tool, clearly this has implications for practice and the clinical decisions of providing preventative strategies (Defloor 2004). Therefore it is likely that inappropriate allocation of resources compound the increasing burden of pressure ulcers and healthcare costs (Defloor 2004). The Braden scale is the risk assessment tool noted to be most frequently used in clinical practice (Moore et al., 2011). For the purpose of the proposed study the writer will adopt Braden scale risk assessment tool to identify patients at risk of developing pressure ulcer. It comprises of 6 subscales; sensory, perception, moisture, activity, mobility,
nutrition and friction or shear. Each subscale is ranked numerically as the scores become lower predicted risk becomes higher (Braden & Bergstrom 1987).

2.4 Pressure ulcer grading
The purpose of pressure ulcer grading is to identify the most predominant tissue affected, the dermis, epidermis, subcutaneous fat, muscle or bone (Defloor and Schoonhoven, 2004). The level of tissue damage is assessed and graded, this grading remains throughout the healing process to avoid confusion. In other words, a grade 4 pressure ulcer will be described as healing grade 4 (Defloor and Schoonhoven, 2004). The EPUAP scale uses a four stage classification system ranging from non blanching erythema to full scale tissue destruction (EPUAP 1999). Assessment is an integral part of care. Nurses assessing pressure ulcers must be aware of the possible causes for other types of skin damage that occurs. For example, incontinence causes maceration and skin excoriation but the treatment for incontinence differs from that of pressure ulcers. This highlights the need for the correct identification of the nature of the causative factor (Defloor and Schoonhoven, 2004).

2.5 The role of repositioning in the prevention of pressure ulcers
Pressure from lying or sitting on a particular part of the body results in oxygen depletion to the affected area (Defloor et al., 2005). Pressure ulcers occur over bony prominences because of insufficient tissue to spread the pressure. Furthermore, weight bearing directly onto an existing pressure ulcer will cause vascular obstruction which will eliminate capillary blood flow to the pressure ulcer. Repositioning is often regarded as being time consuming and costly in terms of personnel and time (Defloor et al., 2005). Therefore there is an ever increasing reliance on the use of high
technology pressure redistribution equipment as a replacement for repositioning of the patient (Moore et al., 2011). Use of equipment is not often combined with regular repositioning (Krapfl et al., 2008) although there is evidence to suggest repositioning used in combination with pressure relief devices is known to reduce number of pressure ulcers (Vanderwee et al., 2007). This suggests that patients still need repositioning strategies, even when nursed on high specification equipment.

National and International guidelines advocate use of repositioning for the prevention of pressure ulcers (EPUAP, NPUAP). There is consensus in the literature that certain positions are not useful in preventing pressure ulcers. (Defloor 2000). The 90 degree lateral position has been shown to decrease blood flow and transcutaneous oxygen tension (Defloor 2000). In the study by Young (2004) that explored the incidence of pressure ulcers between two groups, no statistical difference in pressure ulcer incidence between the groups found. Although a statistical difference was found among the few patients in the 30 degree group who could maintain the position, there are a few points to be noted. The sample size is small and therefore it cannot be generalised. The time scale to detect is short as the study time was one night. The reliability and validity of study is questionable. Furthermore the difference in the mattress used is not accounted for in the study.

The study conducted by Defloor (2005) explored the effects of four different patient turning regimes on the incidence of pressure ulcers, namely. 2 hourly or 3 hourly turning on standard foam mattress, 4 hourly and 6 hourly turning on visco elastic foam mattress and 1 control group on standard care mattress (Defloor et al.,2005). This study identified that four hourly turning on visco elastic foam mattress resulted
in statistically less pressure ulcers compared to all other repositioning groups (Defloor et al., 2005). This study demonstrated that repositioning when used in combination with a visco elastic foam mattress, results in a positive effect in terms of pressure ulcer incidence. A similar study conducted by Vanderwee et al., (2007) explored the effect of 2 hourly, 30 degree positioning, followed by 4 hourly supine positioning both alternated on a visco elastic foam mattress. The aim of the study was to determine the pressure ulcer incidence; the study findings were statistically not significant. The possibility of identifying the difference between the groups is minimised because of the similarity in the intervention offered.

Most recently a randomised controlled trial (RCT) was conducted across 12 long term care centres in Ireland by Moore et al., (2011). The study hypothesis was repositioning patients using 30 degree tilt 3hourly could reduce the incidence of pressure ulcers compared to routine 90 degree lateral tilt and pressure ulcer prevention measures (Moore et al., 2011). The study findings reported pressure ulcer incidence of 3% in the experimental group and 11% in the control group. The pressure ulcers developed were reported as grade 1. The study also found that mobility and activity scores were the highest predictors of pressure ulcer development and this was found to be statistically significant (put in the actual figures). It is noted that 94% of pressure ulcers were located on the sacrum and buttocks. The mean time for pressure ulcer development was reported as 17 days in control group and 26 days in the experimental group. No statistical difference was found between the groups for age, sex and Braden scores. Interestingly the study identified no baseline care plans documented for repositioning for 79% of patients when in chair or for 74% of patients in bed. Furthermore the study also reported that 99% of patients had pressure
alternating devices for seating, where as pressure alternating devices in bed was 86% in control group and 96% in experimental group. This suggests that 30 degree repositioning with pressure redistributing devices can prevent pressure ulcers. The 30 degree tilt, three-hourly repositioning has been shown to result in better outcomes in terms of pressure ulcer incidence. This concludes that 30 degree tilt method of repositioning is superior and low cost yet effective method of pressure ulcer prevention (Moore et al., 2011). The findings of this study have significance for clinical practice as such they support the recommendations of the pressure ulcer prevention guidelines (EPUAP & NPUAP 2009).

Although 30 degree repositioning is identified as the effective method of repositioning and shown to reduce pressure ulcer incidence, there is only four studies known to have explored the effects of 30 degree repositioning in the prevention of pressure ulcers. However none of the studies explored the experiences of patient using the 30 degree tilt repositioning.

2.6 Patient experience and how it is measured:

It is important to understand the factors that are central to the patient in terms of impact on life style and treatment outcomes (Spilbury et al., 2007). Until recently the main focus of treatment of patients with chronic diseases changed from saving patients life to improving quality of life and alleviating symptoms. Thus quality of life has gained awareness and importance in not only health matters but in every aspect of day to day living (Spilbury et al., 2007). Hence it is very important to understand HRQoL (Health Related Quality of Life) and how it is measured. To improve the health related quality of life of every patient, researchers have been closely
developing appropriate measures to adequately define HRQoL and its relevance to health (Spilsbury et al., 2007). There appears to be no perfect instrument developed yet to measure HRQoL (Hopkins et al., 2006). Many different researchers developed different models to measure HRQoL based on various domains (Hopkins et al., 2006). Todd in 1992 proposed that the domains of physical, social and psychological aspects are sufficient to describe the impact of diseases on patients, while others suggested up to six domains (Spilsbury et al., 2007). It is argued that more severe pressure ulcers would have a greater effect on quality of life. It may also be difficult for participants to separate the affect of other co-morbidities from that of the pressure ulcer (Hopkins et al., 2006). Initial studies in the development of these tools use qualitative methods to establish areas of patient’s life affected by disease. Open ended prompts may be used in either one to one interview or focus groups, to help patients express their personal feelings about the problems they face, what is important to them and what they hope most to achieve from the treatment (Hopkins et al., 2006). A preliminary questionnaire is developed from the interviews (Hopkins et al., 2006). This questionnaire is then tested on different samples of patients suffering from same disease in order to analyse the relevance of the questionnaire ((Spilsbury et al., 2007). This tool must also fulfil scientific criteria of validity, repeatability and sensitivity (Hopkins et al., 2006). Thus developed health related quality tools are of value in describing individuals, samples and populations ((Spilsbury et al., 2007). However it is important to understand that these tools or designed questionnaire could fail when patients are unable to complete the questionnaire or express themselves adequately. The purpose of exploring the lived experience is to engender understanding of what it is like to have a pressure ulcer, for example, and then use this information to help the
person to deal with this experience ((Spilsbury et al., 2007)). Qualitative research is used widely to study the experiences of patients.

2.7 Discussion & Summary
Pressure ulcers are caused by pressure and shear. Elderly people are the most vulnerable population susceptible to risk of pressure ulcers. Pressure ulcer affects all domains of activity and life of patient. Managing and treating pressure ulcer is a burden, both to health care and the patient. It is evident that pressure management and treatment consumes huge costs of health budget, nursing time and unnecessary patient suffering. The changing demographics and predicted rise in the older population adds challenge to the health care in the prevention of pressure ulcers and tackling the magnitude of the problem.

It is postulated that there are 4 mechanisms acting within 3 functional units which leads to development of pressure ulcers. The functional units are capillaries, interstitial space and cells. The mechanisms are ischemia, reperfusion injury, impaired interstitial fluid flow and sustained cell deformity. Prolonged unrelieved pressure causes irreversible tissue damage and cell death. Therefore it is postulated that pressure ulcer development is a combination of pressure, time and the individual. However there are a number of other factors that contribute to pressure ulcer development such as old age, immobility, malnutrition and presence of co-morbidities. Pressure ulcers can be prevented with appropriate management and intervention. International guidelines advocate the use of risk assessment tools for nurses to identify patients at risk of developing pressure ulcer. Thereby nurses can make clinical decisions and determine the appropriate intervention equipment and
draw care plans for the prevention of pressure ulcers. Involving patients in clinical decision making can enhance better understanding of problems and needs of the patient. Furthermore gaining an understanding of the lived experiences of patient is important as such as nurses can understand the problems and provide care accordingly. This can enable nurses to understand and assume the problems of patients who cannot articulate their needs or suffering. Qualitative research is used widely to study the experiences of patients. However there is no study conducted to explore the patient and staff experiences of using the 30 degree repositioning technique. Eliciting patient and staff experiences is important to ensure that therapies offered are acceptable to those for whom the therapies are intended. This study therefore, proposes to explore the experiences of patients and staff nurses using the 30 degree repositioning technique for the prevention of pressure ulcers.

2.8 Conclusion

There is substantial evidence that prolonged pressure causes development of pressure ulcers. Repositioning is the recommended intervention for the prevention of pressure ulcers. Although 30 degree repositioning is identified as the effective method of repositioning and shown to reduce pressure ulcer incidence, there is only four studies known to have explored the effects of 30 degree repositioning in the prevention of pressure ulcers. However none of the studies explored the experiences of patient using the 30 degree tilt repositioning. This study will contribute to patient safety through eliciting patient and staff experiences of the recommendations of best practice in pressure ulcer prevention within the clinical setting. In turn, the study is also contributing to the health and social gain of one of the most vulnerable population in our society.
CHAPTER 3: METHODOLOGY
3.1 Introduction

This chapter will set out a concise introduction to qualitative research secondly a brief introduction to the phenomenological approach and the underpinnings of phenomenology will be provided. In addition, the chapter will describe the methodology and how these elements relate to the study design, detailing data collection, the sampling strategy and data analysis, issues relating to rigour & trustworthiness and ethical considerations. Finally a summary that captures the salient points raised with in the preceding sections will be provided.

The research question is: What are the experiences of patients and staff nurses using the 30 degree repositioning technique for the prevention of pressure ulcers, within an elderly care unit?

Qualitative research is usually conducted to explore the experiences about which relatively little is known. Therefore in this chapter the researcher will discuss the qualitative methodology in an aim to provide clarity and readability.

3.2 Research Paradigms

A paradigm is a framework of logical beliefs and propositions which set out the philosophical stance & methods a researcher might adopt when researching a topic (Polit & Beck 2010). Research frameworks can predominantly be grouped into positivistic or naturalistic processes. Positivistic approach is commonly used by quantitative researchers it involves collecting systematic numerical information using statistical procedures (Creswell 2007). A naturalistic approach is known to be used by qualitative researchers, this approach is concerned with the ‘meanings’ people attach to their lives and is therefore interpretative (Speziale et al., 2003). Qualitative
research is based on the researcher exploring the individuals views and ideas with utmost respect for the individual’s perspective and his or her space (Speziale et al., 2003). Naturalistic researchers focus on the dynamic, holistic and individual aspects of phenomena and aim to capture those aspects in their entirety within the context of those who experience it (Creswell 2007).

3.2.1 Qualitative research and its growing importance in nursing:

The main goal of research in nursing is to create new insight into a particular subject (Benton and Cormack, 2000). The role of qualitative research has gained importance in nursing in recent years and has had much to offer to the body of nursing knowledge (Polit and Beck 2010). Although both qualitative research and nursing care strive to address the lived experiences, the increased awareness of healthcare consumers has also contributed to the growth of qualitative research as this paradigm responds to consumer experiences enabling healthcare staff plan care based on evidence (Hamill 2010).

Qualitative research is mainly descriptive and involves gathering verbal or observational data, concerned with how people understand their experiences and is said to present the uniqueness of each participant’s individual situation (Doody 2013). There are five approaches to qualitative research namely; case study, ethnography study, grounded theory study, content analysis and phenomenological study. These five approaches are representative of research that is built upon inductive reasoning and associated methodologies (Creswell 2007). At the descriptive level, the researcher is aimed at describing phenomena about which little is known. Phenomenology is a research approach that focuses on the meaning of the lived experiences of the
individual. The phenomenological baseline in nursing is concerned with holism in the real world of living and experience of the patient and nurse, therefore phenomenology is well suited to nursing care (Yegdich 2000).

3.3 Phenomenology

3.3.1 Phenomenological Roots

Phenomenology refers to a particular way of approaching the world (Speziale et al., 2003). It implies the eliciting of experience as it is lived. As a research method, phenomenology is governed by rigorous processes in data gathering and data analysis (Giorgi 2000). The phenomenological movement began around the first decade of the twentieth century (Speziale et al., 2003). Edmund Husserl and Martin Heidegger were the prominent leaders during the phenomenological movement (Creswell 2007). Husserl’ believed that philosophy should become a rigorous science that would restore contact with deeper human concerns and the concepts of essence, intuiting and phenomenological reduction were developed during this phase (Speziale et al., 2003).

