Implementation of a Practice Change:
Repositioning as a Preventative Measure for Pressure Ulcer Development

Kevina K. Desai

University of South Florida College of Nursing

Implementation of a Practice Change: Repositioning as a Preventative Measure for Pressure Ulcer Development

Pressure ulcers frequently occur in hospitalized patients who are usually immobilized and remain in the same position for long periods of time. This causes extra amounts of pressure and less oxygenation to the tissues resulting in ulcerations (Hagisawa & Ferguson-Pell, 2008). In 2008, Medicare made a decision that hospitals would no longer reimburse hospitals for treating pressure ulcers and designated the prevention as a “reasonably preventable condition” (Rich et al., 2011). In order to prevent these ulcers from occurring, hospitals implemented techniques such as repositioning patients. Although repositioning is beneficial for immobile patients, the time frequency in which the patients should be turned is unclear. The initial step in this review process was the development of the following PICOT question: In immobile patients, does repositioning every two hours compared with every 4 hours affect pressure ulcer development during their hospital stay? Upon examination of studies in which repositioning amongst immobile patients was tested, Vanderwee, Grypdonck, Bacquer, and Defloor (2007) and Still et al (2013) suggested that repositioning patients every two hours was more effective than repositioning every four hours in order to prevent pressure ulcers amongst immobile patients. In order to support the change, help will be need from many members of the healthcare team. The nurse managers and nurses of every floor will need to understand their roles during the change. The managers will be informed on the change that needs to be made in order to accurately prevent pressure ulcers and the nurses will carry out the plan. With the help of the health care team and their dedication and willingness to make a change based off of evidence-based research, this is what is needed to support the change.

**Synthesized Literature Review**

In order to accurately obtain information for the PICOT question, the search engines used included PubMed and Science Direct. During the search, important key terms used were pressure ulcers, randomized controlled trials associated with pressure ulcer prevention, pressure ulcer prevention, two-hourly turning, and pressure ulcer repositioning prevention.

A five week study with a total of two hundred thirty five patients was conducted by Vanderwee, Grypdonck, Bacquer, and Defloor (2007), One hundred twenty two participants in the experimental group who were repositioned every two hours in a lateral position and every four hours in a supine position. The control group, which consisted of one hundred thirteen patients, were only repositioned every four hours. In the experimental group, 16.4% patients developed a pressure ulcer, while 21.2% did so in the control group giving the experiment a significance rate of p=0.40. The results to this trial concluded that the time frequency of repositioning within the two groups improved the prevention of pressure ulcers. There were a total of twenty identified pressure ulcers on the patients in the experimental group who were repositioned every two hours versus twenty-four identified pressure ulcers on those who were turned every four hours.

 Additionally, the study done by Still et al. (2013) showed similar results. Five hundred seven post-operative patients were repositioned every two hours with the help of a turn team. The results were of a comparison from patients who developed pressure ulcers before and after the initiation of the turn team. Before the turn team was assembled for the task, a total of forty two pressure ulcers were found in two hundred seventy eight patients. Once every patient was strictly turned every two hours by the turn team, a total of twelve pressure ulcers were found from a population of two hundred twenty nine patients (p<0.0001). Results showed that repositioning patients every two hours reduced the incidence of pressure ulcers.

 Rich et al. (2011) used similar methods, but resulted with different outcomes. Two hundred sixty nine patients underwent hip surgery who were then bed bound. Sample sizes in this study included two groups of patients, the first with a population of one hundred thirty nine and the second group of one hundred thirty participants. Results from this study did not find enough evidence that frequent repositioning of patients every two hours helped in the prevention of pressure ulcers. More than ninety percent of the participants were already at risk for pressure ulcers with a Braden scale score of less than sixteen. According to the results, there were a total of twenty-five pressure ulcers present on the group of patients who were repositioned every two hours. There were only nine pressure ulcers present on the other group who were positioned less frequently than two hours. In conclusion, results from this trial established that those patients who are repositioned more frequently were more likely to be at a higher risk of nutrition related complications and a lower Braden scale score (p=0.006).

Proposed Practice Change

Pressure ulcer prevention has become part of a vigorous plan in hospitals and facilities. Pressure ulcers are a common, but preventable condition seen in populations such as immobile or elderly patients. Evidence based practice states that repositioning patients every two hours is the most effective way of preventing pressure ulcers (Hagisawa & Ferguson-Pell, 2008). Evidence from two out of the three studies demonstrates that repositioning every two hours reduced the presence of pressure ulcers. Several other prophylactic measures can be taken on in order to prevent pressure ulcers in clinical settings. Frequent repositioning, using support surfaces, using different types of mattresses, improving nutritional status, or using the Braden scale score are all strategies to prevent pressure ulcers (Reddy, Sudeep, & Rochon, 2009). According to Hagisawa & Ferguson-Pell (2008), several clinical guidelines recommend repositioning every two hours to prevent pressure ulcers. According to this evidence-based research, Florida Hospital should reposition immobile patients every two hours to see if it will prevent pressure ulcers. The use of heel floaters and implementation of a new system called EarlySense Proactive Patient Monitoring System are being used, but repositioning should also be used as preventive methods of pressure ulcers (Florida Hospital, 2013).

**Change Strategy**

The Model for Evidence Based Practice can be used for the change. Strategies to promote staff engagement can include weekly meetings to see progress of interventions. At these meetings, staff member can voice their opinions as to which interventions are working and which ones can be improved upon. Also, having bi-yearly skills fair type events can also benefit staff members on proper methods of repositioning in order to achieve optimal prevention of pressure ulcers.

**Roll Out Plan**

|  |  |  |
| --- | --- | --- |
| STEPS | DEFINITION | TIMEFRAME FOR ROLLOUT |
| Step 1 | Assess the need for change in practice• Include stakeholders• Collect internal data about current practice regarding repositioning• Compare external and internal data• Identify problem with pressure ulcers• Link problem, interventions, and outcomes for pressure ulcer prevention | Completed September, 2013 |
| Step 2 | Locate the best evidence for prevetion of pressure ulcers• Identify types and sources of interventions for prevention• Review research concepts of interventions• Plan the search• Conduct the search | Completed October, 2013 |
| Step 3 | Critically analyze the evidence• Appraise and weigh the evidence against the time intervals between repositioning• Synthesize the best evidence to obtain best method for pressure ulcer prevention• Assess feasibility, benefits, and risks of new practice with current ones | Completed October, 2013 |
| Step 4 | Design practice change• Define proposed change• Identify needed resources• Design the evaluation of the pilot• Design the implementation plan | November