The most popular approaches used by Nurse researchers are based on the works of Husserl on models of awareness and the Hermeneutic tradition of Heidegger, that emphasise modes of being (Paley 1997). Husserl’s phenomenology is also known as the descriptive phenomenology and is aimed at uncovering and describing the essence of phenomena of interest (Wahabi 2012). His method focuses on the description, explanation with the prime aim of uncovering the ultimate structures of the consciousness (Watson 2008). Heidegger’s phenomenology is viewed as an extension of Husserl’s original ideas, adding meaning and interpretation to descriptions without the notion of bracketing (Hamill 2010). That is, Heidegger did not believe that getting to know and
describe the experience of individuals was enough instead he stressed the importance of knowing how respondents come to experience phenomena in the way they do (Giorgi 2000). While Heidegger focussed on the experience of understanding, Husserl focused on the experience itself (Speziale et al., 2003).

3.4 Philosophical Underpinnings of Husserl's Phenomenology

Philosophical underpinnings are important as they provide a body of accepted knowledge that forms the basis of a paradigm (Yegdich 2000). Husserl’s believed that philosophy should become a rigorous science that would restore contact with deeper human concerns by applying the concepts of essence, intuiting and phenomenological reduction (Speziale et al., 2003). Essence in Husserl’s phenomenology acknowledges a person’s appreciation of his or her experiences (Creswell 2007). The intuiting process in phenomenological research results in a common understanding about the phenomenon under investigation, it begins as the researcher remains open to know about the phenomenon from the participants’ perspective. Phenomenological reduction- or bracketing, is derived from mathematics (Hamill 2010) and is a return to the original awareness regarding the phenomenon under investigation in that, Husserl suggests suspending of the researcher’s prejudices and beliefs so that they would not interfere with the description of the participants’ experience. Many studies agree that by bracketing the researcher avoids bias, and does not influence the participants’ understanding of the phenomenon (Yegdich 2000, Speziale et al., 2003, Hamill 2010) Recent criticisms of nursing interpretations of Husserlian phenomenology (Paley 1997, Yegdich 2000, Hamill 2010) thus claim that Husserl’s philosophy has not been adapted for nursing. It is argued that nurse researchers claim to adapt Husserl’s phenomenology but remain within the Cartesian- Kantian tradition (Yegdich 2000). However a number of researchers provide clarity about nursing
enquiry into patients subjectivity, in that it appears to promise an inquiry that will counteract dehumanizing tendencies and overcome Cartesianism (Yegdich 2000). Furthermore, Hamill (2010) suggests, that the trustworthiness and rigour of the study can be upheld by nurse researchers when Husserl's principles of essence, intuiting and bracketing is applied throughout the study.

The researcher has chosen a Husserl’s phenomenological approach based on its appropriateness in examining subjective human experiences commonly used in nursing science. Moreover the researcher aims to gain an understanding of the experiences of patients and staff nurses using the 30 degree tilt repositioning technique and thus a Husserl’s descriptive methodology is deemed most suitable to this study. It is anticipated that this approach will provide the richest, most descriptive data. Furthermore this study will add to the body of nursing knowledge and contribute to better care planning and decision making in daily practice, for the prevention of pressure ulcers.

### 3.5 Data Collection

Data gathering is a key element within research as it provides the evidence from which new knowledge may be generated to improve and advance nursing practice (Creswell 2007). The method of data collection for this study was by means of interviews in that, the researcher will adopt focus group interviews for gathering data around the experiences of staff nurses and one to one interviews were adopted for gathering data around the experiences of the patients in the study.

Semi-structured interviews are referred to as in depth or qualitative interviews, the questions are open ended and as such there is no predetermined responses presented to
participants (Creswell 2007). Therefore it allows the researcher to gather meaningful data around the actual experience of the participants.

### 3.6 Interviews

According to Morgan (1993), interviews are the most appropriate method of data collection as interviews offer the opportunity to voice the experience of the participants. Interviews can occur between a researcher and individual participants or between researcher and two or more participants. Interviews enable researchers to gain valuable insight into a wide range of human attitudes, beliefs, thoughts and feelings (Doody et al., 2013). Therefore interviewing was chosen as the method of data collection and for the purpose of this study.

#### 3.6.1 In-Depth Interviewing

In depth interviewing is a technique designed to elicit participant’s perspectives on the research topic. In-depth interviews can be conducted over phone or face to face, involving one participant and one interviewer (Polit & Beck 2010). On average, in-depth interviews last from one to two hours and the researcher uses set questions as interview guide (Doody et al., 2013). During this time the researcher engages with the participant by posing questions in a neutral manner, listening attentively to participant responses and asking follow-up questions & probes based on those responses. According to Wahabi et al., (2012), open ended questions set no limits on the range or length of responses. Instead they give participants the opportunity to explain their position, feelings, or experiences. The interviews are tape recorded, at the same time the researcher uses field notes to write the non verbal or observations during the interview. For this study the researcher used open ended questions (Appendix-09). Furthermore the researcher used probes to gather
more information about the experience. For example: what do you mean? Can you elaborate please? How did you handle x? How did x affect you? Can you tell me more? Why do you think so?

3.6.2 Consent for In-Depth Interviews

Staff nurses working within the unit identified potential suitable patients and provide the patient with a study information sheet (Appendix-05). Following a reasonable period of time (24-48 hours) the researcher approached the patient to enquire whether they wish to participate in the study. The interviews did not commence until signed informed consent had been received (Appendix-07).

3.6.3 Conducting Focus group

This method of data collection has been used in behavioural sciences for over 80 years and is accepted as a legitimate qualitative methodology (Doody et al., 2013). Focus groups are conducted in nursing to investigate the views of patients, carers or lay people (Morgan 1993). The primary goal of this method is to use the interaction data in the verbal and observational data, generated during discussion between participants, to increase the depth of the enquiry and reveal aspects of the phenomenon assumed to be less known (Doody et al., 2013). They are also cost effective, easy to set up and time efficient (Morgan 1993). Decision on the size of the sample depends on the amount of information each participant can give, it also depends on the topic and how much each participant can contribute. Therefore the researcher should be mindful of selecting the number of participants; the choice of a smaller group should be made when participants are willing to contribute to a meaningful discussion (Doody et al., 2013). Arguably a larger group can be challenging for any researcher, sometimes small conversations can
occur between participants or all participants can talk at the same time. However large
groups tend to work better with topics that do not evoke strong feelings and smaller
groups are more advantageous when sensitive aspects are the focus or when the
participants have considerable expertise in or experience of the topic (Wahabi et al.,
2012).

3.6.4 Consent for the staff focus group

An information sheet was given, by the researcher, to each staff member, inviting
participation (Appendix-06). Consent was obtained, by the researcher, before
commencement of the focus group interview, from those staff who indicated to the
researcher, their willingness to participate. Focus groups were not conducted until consent
was obtained (Appendix-08).

In-depth interviews with 6 patients and a focus group interview with 8 nurse participants
were conducted. In order to avoid predetermined responses and offer space to
participant’s views, open ended questions were developed for this study (Appendix-10).
To comply with confidentiality of patients and staffs, the researcher ensured that the
name did not appear on any tape recordings or transcripts.

3.7 Study Setting and Access

This study was conducted in the Long term care facility dedicated to the services of the
elderly in the Dublin area. This study was conducted following ethical approval
(Appendix-03). Permission was sought, and granted from the hospital’s Medical
Superintendent (Appendix-01) and Director of Nursing (Appendix-02). Study participant
access was gained through the area of work. A gatekeeper was used to avoid bias and the voluntary nature of the study was informed to the participants.

3.8 Study Design
A qualitative descriptive research method was employed to gather data relevant to the objectives of the study. Specifically the following designs were used:

- Following 4 week use of the 30 degree repositioning technique, one to one interviews were conducted with a sample of the patients. The purpose of these interviews was to elicit patients perceptions of the positioning regimen

- Focus group interviews were conducted with a sample of the staff nurses, the purpose of these interviews was to elicit staff nurses perceptions of the positioning regime

3.9 Population and Sampling Population refers to a set of individuals that have specific characteristics in common (Polit and Beck 2010). In this study, it refers to patients at risk of developing pressure. A sample refers to a subset of the population that have been selected for the study. This project was conducted in an elderly care unit comprising of 46 patients and 20 staff nurses.

Patient selection: According to Creswell (2007), when adopting purposive sampling, the researcher must be aware of the risk of bias, although Creswell (2007) suggests that bias can be used positively when the description of participant experiences of the phenomena is justified. Purposive sampling will be employed to select all patients who meet the inclusion criteria.
3.9.1 Sample size, Inclusion criteria and rationale for the patient interviews

On average approximately 20 patients are positioned using the 30 degree tilt, however, owing to the high prevalence of patients within the unit who were not able to freely participate in the interview process due to possible cognitive impairment, the researcher could not interview all individuals, therefore 5 participants were chosen. Speziale et al., (2003), suggests that the sample size is not determined by the need to generalise the information, but to gain an understanding of the meaning of the patients’ experiences.

The Inclusion criteria were:

- Patients at risk of pressure ulcer development, and repositioned using the 30 degree tilt repositioning technique
- Patients who agreed to participate in the one to one interviews

3.9.2 Sample size, Inclusion criteria and rationale for the nurse focus group

Approximately 20 staff nurses work within the unit. Due to time and staff pressures, one focus group interview with no more than 8 participants was conducted. Eight staff was considered representative of the whole group of nurses. For the staff nurse selection, convenience sampling was used to select those willing to participate in the focus group interviews.

The Inclusion criteria were:

- Staff nurses who have nursed patients using the 30 degree tilt repositioning technique
- Staff nurses who agreed to participate in the focus group interviews
3.10 Subject Recruitment

3.10.1 Gate keeping

Gate keeping is a process of allowing or denying other person access to someone or something, the gate keeper in healthcare has a responsibility to protect vulnerable people in care from potential harm (Creswell 2007). According to Lee (2005) gate keeping as part of a research project is a complex ongoing process. It requires the researcher to have strong interpersonal skills, a sound understanding of ethical principles and knowledge of who can be approached for advice and when to do so. Benton and Cormack (2000) suggest that gate keepers are at both the organisational and the professional level. The professional gatekeepers will need to be convinced that the research is credible and that the researcher is competent (Benton and Cormack, 2000).

The researcher has gained consent from the Medical Superintendent and Director of Nursing from the study site (Appendix-01 & 02). Furthermore the Director of nursing informed the ward in charge and staff nurses of the research study. The researcher approached the staff nurses for identifying the participants for one to one interviews and provided the study information sheet. This allowed the participants to consent at their free will.

3.10.2 Patient recruitment

The staff nurses identified 6 patients for the one to one interviews, and an information leaflet pertaining to the study was given to the patients (Appendix-05). Having allowed them time to absorb the information, (at least 24 hours later) the researcher approached the patients and obtained consent from those willing to participate in the interview
(Appendix-07). Debriefing sessions were not conducted as all the participants were comfortable throughout the interview sessions.

3.10.3 Staff nurses recruitment

Staff nurses were invited to participate in the focus group interview. Initially, an information poster was displayed in the nurses’ station, outlining the nature and purpose of the focus group. A letter of invitation was given to the staff nurses (Appendix-04), outlining the volunteer nature of participation. Finally, those who volunteered, were given an information leaflet and consent form for participation. Only when consent was received did the focus group occur.

3.11 Data Analysis

Data analysis in phenomenological research begins during data collection (Speziale et al., 2003). The main purpose of the data analysis is to organise, provide structure and elicit meaning from the data obtained (Polit and Beck, 2010). There are many methods of data analysis associated with phenomenology such as Burnard’s, Van der Zalm and Ricoeur’s approach, however these were deemed unsuitable as these are interpretive rather than descriptive and are associated with Hermeneutic phenomenology (Creswell 2007).

Within the Husserlian phenomenology, Giorgi’s, Van Kaam’s, Van Manen’s and Colaizzi’s approach can be used to guide data analysis (Cresswell 2007). It is the decision of the researcher to chose the best suitable approach for data analysis. The Colaizzi’s framework advocates the use of bracketing & underpins the Husserlian philosophy (Saunders 2003, Cresswell 2007, Hamill 2010). In this study data analysis was guided by
a modification of the seven-stage Colaizzi (1978) frame work, which was found to be both logical and credible (Speziale et al., 2003, Saunders 2003).

3.12 The Colaizzi’s frame work

Step 1: Understanding each transcript

All participants’ descriptions were read, to acquire a feeling for their contents.

Step 2: To extract significant phrases and sentences

Sentences and words were repeated, rephrased and interpreted in the margin of the transcript.

Step 3: To spell out the meaning of each statement. This is known as formulating meanings. This formulation brings out meanings hidden in the various contexts of the phenomenon that will be present in the original description by the participants.

Step 4: Repeating the process for each description and arranging these formulated meanings into clusters of themes. During this phase the researcher returned to the original descriptions to validate them.

Step 5: Integrating all resulting ideas into an exhaustive description of the phenomenon understudy.

Step 6: Reducing the exhaustive description of the phenomenon to an essential structure. Colaizzi (1978) describes this as an unequivocal statement or identification of the fundamental structure of the phenomenon.

Step 7: In this final stage the researcher returned to the research participants for a further interview to elicit their views on the findings and to validate them (Saunders 2003).

According to Sandlowski (2003), without rigour there is danger that research may become fictional and worthless as contributing to knowledge. For the purpose of
establishing rigour in this study the researcher documented a record of experiences and events in order to aid reflection and also to provide an audit trial.

3.13 Data Preparation

3.13.1 Transcribing interviews:
The researcher is the moderator and data collector for this study. The handwritten field notes were expanded and transcribed in a separate file in the computer for easy access and to avoid cluttering. Audio recording of in depth interviews and focus group interviews was transcribed by listening to the tape and the researcher simultaneously typed all the verbal data. It is recommended to follow a uniform way of presenting information on the location, date and the type of data collected. Thus, transcribed data were provided for the participants review for accuracy and amended as per the participants wish. The raw data was securely locked in the cupboard with access only to the researcher, and this will be stored for a period of 5 years and then destroyed as per the data protection act 2003. The transcribed data was transferred to the supervisor for storage under RCSI V Drive. Following this the researcher deleted all transcribed data from the personal computer, once the data transfer was confirmed and verified.

3.13.2 Coding:
There are a number of ways of doing this, according to Speziale et al., (2003), using highlighter pens or coloured pens are the easiest, another way of doing it is by open coding. The researcher coded the person and content in same colour, so that when relating the descriptive data the researcher can trace back who said what. While reading the content, the researcher identified several key words that stood out from the data were noted as memos. This proved helpful in the later stages of analysis. Examples of the key
words identified include: regular repositioning, prevention, healing, comfort, pain, sleep disturbance, agitation, short staffed.

3.13.3 Rigour and Trustworthiness

Trustworthiness is the term used in qualitative research to describe a rigorous research process or the robustness of the methodology used in the study (Sandlowski 1986, Speziale et al., 2003, Creswell 2007, Polit and Beck 2010). The trustworthiness of a study is based on the criteria of the framework used for establishing the rigour in qualitative studies in that, there are four criteria; credibility, transferability, dependability and conformability (Polit and Beck 2010). Trustworthiness is demonstrated in data analysis when these four criteria are applied.

3.13.4 Credibility:

This refers to confidence in the truth of the data and findings (Polit and Beck 2010). Accordingly this can be achieved when the participants recognise the true meaning of their experience. The researcher can ensure that the participants’ expressions are interpreted in its true meaning. The researcher can achieve this by checking and verifying the transcripts with the participants. When the reader has confidence that the researcher has produced data that truthfully reflects the participants view, credibility is achieved (Polit and Beck 2010). The researcher returned to the participants to validate the findings but no changes were needed further.

3.13.5 Transferability:

Transferability refers to the extent to which the findings from this study can be transferable to similar situations (Polit and Beck 2010). This can be achieved by a concise
description of the study setting, participant recruitment and data collection & management and further by providing detailed descriptions of the context (Polit and Beck 2010), the experience of the patient and nurses using the 30 degree tilt repositioning. The findings from the focus group and one to one interviews were detailed including participant quotations and narratives. Thereby it will allow the readers to find meaning and evaluate its application to similar settings.

3.13.6 Dependability:
Dependability refers to reliability, stability and consistency of data over time and situations (Polit and Beck 2010). It is vital that other researchers can follow the study trail easily. The researcher aimed to achieve this by detailed demonstration of all the steps applied in the study with clear documentation and logical description, so that other researchers could easily follow the study methods applied.

3.13.7 Conformability:
This refers to the objectivity or neutrality of the data, that is two or more independent people would agree about the data’s relevance or meaning (Polit and Beck 2010). According to Polit and Beck (2010), an audit trial increases conformability in qualitative research. The audit trial is the record of activities overtime. This is achieved by the researcher keeping a record of the raw data, original audio tapes, reflective journals, field notes, transcripts, reduction analysis by applying Colaizzi’s framework–theoretical notes, data reconstruction – drafts of the final report (Speziale et al., 2003). Researchers can also enhance the auditabilty of their enquiry with a person outside the study to follow the decision trial (Polit and Beck 2010). The findings of this study were evaluated by the study supervisor.
Researchers cannot contribute evidence to guide clinical practice if the findings are inaccurate, biased or fail to adequately represent the experiences of the target group (Creswell, 2007). The findings need to reflect truthfully in phenomenological research in order to contribute knowledge useful to others (Creswell 2007).

3.14 Ethical Considerations

All governing bodies especially An Bord Altranais (2007), recommend that when conducting nursing research the ethical principles such as beneficence, justice, autonomy and confidentiality should be adhered to guide the research process. These ethical standards were upheld in all aspects of recruitment of participants, confidentiality, anonymity, management of data collected and privacy. The direct relationship between the researcher and participants is very important throughout each step of the research (Speziale et al., 2003, Polit and Beck 2010). As this involves human subjects, therefore careful consideration to protect their rights was taken.

**Beneficence:** This imposes a duty on the researcher to minimise harm and maximise benefits (Polit and Beck 2010). Participants must not be subjected to unnecessary risks of harm or discomfort. Risk to the participants may include psychological or emotional distress from self-disclosure, loss of privacy or embarrassment (Polit and Beck 2010). Arrangements were made to allow time for discussions privately with participants if such instances occurred during the interview. To maximise the benefits of the study the researcher provided all participants with the opportunity to voice their opinions and pass on their experience and understanding.
**Justice:** This implies the participant’s right for fair treatment and their right to autonomy and privacy (Speziale *et al.*, 2003). Respect for human dignity is paramount within nursing research (Polit and Beck 2010). This involves honouring and respecting the decisions of the participants to decline from the study if they wish to do so.

The researcher used a gatekeeper to avoid any bias the researcher also issued a letter of invitation for all the study participants, and provided a study information sheet with the details of the study. Further the researcher checked with the participants to determine if they needed any clarifications and to obtain their consent. A copy of the transcript was provided to participants for review if they wish to do so. All data collected during the study were treated confidentially.

**Autonomy:** This includes the right to full disclosure and self determination (Polit and Beck 2010). Participants were informed of the study both verbally and also given a written patient information leaflet explaining the study. The researcher interviewed at a time suitable for the participants.

**Confidentiality:** Confidentiality and anonymity were guaranteed at all times in accordance with the data protection and regulations act 2005. An Bord Altranais (2007) explains that researchers have a moral obligation to keep participants information anonymous and the data collected confidential. The researcher explained to the participants of how their anonymity will be maintained throughout the study. The researcher used codes instead of participant names and ensured that personal identification was not revealed. The data collected were securely locked in the cupboards with access only to the potential researcher. Transcribed data were stored on the V-Drive
in adherence to the RCSI policy. Furthermore all data will be destroyed after 5 years as per the data protection act 2005 in line with the RCSI policy. The findings of the study were written in descriptive thematic form and therefore the anonymity and confidentiality was strengthened.

3.15 Limitations

This is the first research study that will be carried out by researcher and this lack of experience may add on to the limitations of the study. This study is conducted in a long term facility and therefore the study findings may not be generalisable.

3.16 Summary

This chapter details the methodology that was chosen for this study. It explains why a qualitative approach was deemed suitable for exploring the experiences of patients and staff nurses using the 30 degree tilt technique for the prevention of pressure ulcers, in an elderly care unit. The qualitative paradigm and its philosophical underpinnings were discussed. The research strategy, including sampling, data collection and management, was discussed. In addition, the data analysis using the Colaizzi’s (1978) framework was discussed. Furthermore the importance of upholding the ethical standards in all aspects of recruitment of participants, confidentiality, anonymity, management of data collected and privacy was discussed. Ethical approval was obtained from the Research Committee at the Royal College of Surgeons in Ireland for the commencement of this study. This involved submitting an application with a detailed outline of the research protocol. The following chapter will present the findings.
CHAPTER 4: DATA FINDINGS AND DISCUSSION
4.1 Introduction:
This chapter will present the findings of data gathered exploring patients and staff nurses experiences of using the 30 degree tilt repositioning technique in an elderly care unit. The findings are presented in two sections under the themes that emerged from the data analysis. The first section covers “Theoretical application” with a separate section that provides the discussion. The second section covers “Practical application” followed by a section that provides related discussion. Finally a summary is provided capturing the salient points raised within the preceding sections. The two main overarching themes that emerged from the focus group and the in-depth interviews were:

1. **Theoretical application**: under this theme two sub themes emerged Prevention, Treatment.

2. **Practical application**: under this theme three sub themes emerged Advantages, What it feels like?; a patient perspective & Challenge.

4.2 Demographics:
Twenty two patients met the study inclusion criteria however, only 6 patients, 3 male and 3 female all aged between 85 – 95 years were identified by staff nurses as being freely able to articulate, thus suitable for the in-depth interviews. The focus group was conducted with 8 female nurses who had repositioned patients using the 30 degree tilt technique and volunteered to participate. The majority of nurses represented originate from overseas aged between 35 – 45 years, while some nurses are well versed in the care of the elderly few others are new to this area.

4.3 Data analysis
Watson *et al.*, (2008) describes the data analysis as the activity of making sense of interpreting or theorising about data. Speziale and Carpenter (2003) suggest that qualitative researchers need to have a deep engagement with the data, known as dwelling with the data.

Each interview recording was listened to several times, by the researcher. The interview was transcribed simultaneously while listening to the digital recording. By paying keen attention to participant statements, the data relevant to the study were transcribed verbatim and this allowed the deep engagement with the content. To ensure anonymity and confidentiality, transcripts were coded as PT 1,2,3,4,5,6 for in-depth interviews and FG 1,2,3,4,5,6,7,8 for focus group interviews.

Husserl’s phenomenological approach emphasises the importance of “bracketing” as the method of suspending preconceived notions (Giorgi 2000, Yegdich 2000). Bracketing researcher’s preconceived ideas and prejudices enables capturing the experience of the respondents (Hamill 2010). The Colaizzi’s frame work (1978) also advocates the use of bracketing and as such, is underpinned by the Husserlian phenomenology (Saunders 2003, Cresswell 2007, Hamill 2010). For the purpose of this study Colaizzi’s (1978) data analysis frame work was adopted. The seven stages of Colaizzi's frame work are:

**Stage 1**: Understanding each transcript: All participants’ narratives were read and re-read, so the writer could familiarise with the actual meaning of the data. While reading the content, several key words that stood out from the data were noted as memos. This proved helpful in the later stages of analysis. Examples of the key words identified
include: regular repositioning, prevention, healing, comfort, pain, sleep disturbance, agitation, short staffed.

**Step 2:** Extract significant phrases and sentences: All the content of the data was read through to enable the researcher engage with the data. This allowed identification of any consistencies and differences. Sentences and words were repeated, rephrased and interpreted in the margin of the transcript. Changes to the statements were made as little as possible to retain the actual views of the participants. Examples of some of the sentences extracted from the data are:

“Yes, I find it useful. I am paralysed from here down, from the hip down so I’ve no feeling at all” PT1

“After you showed the DVD of the 30 degree tilt we know how to keep the pillows the right way supported” FG2

**Step 3:** To spell out the meaning of each statement: The meaning of each statement was analysed and this is known as focusing, simplifying, abstracting and transforming. This formulation brings out meanings hidden in the various contexts of the phenomenon that were present in the original description by the participants (Speziale et al., 2003. Saunders 2003). For example,

1. “*It lets the air into the bones*” PT5

Abstract: repositioning promotes comfort

2. “*I am not allowed to sneak out of bed, so I suppose it would be good for people to be turned every couple of hours in bed*” PT6

Abstract: Repositioning is important in patients with immobility.

**Step 4:** Formulate meanings: This stage involves repeating the process for each description and arranging these formulated meanings into clusters of themes (Saunders
During this stage the study-supervisor was consulted for guidance. The original descriptions were revisited to validate them and to examine any discrepancies. The themes were found rather discordant in the beginning but, after categorised, a connection was identified between them. The themes were colour coded and this further provided clarity. Two main themes emerged from the findings, Theoretical application and Practical application. Under these four sub themes emerged: Prevention, treatment, advantages, what it feels like?; a patient perspective & challenges.

Examples of statements extracted:

“It’s very good for immobile patients, the 30 degree tilt technique we found it very useful.” FG4

“We’ve seen it promotes comfort” FG7

“Good with pain relief at the back” FG4
“Increases circulation” FG3

“And easily we can inspect the skin” FG5

“I find it has improved the sore on my bottom very well. Nurses found one on this side dry and healed since the use of it” PT1

“Yeah I was probably in a bad position and they turned me and I felt better” PT3

Examples of cluster themes that arose from the statements:

1. Understanding the role of repositioning
2. 30 degree repositioning relieves pain and promotes comfort
3. Repositioning in 30 degree tilt assists healing
4. Regular skin assessment of the elderly

**Step 5:** To compare theme clusters to original descriptions: This process involves integrating all resulting ideas into an exhaustive description of the phenomenon under study. 15 clusters of themes were colour coded and collapsed into 4 emergent themes
Prevention, Treatment, Advantages and Challenges. The themes were compared with the original descriptions to validate them and to further examine them, clusters was read and incorporated into the initial text.

**Step 6:** Reducing the exhaustive description of the phenomenon to an essential structure: Colaizzi (1978) describes this as an unequivocal statement or identification of the fundamental structure of the phenomenon. As data analysis proceeds the findings created a conceptualisation of two over arching themes “Theoretical application and “Practical application”. Further, “Prevention and Treatment” were collapsed into over arching theme of “Theoretical application”. “Advantages, “What it feels like? ; a patient perspective” & “Challenges” were further collapsed into the over arching theme “Practical application”. The organised data arranged from the colour code formed the material from which the report findings are written.

**Step 7:** In this final stage the researcher returned to the research participants for a further interview to elicit their views on the findings and to validate them (Saunders 2003). According to Sandlowski (2003), without rigour there is danger that research may become fictional and worthless as contributing to knowledge. For the purpose of establishing rigour in this study the researcher documented a record of experiences and events in order to aid reflection and also to provide an audit trial. A sample of the general themes is provided in the Appendix-11.

**4.4 Presentation of findings:**

**4.4.1 Theoretical Application:**

Nursing theories are systematic descriptions and explanations of aspects of professional nursing (Myer et al., 2010). Theories provide guidance for proficiency in everyday
practice (Nettina 2006). All theories are designed to be applied to situations in patient care (Nettina 2006). Indeed, nursing theory results in enhanced professional status for nurses (Russell 2005). It renders practice more effective and efficient by supporting autonomy and accountability in nurses (Russell 2005). Further, it helps nurses to identify the focus, meanings and goals of practice. Nursing theory provides a foundation for assessing, explaining patient conditions (Nettina 2006). Once this assessment and evaluation is made, nurses can contribute to diagnosis and planning patient care interventions (Nettina 2006, Myer et al., 2010). This means that the theoretical application is largely inclined towards prevention & treatment for health promotion. However, only through means of nursing research and evidence based practice we can determine if theory fits everyday practice effectively. The literature is largely devoid of qualitative studies exploring the views of patients and nurses use of 30° repositioning technique. While health sectors emphasise the use of evidence based care to enhance patient safety (EPUAP & NPUAP 2009), nurses strive to cater for the demands of the patients’ and relatives. The sub themes under theoretical application relates to “Prevention” and “Treatment”. Both prevention and treatment are important aspects of health care.

4.4.1.1 Prevention of pressure ulcer:
Pressure and shear are the causative factors in pressure ulcer development, thus it is important to understand how sustained external mechanical forces damage skin and tissue integrity (Defloor et al., 2005). Although the exact mechanisms responsible for pressure ulcer development are not clearly understood, it is postulated that within three functional units; the cells, capillaries, interstitial space and four mechanisms; local ischemia, reperfusion injury, sustained tissue deformity and impaired lymphatic drainage
lead to pressure ulcer development (Moore & Cowman 2012). The circulatory system and lymphatic system are both responsible for maintaining normal tissue integrity. The circulatory system delivers oxygen & nutrients to the tissue and removes carbon dioxide & waste following cell metabolism (Defloor & Schoonhoven 2004). The lymphatic system removes excess fluid and protein from the tissue spaces (Colin et al., 1996). The space between cells and blood vessels is called the interstitial space and is filled with interstitial fluid. Oxygen and nutrients diffuse from the interstitial space to the cells and waste products from cells diffuse into interstitial space and from there to the blood vessels responsible for elimination (Defloor & Schoonhoven 2004). The four mechanisms involved in pressure ulcer development will now be discussed.

Local Ischemia: The compressive forces results in vascular obstruction depleting oxygen and nutrients to the tissue leading to cell damage (Colin et al., 1996). This is followed by inflammatory response resulting in altered capillary permeability, leakage from the capillaries and interstitial oedema (Colin et al., 1996). This hinders osmosis and diffusion and causes damage to skin and underlying tissues with muscle being more susceptible to changes in perfusion than skin (Colin et al., 1996).

Reperfusion Injury: This is defined as injury to cells as a result of the restoration of blood supply to tissues which have been previously deprived of blood (Peirce et al., 2000). Reperfusion causes more harm due to the production of toxic oxygen free radicals which exceed the ability of the body’s free radical scavenging mechanisms. These are cytotoxic to cells and cause capillary occlusion (Peirce et al., 2000).
Impaired interstitial fluid flow: Firstly direct compression occludes the lymph flow, secondly occlusion of blood flow releases hormones which affect lymphatic smooth muscle and lymphatic contraction (Peirce et al., 2000). Both these factors impair osmosis and diffusion and cause accumulation of waste products, proteins and enzymes which ultimately leads to tissue damage (Peirce et al., 2000).

Sustained deformity of cells: Researchers suggest that local ischemia causes oxygen depletion and is reversible, whereas cell deformation causes cell rupture and eliminates the possibility of cell damage reversal. The findings of the study by Gefen et al. (2008), demonstrated that cells were able to tolerate strains for up to one hour but gradually reduced tolerance over three hours, after which cell death was evident. Overall the prevention of pressure ulcer is complex and challenging as it involves different interventions including nutritional care, pressure relieving surfaces and skin & wound care (Defloor & Schoonhoven 2004). Most importantly repositioning patients at risk is an integral component of pressure ulcer prevention (Moore & Cowman 2012).

4.4.1.1a Understanding the role of repositioning:
Pressure ulcers are caused by prolonged unrelieved pressure especially in vulnerable elderly persons and they occur mostly over bony prominences (Moore & Cowman 2012). This is because the bony prominences do not have sufficient tissue to spread the pressure and therefore not all areas are equally protected when patient is in bed, or seated (Moore & Cowman 2012).

Pressure from sitting or lying on a particular part of the body deprives the affected area of oxygen supply (Defloor & Schoonhoven 2004). Pressure damage may involve superficial
layers of the skin and deeper tissues, but most superficial skin damage is known to be caused because of shearing forces (Defloor et al., 2005). Unlike deeper tissue damage, skin damage is easily visible on assessment and further deterioration can be prevented with appropriate pressure relieving strategies in place (Moore 2008). Conversely, damage to deep tissue has often been happening over some time and is not visible to the naked eye until it arises from underlying structure towards the superficial skin layers (Defloor & Schoonhoven 2004).

Failure to reposition patients regularly results in oxygen depletion, interstitial oedema, cell deformation and deep tissue damage (Mino et al., 2001). Therefore patients at risk of developing pressure ulcers need to be repositioned at regular intervals (Mino et al., 2001). Indeed, the participants in this current study recognised the role of repositioning for the prevention of pressure ulcers. When the patients were asked about their views of repositioning, they demonstrated an understanding of the benefits and emphasised the need for regular turning. The following are an indication of this understanding:

“Yeah, well it helps when I am turned” PT1

“It relieves if you have weak skin or something” PT5

“Turning is important to me or else it upsets me” PT4

Literature agrees that 95% of pressure ulcers can be prevented depending on the recognition of at risk individuals, implementation of prevention strategies facilitated through the use of validated guidelines (Young 2004, Vanderwee et al., 2007, Moore et al., 2011). In this current study, the focus group began with asking the nurses what came to their minds first, when thinking about pressure ulcer prevention. The statements of the respondents indicate understanding of the importance of repositioning:

“Repositioning” FG1
“Regular positioning” FG2 (all the participants agree)

This suggests that nurses are aware of the role of repositioning and its importance in the prevention of pressure ulcers.

4.4.1.1b Identifying patients suitable for the 30 degree tilt repositioning:

Risk is identified as the probability of an individual developing a specific problem (Mino et al., 2001, Moore 2001). Pressure ulcer prevention without accurate and on-going assessment places the at-risk person in an increasingly vulnerable position (Moore 2005, EPUAP & NPUAP 2009). Therefore identifying patients at risk allows nurses to allocate preventive strategies, equipment and treatment appropriately (Moore & Cowman 2012).

The potential factors predisposing an individual to developing pressure ulcers are age, nutrition and mobility (Moore et al., 2011). Guidelines recommend the use of risk assessment tools to identify patients at risk for pressure ulcers (EPUAP & NPUAP 2009).

As noted in the writer’s reflective journal, the general practice in the unit where this study took place is to complete a risk assessment using the Braden scale, for all patients on admission and risk should be reassessed monthly or more frequently if there is a change in the patients’ general condition.

The Braden scale is composed of six subsets which measure elements of risk that contribute to higher intensity and duration of pressure, or lower tissue tolerance for pressure (Ayello & Braden 2002). These are: sensory perception, moisture, activity, mobility, friction and shear (should reference the authors of the Braden scale). Each item is scored between 1 and 4 (except for friction, which is scored 1-3), with each score accompanied by a descriptor (Ayello & Braden 2002). The lower the score is, the greater the risk of pressure ulcer development (Ayello & Braden 2002). A score of 15-16 is
termed low risk, 13-14 is medium risk and 12 or less indicates high risk (Ayello & Braden 2002).

The Braden scores of patients in the study ranged between 14-12, this indicates that the study participants were at medium to high risk for pressure ulcer development. The nurse participants demonstrated good understanding of the risk factors that contribute to development of pressure ulcers. The following are an indication of this understanding:

“Patients with old age problems” FG4
“Unable to move” FG5
“Contractures” FG5
“Patients with pressure sores, sick patients” FG6
“Bedridden patients” FG8
“Patients with Parkinson disease” FG3
“Patients who cannot feel pain, patients with no sensation” FG7

When the nurses were asked about what was common among these patients, their views were as follows:

“They are unable to turn themselves” FG5
“They are very prone to develop a pressure sore” FG2

Literature highlights that people at greatest risk of developing pressure ulcers are those who have lost sensation and patients with altered mobility (Young 2004, Defloor et al., 2005, Moore 2005, Vanderwee et al., 2007). When sensory loss occurs patients may not feel uncomfortable or the need to be repositioned (Moore et al., 2011). This quotation gives a glimpse of that experience:

“Repositioning helps, since I am paralysed from here down, from the hip down so I’ve no feeling at all” PT1
Patients who have experienced loss of sensation as the result of spinal cord injury or neurological disease are at higher risk of developing pressure ulcers (Nettina, 2006). Aging brings about bodily changes for example the skin becomes thinner and more fragile thereby increasing the risk of skin breakdown (Moore 2005, Spilsbury et al., 2007). Nutrition plays an important role in pressure ulcer prevention in that poor nutrition leads to muscle wasting & soft tissue loss which can increase the pressure on bony areas of the body (Moore et al., 2011). This is because pressure is equal to force divided by area (Vanderwee et al., 2007) thus, less fatty tissue renders bony prominences more prominent, yielding a decrease in area to dissipate compressive forces, thus an increase in pressure (Moore et al., 2011). Patients with an altered level of consciousness may not feel discomfort or may not be awake enough to physically reposition themselves (Hickman et al., 2007). Indeed, this is well captured by one of the participants:

“Well I can’t turn myself if I’m asleep, I mean how can I turn myself if I’m asleep I don’t know what way I lay.” PT2

“I don’t know if I am gone asleep I don’t know what happens to me, when awake I don’t stay in the one position, I move around a few times.” PT2

Another patient with limited mobility humorously expressed that turning was very important to him:

“I am not allowed to sneak out of bed (smiles)I suppose it would be good for the people to be turned in bed every couple of hours every day” PT6

Thus, nurses have an important role in assessment and identifying patients need for repositioning. Nurses are largely responsible for both aspects of prevention and treatment (Brandies et al., 2001). Although there is argument about the accuracy of the risk assessment scores, it is suggested that nurses should use their clinical judgement in addition to the use of risk assessment tools (Moore & Cowman 2010).
4.4.1.1 Treatment:

Healthy tissue is maintained naturally when there is an adequate supply of oxygen and nutrition (Gefen et al., 2008). When there is an injury to skin for example, when a patient develops a pressure ulcer, this initiates a series of wound healing responses (Brandies et al., 2001). Wound healing pattern is regulated by growth factors, cytokines and matrix metalloproteinase’s, conversely a few predisposing factors negatively influence wound healing, for example, poor blood supply, systemic diseases and infection (Peirce et al., 2000). Open wounds restore the continuity of the skin by replacing dead tissue with new living tissue through the healing process of granulation and epithelial tissue formation (Stekelenburg et al., 2006, Moore et al., 2011). The granulation tissue is fabricated densely with blood vessels, capillaries and cells (Gefen et al., 2008). The cellular metabolism indicative of wound healing, demands adequate supply of oxygen, nutrients and effective waste elimination (Gefen et al., 2008). In the case of patients resting in the 90° lateral position this causes tissue hypoxia and irreversible damage at weight bearing areas (Defloor et al., 2005, Vanderwee et al., 2007, Moore et al., 2011). Tissue hypoxia is oxygen depletion which means that adequate nutrition and waste metabolism to the tissue is occluded (Gefen et al., 2008). Consequently wound healing is further impeded when patient with multiple ulcers are positioned such that they are weight bearing over the damaged area (Moore et al., 2011).

4.4.1.2a Repositioning using the 30 degree tilt technique assists healing:

It was interesting to hear the participant views of using the 30 degree tilt technique. Although some participants shared different views about 30 degree repositioning technique, overall findings support the theoretical aspects discussed in the literature.
review. One of the themes that arose from the findings was “healing”. When the patients were asked about their experiences of the 30 degree tilt repositioning, one participant noted that it was helpful in healing pressure ulcers. The following quotation is an indication of this conception:

“I find it has improved the sore on my bottom very well, Nurses found one on this side dry and healed since the use of it.” PT1

The nurse participants were confident that the 30 degree tilt repositioning technique had assisted in healing. These are some quotations of the nurse participants that imply an understanding of this concept:

“Yes, there is much of an improvement.” FG7

“Definitely there is improvement, we have one patient now with grade 2 pressure ulcer since last week, he almost healed already closed.” FG1

“And then we also have one grade 3 and now that too is decreasing in size with the 30 degree tilt.” FG2

There is consensus in the literature that certain positions are not useful in preventing pressure ulcers (Young 2004, Defloor et al., 2005, Vanderwee et al., 2007, Moore et al., 2011). According to the findings provided by Defloor (2000), the 90 degree lateral position is known to occlude capillary blood flow and reduce transcutaneous oxygen tension. The 30 degree tilt position relieves pressure especially at the sacrum and the heels, areas that commonly develop pressure ulcers due to lack of fat padding (Moore et al., 2011). Therefore, the participant are in congruence with the literature, in that they agreed that the 30 degree tilt repositioning assists tissues perfusion and contributes healing (Moore et al., 2011).

4.4.1.2b Skin assessment for signs of pressure damage:

Skin care is a fundamental part of nursing care (EPUAP & NPUAP 2009). Nurses play an important role in preventing skin breakdown especially in the elderly because of
the fragile nature of skin (Brandies et al., 2001, EPUAP & NPUAP 2009). Pressure ulcers can damage not only the skin, but also the fatty tissue beneath, resulting in excruciating pain and lengthy treatment (Gefen et al., 2008). Pressure ulcers can also become infected and may be a contributing factor in increasing mortality (Defloor et al., 2000). Therefore skin assessment and early detection of pressure damage is important in both prevention and treatment of pressure ulcers. The guidelines propose that skin assessment should be carried out regularly in order to inspect vulnerable areas for signs of pressure damage (EPUAP & NPUAP 2009). The findings from this current study support that nurses were able to perform skin inspection easily and regularly when repositioning individuals using the 30 degree technique. The following are the indications of this perception:

“When they are lying on their sides we also can inspect all areas regularly.” FG2

“And we can prevent it from further deterioration while we inspect skin.” FG8

The nurses also demonstrated the need to assess and manage patients suffering with pain effectively. Such strategies, in turn may relieve pain and therefore help patients to co-operate with the repositioning technique. This quotation is an expression of that concept:

“And we also need to assess them for pain before turning, when they are in pain we need to give them something to relieve that first and then turn them at the right times you know” FG3

This signifies that because the staff nurses were positioning the patient regularly, this provided opportunities for skin inspection, helping in the early detection of tissue damage, and in the subsequent prevention of skin related problems.
4.4.1.3 Discussion:

Theoretically most pressure ulcers can be prevented with appropriate prevention strategies being put in place (Brandies et al., 2001, Stekelenburg et al., 2006). Regular skin assessment and early detection of pressure damage of at-risk patients can be effective in preventing pressure ulcers (Moore et al., 2012). This requires accurately completing risk assessment otherwise this action may not bring the anticipated results (Moore & Pitman 2000). Because pressure is the cause of ulcer development, repositioning is considered one of the best ways to prevent pressure ulcer occurrence. The RCT conducted by Moore et al., (2011) provides evidence that occurrence of pressure ulcer was reduced by 85% when patients were repositioned every three hours using the 30° lateral tilt technique. Repositioning helps to shift & redistribute pressure off the vulnerable area (Young 2004, Defloor et al., 2005, Moore 2005, Vanderwee et al., 2007). Therefore it makes sense to reposition patients using the 30° lateral tilt since the 90° and 60° lateral position cause tissue hypoxia and are ineffective in relieving pressure at the weight bearing areas of the body (Young 2004, Defloor et al., 2005, Moore 2005, Vanderwee et al., 2007, Moore et al., 2011).

The participants in the study demonstrated good understanding of the role of repositioning, the importance of risk assessment and skin inspection in prevention of pressure ulcers. Based on the information gathered from the participants and taking into consideration patient needs and preferences, the results may unfold new measures to initiate into practice. Participants’ awareness of repositioning as an intervention appears to be a good start for the Tissue Viability Nurse to implementing best practice in the clinical setting. This will allow health professionals to work together with patients where by patients can play an active part in making decisions about their care.
(Grol & Wensing 2004). Furthermore the participants in this study witnessed improvement in active ulcers in that they noticed reduction in wound dimension and healing when patients were positioned in the 30° lateral tilt technique.

Research highlights the importance of early intervention in preventing problems escalating further i.e. for patients who are vulnerable to develop pressure ulcer (Brandies et al., 2001, Moore 2005). In this the outcomes for both the health sector and the patients can be seen from decrease in incidence of pressure ulcers (Spilsbury et al., 2007). This may entail avoiding occurrence of painful pressure ulcers, lengthy treatments, dressing costs and costs related to nursing time (Defloor & Schoonhoven 2004, Spilsbury et al., 2007). Based on the reports of DH UK (2010), reducing and preventing pressure ulcers could lead to annual savings of £154m. While treating and managing pressure ulcers incur high expenses from the health budget, it makes sense to focus on prevention strategies especially at this crucial time when national and international economy stability is at stake (Spilsbury et al., 2007). Repositioning at-risk patients using the 30° lateral tilt technique can be an effective prevention strategy which is well accepted by patients and nurses alike.

4.4.2 Practical Application:

In theory, theory and practice are the same but in practice they are different (Myer et al., 2010) for example, although theoretical aspects of pressure ulcer prevention stress the importance of repositioning as an intervention, literature suggests repositioning is not integrated well in clinical practice (Moore et al., 2011). Despite National and International guidelines setting out repositioning as primary component of prevention (EPUAP & NPUAP 2009), only 4% of patients were found having repositioning care plans for either sitting or lying (Moore et al., 2012). At its essence, a lack of
adherence to best practice compounds the challenges in achieving safety standards for patients. As such, the literature indicates the need for change in practice, particularly when the presence or absence of pressure ulcer is often seen as a quality care indicator (WHO 2003, EPUAP & NPUAP 2009, HIQA 2012). To bridge this gap between scientific evidence and patient care, requires an in depth understanding of the barriers and incentives to achieving change in practice (Prochaaska et al., 1992). Change is a process that entails planning, innovation, and need to have cognisance of the characteristics of professionals & patients involved including the social, organisational, economic and political context (Prochaaska et al., 1992, 1994). Changing clinical practice is a major challenge and as such, many theories and models have been developed to facilitate the change process. These models point to a multitude of factors that may affect the successful implementation of change (Grol & Wensing 2004).

The model of change conceptualised by Prochaaska and Di Clemente (1983) comprises of five stages (Prochaaska et al., 1992, 1994). It provides a framework for understanding the process of how people change, while recognising that people are at different stages of change and thus require different types of interventions needed to help them progress (Prochaaska et al., 1992, 1994). Gaining an understanding of the change process provides clarity into how change may be adopted into clinical practice.

The five stages of change are; Pre-contemplation, Contemplation, Preparation, Action, Maintenance & relapse prevention (Procaaska & DiClemente 1992). According to Prochaaska& DiClemente (1992), the pre-contemplation stage is when the person is in denial, unaware and thus does not consider the need for change. In the
contemplation stage the individual is aware of that there is a problem and begins seriously thinking about change and starting to assess barriers and benefits to change. The preparation stage: sees the individual realising the benefits of making change and thus begins to prepare to make the specific change. In the action stage active steps are taken towards making the change. Finally the maintenance & relapse prevention stage involves incorporating new behaviour into the long term. Discouragement over occasional slips may halt the change process. Relapse is common and a normal part of change process however, shifting the focus from failure towards problem solving offers encouragement. The main goal here is to offer support and re-engage the individual’s efforts in the change process.

There is lack of clarity for staff nurses regarding the repositioning regimen that is specific to pressure ulcer prevention. Therefore, adopting the evidence based regimen of 3 hourly 30° repositioning will enable nurses to prevent pressure ulcers, reduce suffering, expenditure and nursing time. Furthermore, implementing repositioning strategies for patients using the 30° lateral tilt involves both patients and nurses undergoing the process of change. Therefore, understanding the stages of change framework conceptualised by Prochaaska & DiClemente (1983) will allow effective implementation of change. In an aim to structure the experiences of the participants within this study, the themes that emerged under “Practical application” were; “Advantages” “What it feels like? ; a patient perspective” and “Challenges”.

4.4.2.1 Advantages

4.4.2.1a 30 Degree repositioning relieves pain and promotes comfort:
Most of the patient participants stated that they found the 30° lateral repositioning comfortable and relieving, probably from pain related to pressure. Literature suggests that
repositioning is essential because it temporarily reduces the interface pressure allowing compressed tissues reperfuse before necrosis occurs (Moore et al., 2011). Interface pressures are a measure of the physical interaction between the individual and the surface they lay on (Moore et al., 2011). Despite recommendations suggesting that repositioning is an effective intervention to preventing pressure ulcers lack of clarity exists around the optimal technique for repositioning (Moore et al., 2011). However, the 30° lateral tilt technique is advocated as best practice for the side lying position because it reduces the pressure over the trochanter, shoulder and lateral malleolus (Vanderwee et al., 2007). These few quotations point out participants’ expression of relief from pressure when using the 30 degree tilt:

“Yeah, I was probably in a bad position and they turned me and I felt better.” PT3

“The 30 degree tilt technique, we found it very useful.” FG4

“It also promotes comfort, like when you lie on your side you feel comfortable than being flat on the back.” FG2

“We’ve seen it promotes comfort” FG7

“Good with pain relief at the back” FG4

In addition as noted in the reflective journal, from regular interactions with the patients, nurses were able to determine that most patients were willing to be turned in the 30° position. These quotations show the participants appreciation for repositioning:

“Sometimes they love the turning.” FG5

“Well It wouldn’t bother me nurses coming and visiting me, talking to me, turning me, it doesn’t give a care as long as they are moving me somewhere.” (Laughs) PT6

Another participant also humorously expressed his desire and willingness to rest in bed more than spending time in the wheel chair:
“Oh I’ll tell you first about the wheel chair, Oh really it cuts my bottom off me and I still have to be going and sit in my room.” (Laughs) PT6

This means that by effective communication and involving the patient in shared decision making could probably enhance implementing change in daily practice more effectively.

4.4.2.1b Standardization of care:

Standards of nursing practice are the baseline for assessing quality nursing care and nurses are accountable for delivering consistent, high quality health care services (Myer et al., 2010). Indeed, standardization of practice reduces variation in the treatment of care delivered to patients and enhances patient safety (WHO 2003). Furthermore it enables effective monitoring, management and evaluation of care provided (Davidson et al., 2006). These quotations of participants indicate that adapting the 30° lateral tilt technique provides consistency in prevention strategies:

“Everybody will be doing the right way you know so it’s nice and it’s the way it should be” FG3

“Everybody is following the same way” FG2

“So we are able to follow it well” FG3

“We will keep the 30 degree tilt going as it is very useful in the hospital for patient’s pressure ulcer prevention” FG4

Most interestingly, another participants’ view focused towards establishing effective clinical outcomes. This quotation is an indication of that concept:

“But we have to keep doing it otherwise it won’t work that way” FG8

This is arguably true in essence, the 30° lateral repositioning technique if not incorporated efficiently, will result in a lack of consistency in daily practice which may serve to defeat the whole purpose yielding anticipated results unattainable, that
is, the reduction of incidence & prevention of pressure ulcers. Standardization is a cultural process and it involves organisational support in providing staff training for skill enhancement (Shanley 2004).

Surprisingly, data collection paved the way into capturing unexpected concepts and ideas of the participants. For example, one of the nurse participants’ perceptions on sleep disturbance concerning the patients appears to encircle around job satisfaction. This quotation is an indication of that idea:

“Actually even at night times when they are fast asleep we even feel bad to go and wake them up and turn them, I know it’s good for them but I don’t know..”

FG1

In daily practice, nurses encounter many patient care situations that call for effective decisions and here the nurse participant unfolds one such experience. This statement reveals that the understanding of the nurse towards the rationale for adapting best practice in pressure ulcer prevention is crucial. Indeed, there appears to be a fine line between choosing to promote best practice over facilitating patient comfort. However, in such instances decision guided through knowledge & skills and clinical findings is central to safe practice (Ayello et al., 2002).

According to Lu (2005), by comparison of one’s prior expectations about the job and the actual experience of the job we can determine job satisfaction. This is taken to mean that job satisfaction relates to beliefs and emotions that individuals have about their work, and their job (Lu 2005). Research literature suggests that there is a direct correlation between staff satisfaction and patient satisfaction in health care organisations (Price 2002). This means that by repositioning the patient in the 30° lateral tilt technique the nurse’s decision was based on evidence. Moreover, the professional code of ethics that guide the nurses’ practice emphasise to do no harm (Creswell 2007). Furthermore, satisfied employees are more productive to their
employers and organisation (Price 2002). Therefore as practicing clinicians, knowing the pressure ulcers are a problem one should reflect on the repositioning strategies for prevention of pressure ulcers, this in turn contributes to the individual gaining job satisfaction in promoting patient safety while adhering to the guidelines.

4.4.2.1c Empowerment from knowledge:

The process of developing and delivering evidence based care requires successful implementation of training and education (Davidson et al., 2006). According to Hickman (2010), successful implementation of training programmes could result in positive changes of attitudes and behaviours among nurses towards care delivery. Furthermore, this may benefit successful implementation of best practice. The nursing staff in this study acknowledged that training had enhanced their skills in performing the 30° tilt technique. The nurses were able to understand the actual technique involved in performing the 30° tilt repositioning. The nurses also agreed that the technique was quick and easy, some of these quotations unfold the participants’ views:

“After you showed the DVD video of the 30 degree tilt technique, we learnt to keep the pillows the right way supported.” FG2

“Earlier we use to put only one pillow for both legs.” FG3

“Even the chart, the poster on the 30 degree tilt was very useful” FG5

“Even with the pressure relieving mattress there is still a need to continue the turning regularly, and even with regular turning we find some patients are prone to develop pressure sore or redness sometimes”FG2

Continuing education in nursing is necessary because of an unprecedented growth in professional knowledge rapid changes in the health care system and the consequent changes in nurse’s roles (Thurston 1992, Davidson et al., 2006, Hickman 2010). Therefore health practitioners need to adapt as the professional requirements change,
in order to maintain competence and to safeguard the patients (Thurston 1992, Hickman 2010).

4.4.2.2 What it feels like for me? ; a patient’s perspective

Understanding how the patient feels is essential for quality care delivery especially when therapies offered are intended to enhance patient safety (Grol & Wensing 2004). The Department of Health UK, released the consultation document of “No decision about me, without me” which sets out duties for the NHS commissioning board to put the patient first and in doing so emphasises the rights of the patient (DH UK 2012). Greater involvement of patient in decisions about their care and treatment achieved through shared decision is crucial for continuity of care (DH UK 2012, Health Literacy 2012). Although making shared decision is not a new concept in health care, it does not appear to be fully acknowledged in clinical practice (DH UK 2012, Health Literacy 2012).

Research highlights that most patients recall and comprehend as little as half of what physicians and nurses tell them (Health Literacy 2012). Therefore, it is clear that patients are at risk of misunderstanding health communications. There is consensus in the literature that health literacy has a direct impact on health outcomes conversely, the communication gap between patients and clinicians has clear issues for patient safety (Health Literacy 2010). According to a survey in Ireland, over two thirds of clinicians do not understand literacy problems among the Irish population (Health Service Executive and NALA, 2009). International research also highlights that clinicians overestimate patients literacy levels and rarely consider patients limited literacy skills in their assessment of whether the patients understand what they need to
do to manage their illness (Health Service Executive and NALA, 2009). Indeed, clinicians provide clinical expertise & knowledge about diagnosis and treatment while on the other hand patients are experts in their own condition and have full knowledge of their personal preferences (Health Literacy 2010). Therefore, for continuity of quality care, health sectors should aim at providing patients more choice to enable all patients to access the highest quality of services (DH 2012, Health Literacy 2010). In this study, most patients had some understanding of the benefits of repositioning as an intervention in preventing pressure ulcers and also the disadvantages when not repositioned. This quotation is an indication of this understanding:

“Let’s put it this way if nurses put me in one position and they said it lets the air quicker for that reason I would say yes!” PT6

In addition, participants also demonstrated efficiency in performing the 30° lateral tilt technique by themselves where possible. The following is an indication of this understanding:

“I just do the repositioning technique myself since the nurse told me” PT1

This means that when patients recognise their abilities and limitations it enables the health professionals to engage them in developing care plans and adherence to good practice. Some participants were among those who had memory problems and mild cognitive impairment related to ageing and their disease condition of early dementia or Alzheimer’s. These patients were able to understand simple instructions and seemed to remember some, if not all, incidents linked to the study. These quotations indicate their memory related to the repositioning experience:

“I don’t know because, I can’t remember” PT4

“I don’t remember anything else that is of importance I think” PT5
Thus, we need to understand more how patients who have limitations to memory can contribute to shared decision making. If we do not understand this we will struggle to fully understand who is responsible for the safety of the patients who cannot make decisions or articulate their own needs.

4.4.2.3 Challenges

4.4.2.3a Patient preferences:

Nurses have to be understanding of patient preferences, comfort and physiological requirements (Russell 2005). The studies of Vanderwee et al., (2007) and Young (2004) acknowledge that the 30° tilt reposition is not a typical position most healthy individuals would move into while lying on their side. Indeed, in this study a few patients expressed their desire to remain lying in a particular position at night time. In addition, the nurse participants’ also expressed their concern over patient insisting in remaining in a particular position. These quotations are an indication of this understanding:

“In the night times I usually lie on the one side and on my back um I find it okay” PT1

“But some of them are really choosy they want to be on one side, their comfortable side while sleeping” FG6

The ability of human beings to make decisions must always be respected (Soini and Valimaki 2002). Patients with immobility and inability to perform normal activities are often known to have high stress levels, feeling of outrage and hopelessness (Hickman 2010). Some patients may begin to have difficulty when they feel like they have no control or choices over their environment (Soini and Valimaki 2002). Studies show such patients may become upset when they feel like they have no choice over what to eat or wear (Russell 2005). One participant in the study seemed to understand
the importance of repositioning but failed to realise that he was one among those who needed it most. This quotation provides an understanding of the participant’s perception:

“I told them to buzz off and leave me alone, I was alright in the one position and they would come and turn me and that annoyed me” PT4

This can be very challenging for nurses in providing patient care. On the one hand if patients does not like repositioned yet there is a need to reposition patient to prevent pressure ulcers, this raises the question of the importance of informed decision making for patients. Indeed, this is at the heart of health literacy, whereby, providing patients with information that the can understand, facilitates them to becoming active rather than passive recipients of health care (Health Literacy 2010).

4.4.2.3b Confusion and behaviour changes in the elderly:

As a normal process of aging, elderly persons may experience sensory changes (Davidson et al., 2006). Most of the elderly participants in the unit where this study was conducted have short or long - term memory loss from Alzheimer’s disease (AD). Patients with AD are known to have high stress levels, furthermore, many elderly patients are unable to directly communicate their needs or concerns, thus, the most common ways such patients can make their concerns known is through a behavioural pattern (Davidson et al., 2006). For staff taking care of patients with memory loss and confusion, understanding their needs can be very challenging as the individuals are not able to learn new behaviours or indeed have challenges remembering instructions (Soini and Valimaki 2002). The only strategy for nurses to understand what their needs are is through effective communication. One of the nurse participants made clear that patients’ co-operation is central for any intervention to be successful. The following quotation indicates that concept:
“Some of them will understand that we are helping them and will co-operate but some having problems with understanding we find it difficult” FG4

The nurse participants seemed to have encountered some difficulty in performing the 30° lateral repositioning with agitated and confused elderly patients. The following quotations highlight these concerns:

“The 30 degree tilt may be disturbing at nights especially with patients who are agitated” FG5

“Repositioning can make them agitated or aggressive, when they are fast asleep and when we are waking them up to turn that can make them aggressive.” FG1

All behaviour has meaning and therefore the challenge for the nurses is to identify the trigger for aggression and try to eliminate the cause (Soini and Valimaki 2002). The nurses then have to establish the real need for repositioning the patient in 30° tilt.

The nurse participants in the study also revealed concerns around patients sleep disturbances when repositioning every 3 hours using the 30° lateral tilt at night. The nurses perceived themselves to be in a dilemma with patients on sleep medication. In that, the nurses were administering sedation to patients yet conversely they had to perform the 30° lateral repositioning to prevent pressure ulcers. The following quotation is an indication of that idea:

“The 30 degree tilt may be disturbing at night when we are trying hard to put them to sleep with sleep medication” FG5

“When we reposition some patients at nights then they won’t to go back to sleep when we turn them and you know we have to wake them to turn them.” FG6

The 30 degree lateral tilt is a relatively quick and less disturbing method of repositioning, positions are alternated between left side, back, right side, back (Moore et al., 2011). In order to move the patient on to their back this would only necessitate
gently removing the pillow from behind the patient thus may interfere little with the patient if conducted properly. If the patient is sedated, and not moved, but goes on to develop a pressure ulcer there will be potential litigation situation for the nurse. Thus, developing expertise in the correct method of repositioning may reduce the interference of the patient during repositioning, and at the same time reassure the nurse that they are using evidence based practice in keeping the patient safe.

4.4.2.3c Frequency of repositioning:

Some clinical recommendations support a turning schedule of every 2 hours if the patient is at risk of pressure ulcer development and is nursed on a standard mattress (Brandies et al., 2001, Young 2004). Other clinical evidence supports reducing repositioning to every 4 hours if the at risk patient is nursed on a pressure redistribution surface (Brandeis et al., 2001). However, there is lack of clarity on the exact frequency of turning schedule for nurses to follow (Moore et al., 2012). Moreover, the heels require suspension with appropriate positioning methods or devices for at-risk patients regardless of the type of support surface they lay on (Defloor et al., 2005). The process of improving consistency in repositioning schedules continues to be a challenge in all settings (Brandies et al., 2001). The study participants were repositioned every 3 hours in the 30° lateral tilt technique on their sides and back alternatively. However, the nurse participants expressed concerns related to the frequency of the repositioning care plan. In that, the nurse participants assumed frequent repositioning probably caused sleep disturbances. This quotation is an indication of that thought:

“Especially with 3 hourly turning in the night itself the turn will come 4 times but with the 4 hourly turning will be 3 times in the night, it won’t disturb the sleep much.” FG5
In the study by Moore (2011), there was a 3% in experimental group versus 11% in control group; incidence of pressure ulcers when the patients were turned 3 hourly versus 6 hourly. The study by Defloor et al., 2005 reported 3% (4-hourly turning) versus 15.9 % (6-hourly turning), reduction in pressure ulcer incidence with more frequent turning. Therefore, nursing staff need more education and training on the importance of regular repositioning for prevention of pressure ulcer.

4.4.2.3d Shortage of staff nurses:

Within the context of the recognised global nursing shortage and particular local pressures with international health services, questions of appropriate nurse staffing levels and skill mix are becoming increasingly important (Myer et al., 2010). According to the systematic review conducted by Lankshear et al., (2005) higher nurse staffing and richer skill mix are associated with improved patient outcomes. Many factors impact the quality of care in the elderly (Russell 2005). These include, nurse’s attitudes, lack of expertise in the care of the elderly and changing nursing responsibilities in the current climate of economic rationalism (Ibrahim & Majoor 2000, Sullivan 2000). Another challenge to implementing the 30° tilt repositioning identified by the nurses was availability of nurses. Some of the following quotations are an indication of the concept:

“It is actually very good to relieve pressure sore but it is hard at times when we are short staffed or um especially when we don’t have enough staff to be turning every 3 hourly and then we are too busy.” FG1

“Especially in the night times also equal 12 hours shift and only 2 staff we have it is difficult then.” FG5.

In reality, rigid schedules are difficult to maintain and successful integration of practice changed i.e. implementation of 30° lateral repositioning in clinical practice entirely depends on the availability of staff and volume of work in the unit. Therefore
to prevent detrimental effects on patient outcomes and decrease nurse burnouts adequate staffing levels essential. However, the study by Moore et al. (2011) shows that this type of turning actually required less staff, was less expensive and also reduced the number of pressure ulcers. Thus, using this technique may in fact be more timely and cost effective, plus the fact that every second turn only requires 1 nurse to move the pillow from the back of the patient. Clearly staff nurses need greater education and training about pressure ulcer prevention and repositioning for better outcomes in implementing change in practice.

4.4.2.4 Discussion:

Repositioning is a not a novel concept in health care, and has been a topic of much discussion in the prevention of pressure ulcers for decades (Moore 2000). Indeed National and International guidelines advocate the use of repositioning as an intervention to prevent problems related to pressure (EPUAP & NPUAP 2009). Despite this, repositioning is not well integrated in clinical practice (Moore et al., 2011). According to the studies in US and Netherlands, at least 30-40% of patients do not receive care according to current scientific evidence, while 20% or more of the care provided is not needed or potentially harmful to patients (Grol & Wensing 2004). Therefore, understanding the problems & obstacles to implementing change in practice helps identify the advantages and challenges involved. Such an overview can enable health sectors to tailor the interventions to facilitate the desired change (Prochaaska et al., 1992).

The description of participants experiences were based on the advantages and the challenges they encountered from implementing the 30° lateral repositioning for prevention of pressure ulcers. The participants found that 30° repositioning had
promoted comfort and relieved pain caused from prolonged unrelieved pressure. In addition, this approach also contributed to standardisation of care and empowerment of staff through enhanced knowledge. The participants’ recognised the consistency established in the care delivery from implementing the 30° repositioning in daily practice. They claimed that training and education enabled them to perform the 30° repositioning effectively at the bedside. However, a few participants need clarity around the repositioning regimen which requires greater emphasis on continued education and training of staff nurses. One of the participant’s views emphasise the need for continuing the 30° repositioning in daily practice for better outcomes in pressure ulcer prevention. Another participant’s view was based on job satisfaction, in they felt that they had made the right decisions amidst dilemmas encountered between choosing to promote best practice and patients comfort.

For patients in the study, they clearly understood the benefits of repositioning in the prevention of pressure ulcers. Some participants showed enthusiasm by performing the repositioning themselves where possible. One patient expressed his desire to rest in bed rather than spending time sitting in chair. This means that when patients come to understand their health needs, more active involvements in their care may ensue. However, some participants in the study were among those who appreciated repositioning yet failed to recognise the benefits in it for them. While others expressed desire to remain in positions they preferred and some participants refused repositioning relates to issues of confusion and behaviour problems. There is strong emphasis on promoting person centred care by many statutory bodies, In Ireland HIQA (Health Information and Quality Authority) is a health and safety
body which monitors how well the health care providers HSE (Health Services Executive) meet the requirements of delivering high quality, evidence based care. Health care providers emphasise patient decisions about their care as being important to the provision of quality care. It is here the concept of health literacy comes to play a major role it was launched in Ireland in 2010 and is of much interest to researchers with a goal for individuals to understand treatment options and thereby being able to make more informed decisions about their care. The DHUK (2012), also launched the concept of “No decision about me, without me” that insists on upholding the rights of patients and use of shared decision making as a means of securing better care and enhanced outcomes.

Apart from other participants, for those patients lacking insight into their health needs they would benefit from enhanced health literacy. However, for patients with cognitive impairment or limitations in decisions making, nurses and other health care professionals have an ethical and moral obligation to ensure that their rights are protected. Advocacy in ethical and legal frameworks outline the philosophical foundations for practice.

For the participants who were confused, agitated and did not like repositioned yet were among those who need it the most, in such situations preventing pressure ulcers can be challenging to nurses. Therefore, providing care can be difficult as these patients may not fully understand the implications. However, clearly this is not directly concerned to 30° repositioning and spans all aspect of nursing care. Therefore, caring for elderly patients with Alzheimer’s and dementia requires nurses specially trained to manage and handle care tasks in difficult situations.
4.5 Summary:

Issues relevant to pressure ulcers remain a major challenge in today’s health care setting. Repositioning patients in 30 degree lateral tilt can prevent pressure ulcer and as such needs to be integrated effectively in clinical practice. Participants in the study were aware of the role of repositioning and this appears to be a good starting point for implementing best practice. The participants in the study found repositioning patients in the 30° lateral tilt healed ulcers and relieved pain and promoted comfort. Regular repositioning made skin assessments easy and early detection of pressure damage possible. This implies that early intervention can prevent unnecessary problems and reduce the burden of pressure ulcers from escalating further.

For effective implementation of change in clinical practice, knowledge about the stages of change can identify problems related to change and shift failure towards achievement of the goal that is changing practice. Additionally, when patients are involved in shared decision and choices of managing their health needs this yields better outcomes and importantly patients’ rights are upheld. However, for patients who choose to remain resting in positions not recommended for prevention of pressure ulcers would benefit from health literacy and support of the multidisciplinary team. Furthermore, introduction of the 3 hourly 30° lateral repositioning early in patient care will enable patients & staff to get well accustomed to a pattern of care.
CHAPTER 5: CONCLUSION AND RECOMMENDATIONS
5.1 Introduction:
This chapter will reflect on the findings of the study and therefore the chapter is divided into five sections. The first section will identify the strengths and limitations of the study in context of the data collection & analysis. The possible implications from this study will be discussed in the second section with particular emphasis on the potential to change practice in pressure ulcer prevention. The third section will outline how the researcher intends to disseminate the study findings. The fourth section will provide the recommendations for future research. The fifth section is a researcher’s reflection of the personal journey and learning experience from undertaking this study. Finally a conclusion is provided.

Research question:
The research question for this project was: What are the experiences of patients and staff nurses using the 30 degree repositioning technique for the prevention of pressure ulcers, within an elderly care unit?

Aims:
The aim of this project was to explore the experiences of patients and staff nurses using the 30 degree repositioning technique for the prevention of pressure ulcers, within an elderly care unit

Objectives:
The objectives of this study were to:

- Explore the experiences of patients nursed using the 30 degree tilt repositioning technique for the prevention of pressure ulcers
• Identify experiences of staff nurses using the 30 degree tilt repositioning technique for the prevention of pressure ulcers

5.2 Strengths and Limitations:
All research studies have inherent strengths and limitations (Creswell, 2007). The findings of the current study is viewed as the studies strengths as it is the first study to explore the experiences of patients and staff nurses using the 30° tilt repositioning technique for prevention of pressure ulcers in the Irish health care setting. However identifying the strengths and limitations of the study will help refine the research process and will help preventing them in the future research and support the interpretation of the findings (Watson et al. 2008).

This study has a number of strengths. Firstly, this study sought and received ethical approval from the research ethics committee; this confirms the study met the ethical standards for conducting the research. The ethical principle of anonymity and confidentiality were duly upheld throughout the study.

The study used Husserl’s descriptive phenomenology which is deemed suitable in eliciting the participants experience as it advocates bracketing of researchers ideas, thereby avoids any bias or contamination of the study. Furthermore data collection using the open-ended questionnaire allowed the gathering of meaningful data around the participant experiences. Moreover adapting the Colaizzi’s framework (1978) enhanced the use of bracketing in all stages of data analysis, which confirms the credibility and rigour of the study. This allowed the researcher to identify themes and
assimilate the findings that are relevant to the body of knowledge for prevention of pressure ulcer in the elderly.

There are some limitations to the study. The main limitation is the small sample size, because the study only represents a small number of the participants in the care of the elderly unit, the study cannot be generalised. In addition, for the nurse participants a convenience sampling was utilised. For the nurse participants’ a larger sample would have increased the ability to generalise the findings. Another limitation to the study is the purposeful sampling of the patient participants, this leaves out other patient population that are prone for pressure ulcers, therefore, the findings cannot be generalised beyond the individual participants. However, despite these limitations the researcher feels the study findings may provide insight into the experiences of the participants’, this may also benefit nurses in gaining an understanding of care provision around the cognitively impaired patients particularly with reference to adhering to guidelines.

5.3 Implications of the study findings:

Nurses are accountable for their own practice, their patients, their peers, the public and their professional body (ABA 2007). As such, nurses who incorporate high quality research evidence into their clinical decisions and advice are being professionally accountable to their clients (Polit and Beck 2010). Therefore, nursing research is important for nurses to understand the varied dimensions of nursing profession (Parahoo 2006). For example, this enables nurses to describe the characteristics of a particular nursing situation about which little is known (Creswell 2007). Moreover, the ultimate goal of research is to develop, refine and expand a body of knowledge (Polit and Beck 2010). Therefore the implications for nursing
research in relevant areas should be addressed, especially with respect to the priority in research addressing prevention and treatment of disease (Creswell 2007). Thus the following section will discuss the implications of the findings related to nursing practice, nursing education and management.

5.3.1 Implications for Nursing practice:
Pressure ulcers impact negatively on all aspects of patients’ lives. This study highlights that nurses have a major role in prevention of pressure ulcers. Identifying the patients at-risk helps to identify those needing prevention, thereby reducing suffering, expenditure and nursing time. The findings of the study suggest that overall, the patients and nurses understood the benefits of 30°repositioning, and this is a promising start for the tissue viability nurse in implementing a change of practice in the hospital for the prevention of pressure ulcers. One of the findings from the study suggest that both patients and nurses found that 30°repositioning reduced the dimension of pressure ulcers and aided healing, relieving pain and promoting comfort. In addition, the nurses found that standardization of care provision meant that early detection of pressure damage was easy when using regular repositioning. The study highlights this usual practice requires change so that it is based on best evidence and adheres to best practice guidelines. The study also highlights the role of nurses as patients’ advocate in implementing best practice concerning repositioning needs in patients with memory loss and cognitive impairment. The study suggests that by involving patients in shared-decision making will enable nurses gain patient co-operation and also opportunities to promote health literacy as envisaged in nursing duties (ABA 2000, NALA 2010).
5.3.2 Implications for Nursing education:
The study enlightens that repositioning is not a novel concept in prevention of pressure ulcer however it is not well integrated in clinical practice. The scope of Nursing and Midwifery practice framework and the code of professional conduct for each nurse emphasise the need for nurses to be competent and accountable for their practice (ABA 2005). This calls for ongoing training and education for enhancement of nursing skills in performing the 30° lateral repositioning for pressure ulcer prevention. The findings identify that the nurses lacked understanding about the actual technique of relieving pressure at the heels and sacrum, the most common sites for pressure damage. When staff nurses are trained it will increase their competency around the actual technique involved in performing the 30° lateral repositioning. The findings suggest that the nurses found the 30° lateral tilt technique healed wounds, promoted comfort and relieved pain in patients who had been repositioned regularly. Therefore development of nursing competencies specific to prevention of pressure ulcer is required this also supports professional development. In turn, this will enable nurses to update their theoretical knowledge and their clinical skills in prevention strategies and to facilitate the attainment of competence and confidence in the provision of evidence based nursing care (ABA 2005, HSE 2009, DoHC 2010).

5.3.3 Implications for Nursing management:
The findings of this study have implications to nursing management, because the study supports that the quality of nursing care is linked to the availability of staff nurses. The round the -clock availability of nurses on the hospital units allows for surveillance of patient conditions and early detection of pressure damage and appropriate interventions. Over the past decade, however, the health services have
initiated several cost control measures that lead to cuts in the nursing staff at many hospitals. A good work environment lowers nurse burnouts and staff turnover, while it improves patient safety and satisfaction with care. This is especially important given that the presence of pressure ulcer is a quality indicator Therefore, nursing management must consider providing adequate staff nurses in the hospital units for the implementation of best practice in the prevention of pressure ulcers in the elderly care setting. However, the nurse staffing issue also needs priority attention on a national scale as patients’ lives depends on it (Lu 2005).

Nursing management has a major role in providing ongoing training and education to nurses. Facilitating nursing staff with education around the use of 30° lateral repositioning technique can be a major step towards integrating best practice at the bedside. In addition, introducing the three hourly 30° lateral repositioning early in patient care can assist patients in accepting change and in becoming familiar with the pattern of care. This may prove fruitful in the prevention of pressure ulcers in the care of the elderly setting.

5.4 Recommendations for future research:

The study findings suggest that overall, the participants found the 30° repositioning useful in prevention of pressure ulcers. However, mainly the literature is devoid of patient and nurses experiences of using the 30° lateral repositioning technique in the prevention of pressure ulcers. Therefore, a more robust research study is needed about 30° lateral repositioning technique to explore patient and nurses experience to provide rich data to the body of nursing knowledge.
5.5 Dissemination of findings:

The dissemination of findings from a research study is often over looked yet is an essential component of the research process (Creswell 2007). According to Creswell 2007, any nursing research becomes useless no matter how good it is when no one knows about it and therefore the findings need to be communicated, especially if the research has the potential to impact nursing practice and patient care. This will allow reduction of the gap between nursing research and practice. In order to enhance evidence based nursing practice the writer aims to disseminate the findings of the current study at local level within the department where the research took place. A copy of the thesis will be made available at the hospital library. The writer hopes also to disseminate at local, national and international conferences. A copy of the completed research will be placed in the library of the university affiliated with this Masters programme. The writer also hopes to publish the findings of the current study in relevant nursing journals.

5.6 Personal reflection:

Much of the literature discusses the benefits of reflective practice for continuing education (Kim 1999). Reflective practice is the capacity to reflect on action so as to engage in a process of continuous learning (Schon1983). According to AnBord Altranais (2007) reflective practice is defined as a method of acquiring the new knowledge and competence which will enable him/her to practice effectively in an ever changing health care environment. AnBord Altranais (2007) identifies the importance of the reflective practice and stresses that nurse education programmes need to lead nurses in the development of skills necessary for reflective practice. Lately reflection on practice is a common theme found in nursing literature and has
been implemented into nurse training programs in Ireland (DoHC 2010). The use of reflective practice has been advocated as a means of enabling nurses to apply theory to practice (DoHC 2010). Nursing practice is viewed as a rich source of new knowledge as practitioners are engaged in creating as well as modifying knowledge to respond to specific clinical situations (Kim 1999).

It is with this in mind the writer felt it essential to reflect on the journey of writing the thesis. As the literature search began, the writer found out that there are only four research articles available that were specific to the 30° lateral repositioning technique. This made it difficult as an in-experienced researcher to relate with similar studies however, the study findings have captured both theoretical and practical aspects in the prevention of pressure ulcer this may be of some assistance to future researchers. Indeed, the guidance of the study supervisor enabled the writer in gaining new experience around interview techniques and developing skills in critical thinking and academic writing. Ideally, the writer would have liked to conduct the study in other units of the hospital but due to time constraints, the writer selected one unit however, this helped the writer to manage the data well and concentrate on the research as a whole.

5.7 Conclusion:

The overall findings of the study suggest that all the participants understood the importance of repositioning for prevention of pressure ulcers. The nurse participants found the 30° lateral repositioning was easy and quick to perform. However, a few staff nurses found that three hourly turns disturbed patients sleep at night and another found that a few agitated patients would not co-operate with repositioning. Although nurses are aware of the need for repositioning for prevention of pressure ulcers, they
are unable to implement it effectively at all times. Mainly here, the key point is that this is not concerned directly to the 30° lateral repositioning alone as it spans all aspect of nursing care. Therefore caring for elderly patients with Alzheimer’s and dementia requires nurses specially trained to manage and handle care tasks in difficult situations. In addition, the staff nurses require education and training around the actual technique of repositioning patients with the 30° lateral tilt position for prevention of pressure ulcers. This will enable nurses with skills in providing quick and easy repositioning with least disturbance to patients, while at the same time adhering to evidence based practice. Involving patients, where possible, in decision-making and educating them about their health needs i.e. importance of using the 30° lateral tilt technique will ensure better outcomes of patient care in prevention of pressure ulcer. Furthermore, involving the multi disciplinary team will enable nurses to promote comprehensive care while working within the nurse’s scope of practice. In essence, it upholds the whole ethos of taking care of patients.
References:


Guidance to Nurses and Midwives Regarding Ethical Conduct of Nursing and Midwifery Research


Requirements and Standards for Nurse Education and Programmes, AnBordAltranais 2005  


Accessed on 16/05/2013

Appendix – 01

Medical Superintendent consent

Royal College of Surgeons,
123, St. Stephen’s Green,
Dublin 2.

12 February 2013

Re: Research Paper

To Whom It May Concern:

Staff Nurse Urmila Victor has been granted permission to carry out research in our hospital as part of her MSc Nursing. Her paper is on “Patient and staff nurses’ experiences of the 30 degree tilt reposition technique, for the prevention of pressure ulcers, in an elderly care unit”.

Please feel free to contact me on 01 for any queries.

Yours sincerely

_________________________
Medical Superintendent
IMC Reg number
Appendix – 02

Director of Nursing consent

12.02.2013

Royal College of Surgeons,
123 St. Stephen's Green,
Dublin 2.

Re: Research paper

To Whom It May Concern:

Staff Nurse Urmila Victor has been granted permission to carry out research in Hospital as part of her MSc Nursing. Her paper is on “Patient and staff nurse’s experiences of the 30 degree tilt reposition technique, for the prevention of pressure ulcers, in an elderly care unit”.

Please feel free to contact me on for any queries.

Yours truly,

Acting Director of Nursing
Appendix – 03

Ethics Committee approval

Royal College of Surgeons in Ireland
The Research Ethics Committee
121 St. Stephens Green, Dublin 2, Ireland.
Tel: +353 1 4022373 Fax: +353 1 4022205 Email: reccommittee@rcsi.ie

4th March, 2013

Mrs Urmila Victor,
Royal College of Surgeons in Ireland,
123 St. Stephen’s Green,
Dublin 2,
Ireland

<table>
<thead>
<tr>
<th>Ethics Reference No:</th>
<th>REC</th>
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<tbody>
<tr>
<td>Project Title:</td>
<td>Eliciting experiences of using the 30 degree reposition technique.</td>
</tr>
<tr>
<td>Researchers Name:</td>
<td>Mrs Urmila Victor</td>
</tr>
<tr>
<td>Other Individuals Involved:</td>
<td>Dr Zena Moore, Faculty of Nursing and Midwifery</td>
</tr>
</tbody>
</table>

Dear Urmila,

Thank you for your Research Ethics Committee (REC) application. We are pleased to advise that ethical approval has been granted by the committee for this study.

This letter provides approval for data collection for the time requested in your application and for an additional 6 months. This is to allow for any unexpected delays in proceeding with data collection. Therefore this research ethics approval will expire on 4th January 2014.

Where data collection is necessary beyond this point, approval for an extension must be sought from the Research Ethics Committee.

This ethical approval is given on the understanding that:
- All personnel listed in the approved application have read, understand and are thoroughly familiar with all aspects of the study.
- Any significant change which occurs in connection with this study and/or which may alter its ethical consideration must be reported immediately to the REC, and an ethical amendment submitted where appropriate.

Please submit a final report to the REC upon completion of your project.

We wish you all the best with your research.

Yours sincerely,

PP Dr
Dr
Appendix - 04

LETTER OF INVITATION: NURSES PARTICIPATION IN RESEARCH STUDY

Date: 02/01/2013

Dear Nursing staff,

I am a student of the RCSI, undertaking an MSc Nursing. As part of my programme, I am required to conduct a research project; the subject I am interested in is repositioning to prevent pressure ulcers. The purpose of the study is to elicit patient and staff nurses experiences of using the 30 degree tilt repositioning technique, within an elderly care unit. By taking part in the study you will enable us to gain a greater understanding of the use of the 30 degree repositioning technique from the perspective of patients and staff nurses for the prevention of pressure ulcers.

Should you wish to participate, I will provide you with an information sheet pertaining to the details of the study.

Please contact me and I will arrange to speak to you at a time that suits you.

Thank you for taking the time to read. I look forward to hear from you.

Best Wishes,

Urmila Victor.

<table>
<thead>
<tr>
<th>Contact details of the Researcher:</th>
<th>Contact details of my Study Supervisor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urmila Victor  RGN, PG Dip wound management, MSc Nursing student, Royal College of Surgeons Ireland, 123 St Stephen’s Green, Dublin- 2. Tel: 087 9231101 Email: <a href="mailto:urmilavictor@rcsi.ie">urmilavictor@rcsi.ie</a></td>
<td>Dr Zena Moore PhD, MSc, PG Dip, FFNMRCSI, Dip First line Management, RGN, Lecturer in Wound healing &amp; Tissue repair and Research Methodology, Programme Director, Faculty of Nursing &amp; Midwifery, Royal College of Surgeons Ireland, 123 St Stephen’s Green, Dublin- 2 Tel: 00 353 1 4022414 Email: <a href="mailto:zmoore@rcsi.ie">zmoore@rcsi.ie</a>  <a href="http://www.rcsi.ie">www.rcsi.ie</a></td>
</tr>
</tbody>
</table>
STUDY INFORMATION SHEET – Patients

This study is being undertaken as part fulfilment of an MSc Nursing at the Royal College of Surgeons in Ireland.

Rationale for the study
Eliciting patient and staff nurses experiences is important to ensure that therapies offered are acceptable to those for whom the therapies are intended. This study therefore, proposes to explore the experiences of patients and staff nurses using the 30 degree repositioning technique for the prevention of pressure ulcers.

Title of the study
Patient and staff nurses experiences of using the 30 degree tilt reposition technique for the prevention of pressure ulcers, in an elderly care unit.

The aim of the study
The aim of this study is to explore the experiences of patients and staff nurses using the 30 degree repositioning technique within an elderly care unit for the prevention of pressure ulcers.

What is a 30 degree tilt technique?
The 30 degree tilt is a patient repositioning technique, which can be achieved by rolling the patient 30 degrees slightly to a tilted position, with pillow support at the back.
What will happen during the study?
Following a period of 4 weeks of using the 30 degree repositioning technique, you will be invited to participate in one to one interviews with the researcher. The purpose of the interview is to understand your experiences of using the 30 degree repositioning technique. The researcher will sit with you and ask you to talk about your experiences. The interview will take approximately 30 minutes. During the interview, the researcher will record what you are saying, so that she will be able to understand clearly what is being said. The researcher will provide transcripts of the audiotapes for review and editing should you wish to do so.

Confidentiality and Anonymity
All information gathered will be strictly treated confidential, there will be no possibility for anyone to identify that you were part of the study. The information from the study will be published in relevant journals and presented at conferences; however, the anonymity will be maintained at all times.

Does the study involve any cost for participants?
This study is totally free of cost.
Can the participants withdraw from the study?
You are free to withdraw at will during the study and this will not affect the clinical care in any way.

Are there any risks involved in the study?
There are no risks anticipated.

The possible benefits of the study:
By taking part in the study you will enable us understand your experiences of using the 30 degree reposition technique.

Further information
If you need more information, please ask the nurse to contact me. I will arrange to speak to you at a time that suits you.

Best Wishes,
Urmila Victor.

Contact details of the Researcher:
Urmila Victor  RGN, PG-Dip wound management, MSc Nursing student, Royal College of Surgeons Ireland, 123 St Stephen’s Green, Dublin 2.
Tel: 087 9251101
Email: umila.victor@rcsi.ie

Contact details of my Study Supervisor:
Dr Dea Moore PhD, MSc, PG-Dip, FFNMRCSI, Dip First line Management, RGN, Lecturer in Wound healing & Tissue repair and Research Methodology, Programme Director, Faculty of Nursing & Midwifery, Royal College of Surgeons Ireland, 123 St Stephen’s Green, Dublin 2.
Tel: 00 353 1 4022414
Email: deamoor@rcsi.ie
www.rcsi.ie
STUDY INFORMATION SHEET – Staff Nurses

This study is being undertaken as part fulfilment of an MSc Nursing at the Royal College of Surgeons in Ireland.

Rationale for the study

Eliciting patient and staff nurses experiences is important to ensure that therapies offered are acceptable to those for whom the therapies are intended. This study therefore, proposes to explore the experiences of patients and staff nurses using the 30 degree repositioning technique for the prevention of pressure ulcers.

Title of the study

Patient and staff nurses experiences of using the 30 degree tilt repositioning technique for the prevention of pressure ulcers, in an elderly care unit.

The aim of the study

The aim of this study is to explore the experiences of patients and staff nurses using the 30 degree repositioning technique within an elderly care unit for the prevention of pressure ulcers.

What is a 30 degree tilt technique? The 30 degree tilt is a patient repositioning technique, which can be achieved by rolling the patient 30 degrees slightly to a tilted position, with pillow support at the back.
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This study is being undertaken as part fulfilment of an MSc Nursing at the Royal College of Surgeons in Ireland.

Rationale for the study

Eliciting patient and staff nurses experiences is important to ensure that therapies offered are acceptable to those for whom the therapies are intended. This study therefore, proposes to explore the experiences of patients and staff nurses using the 30 degree repositioning technique for the prevention of pressure ulcers.

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Patient and staff nurses experiences of using the 30 degree tilt repositioning technique for the prevention of pressure ulcers, in an elderly care unit.

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What is a 30 degree tilt technique? The 30 degree tilt is a patient repositioning technique, which can be achieved by rolling the patient 30 degrees slightly to a tilted position, with pillow support at the back.
What will happen during the study?
Following a period of 4 weeks of using the 30 degree repositioning technique, you will be invited to participate in a focus group with the researcher. The purpose of the focus group is to understand your experiences of using the 30 degree repositioning technique. The focus group will take approximately 40 minutes. The researcher will record what is discussed during the focus group, so that she will be able to understand clearly what is being said. The researcher will provide transcripts of the audiotapes for review and editing should you wish to do so.

Confidentiality and Anonymity
All information gathered will be strictly treated confidential, there will be no possibility for anyone to identify that you were part of the study. The information from the study will be published in relevant journals and presented at conferences; however, the anonymity will be maintained at all times.

Does the study involve any cost for participants?
This study is totally free of cost.

Can the participants withdraw from the study?
You are free to withdraw at will during the study.
Are there any risks involved in the study?
There are no risks anticipated.

The possible benefits of the study:
By taking part in the study you will enable us understand your experiences of using the 30 degree repositioning technique for the prevention of pressure ulcers.

Further information
If you need more information, please contact me. I will arrange to speak to you at a time that suits you.

Best Wishes,
Urmila Victor.
PATIENT CONSENT - ONE TO ONE INTERVIEW

Title of the study: Patient and staff nurses experiences of using the 30 degree tilt repositioning technique for the prevention of pressure ulcers, in an elderly care unit.

Introduction:
Please read the study information form provided and ask any questions that you may have before agreeing to be in the study.

You are being asked to take part in an interview to explore your experiences of using the 30 degree tilt repositioning technique. You were selected as someone who might be suitable to take part in this study.

Please tick box as appropriate:

• Have you read or had read to you the study information form?
  YES ☐ NO ☐

• Do you understand the information provided in the study information form?
  YES ☐ NO ☐

• Do you agree to participate in a one to one interview?
  YES ☐ NO ☐
• Do you understand that all information about you will be kept confidential and anonymity will be maintained at all times?  
  YES ☐ NO ☐

• Do you understand that you can withdraw from the study at any time without affecting your clinical care?  
  YES ☐ NO ☐

• Do you understand there are no financial implications of any kind on the study participants?  
  YES ☐ NO ☐

• Have you received enough information about the study?  
  YES ☐ NO ☐

• To whom have you spoken?  
  ________________________________

PLEASE TURN OVER
Do you agree to take part in this study?

YES ☐ NO ☐

Consent

Your signature below indicates that you have decided to volunteer as a research participant for this study, and that you have read and understood the information provided above. You will be given a signed and dated copy of this form to keep, along with any other printed materials deemed necessary by the study investigators.

Participant Name ___________________________

Participant Signature: _______________________ Date: ____________

Investigator’s Signature: _____________________ Date: ____________

Contact details of the Researcher:

Ursula Victor RGN, PG Dip wound management, MSc Nursing student, Royal College of Surgeons Ireland, 123 St Stephen’s Green, Dublin 2. Tel: 087 9231101 Email: ursulavictor@rcsi.ie

Contact details of the Study Supervisor:

Dr Una Moore PhD, MSc, PG Dip, FFNMBRCSI, Dip First line Management, RGN, Lecturer in Wound Healing & Tissue Repair and Research Methodology, Programme Director, Faculty of Nursing & Midwifery, Royal College of Surgeons Ireland, 123 St Stephen’s Green, Dublin 2. Tel: 00 353 1 4022414 Email: umoore@rcsi.ie www.rcsi.ie
CONSENT FORM- NURSE PARTICIPANTS (FOCUS GROUP)

Title of the study:
Patient and staff nurses experiences of using the 30 degree tilt repositioning technique for the prevention of pressure ulcers, in an elderly care unit.

Introduction:

Please read the study information form provided and ask any questions that you may have before agreeing to be part of the focus group.

You are being asked to be in this research study to explore your experiences of using the 30 degree tilt repositioning technique for the prevention of pressure ulcers.

As a part of the Nursing team on this unit, your perception and experiences of using the 30 degree tilt technique are most valuable.

Please tick box as appropriate:

- Have you read the study information form?  
  YES ☐  NO ☐

- Do you understand the information provided in the study information form?  
  YES ☐  NO ☐
• Do you agree to take part in a focus group interview? YES □ NO □

• Do you understand that all information about you will be kept confidential and anonymity will be maintained at all times? YES □ NO □

• Do you understand that you can withdraw from the study at any time? YES □ NO □

• Do you understand there are no financial implications of any kind on the study participants? YES □ NO □

• Have you received enough information about the study? YES □ NO □

• To whom have you spoken? ________________________________

• Do you agree to take part in this study? YES □ NO □
Consent

Your signature below indicates that you have decided to volunteer as a research participant for this study, and that you have read and understood the information provided above. You will be given a signed and dated copy of this form to keep, along with any other printed materials deemed necessary by the study investigators.

Participant Name (print):

Participant Signature: Date:

Investigator’s Signature: Date:

<table>
<thead>
<tr>
<th>Contact details of the Researcher:</th>
<th>Contact details of the Study Supervisor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Umala Victor RGN, PG Dip wound management, MSc Nursing student, Royal College of Surgeons Ireland, 123 St Stephen’s Green, Dublin 2. Tel: 087 9231101 Email: <a href="mailto:umalavictor@rcsi.ie">umalavictor@rcsi.ie</a></td>
<td>Dr Zena Moore PhD, MSc, PG Dip, FFNMS,RCNI, Dip First line Management, RGN, Lecturer in Wound healing &amp; Tissue repair and Research Methodology, Programme Director, Faculty of Nursing &amp; Midwifery, Royal College of Surgeons Ireland, 123 St Stephen’s Green, Dublin 2. Tel: 00 353 1 4022414 Email: <a href="mailto:smoore@rcsi.ie">smoore@rcsi.ie</a> <a href="http://www.rcsi.ie">www.rcsi.ie</a></td>
</tr>
</tbody>
</table>
ONE TO ONE INTERVIEW SCHEDULE

- Do you think repositioning is important? Why?

- Was the information given about the repositioning useful and clear?

- How did you find the repositioning technique?

- Did you have any problems with the repositioning?

- Do you find any difference after the repositioning technique over the pressure prone areas?

- Do you have any queries, suggestions or comments in regards to this topic?

Contact details of the Researcher:
Ursula Victor  RGN, PG Dip wound management, MSc Nursing student, Royal College of Surgeons Ireland, 123 St Stephen’s Green, Dublin 2 Tel: 087 9233101 Email: ursulavictor@rcsi.ie

Contact details of the Study Supervisor:
Dr Zana Moore PhD, MSc, PG dip, FPNM/RCN, Dip First line Management RGN, Lecturer in Wound Healing & Tissue repair and Research Methodology, Programmes Director, Faculty of Nursing & Midwifery, Royal College of Surgeons Ireland, 123 St Stephen’s Green, Dublin 2 Tel: 00 353 1 4022414 Email:  zmooe@rcsi.ie www.rcsi.ie
FOCUS GROUP QUESTIONS

1. When you think about pressure ulcer prevention what comes to mind?

2. Describe what types of patients you have used the 30 degree tilt technique with?

3. Tell me your experiences of using the 30 degree tilt technique?

4. What are the main advantages with using the 30 degree tilt technique?

5. What are the main challenges with using the 30 degree tilt technique?

6. Do you have any other queries, comments or suggestions in regards to this topic?

Contact details of the Researcher:

Uamhla Victor  RGN, PG Dip wound management,  
MSc Nursing student,  
Royal College of Surgeons Ireland,  
123 St Stephen’s Green,  
Dublin-2.  
Tel: 087 9233101  
Email: uamhla.victor@rcsi.ie

Contact details of the Study Supervisor:

Dr Zara Moore PhD, MSc, PG Dip, FFNM RCSI, Dip  
First line Management, RGN, Lecturer in Wound  
healing & Tissue repair and Research Methodology,  
Programme Director, Faculty of Nursing &  
Midwifery,  
Royal College of Surgeons Ireland,  
123 St Stephen’s Green,  
Dublin-2  
Tel: 00353 1 4022414  
Email: zmoores@rcsi.ie  
www.rcsi.ie
## Appendix – 11

### Some Samples of themes from the formulated meanings

<table>
<thead>
<tr>
<th>Significant statements</th>
<th>Formulated meanings</th>
<th>Themes of clusters</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Repositioning helps, since I am paralysed from here down, from the hip down so I’ve no feeling at all”</td>
<td>Participant understands the role of repositioning</td>
<td>Theoretical application: Prevention of pressure ulcer</td>
</tr>
<tr>
<td>“Patients who cannot feel pain, patients with no sensation”</td>
<td>Identifying patients suitable for repositioning</td>
<td>Prevention of pressure ulcer</td>
</tr>
<tr>
<td>“I find it has improved the sore on my bottom very well, Nurses found one on this side dry and healed since the use of it.”</td>
<td>Repositioning using the 30° tilt technique assists healing</td>
<td>Treatment</td>
</tr>
<tr>
<td>“When they are lying on their sides we also can inspect all areas regularly.”</td>
<td>Skin assessment for signs of pressure damage</td>
<td>Treatment</td>
</tr>
<tr>
<td>“And we can prevent it from further deterioration while we inspect skin.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“It also promotes comfort, like when you lie on your side you feel comfortable than being flat on the back.”</td>
<td>30° repositioning relieves pain and promotes comfort</td>
<td>Practical application</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advantages</td>
</tr>
<tr>
<td>“Everybody will be doing the right way you know so it’s nice and it’s the way it should be”</td>
<td>Standardization of care</td>
<td>Advantages</td>
</tr>
<tr>
<td>“After you showed the DVD video of the 30 degree tilt technique, we learnt to keep the pillows the right way supported.”</td>
<td>Empowerment from knowledge</td>
<td>Advantages</td>
</tr>
<tr>
<td>“Let’s put it this way if”</td>
<td>A patient perspective</td>
<td>What it feels like for me? ;</td>
</tr>
<tr>
<td>Challenges</td>
<td>Patient preferences</td>
<td>Confusion and behaviour changes in the elderly</td>
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<tr>
<td>&quot;Especially with 3 hourly turning in the night itself, the turn will come 4 times but with the 4 hourly turning will be 3 times in the night, it won’t disturb the sleep much.”</td>
<td>&quot;But some of them are really choosy, they want to be on one side, their comfortable side while sleeping.&quot;</td>
<td>&quot;Some of them will understand that we are helping them and will cooperate but some having problems with understanding, we find it difficult.&quot;</td>
</tr>
<tr>
<td>&quot;It is actually very good to relieve pressure sore but it is hard at times when we are short staffed, or when we don’t have enough staff to be turning every 3 hourly and then we are too busy.&quot;</td>
<td>&quot;Patient preferences&quot;</td>
<td>&quot;Challenges&quot;</td>
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<tr>
<td>Shortage of nurses</td>
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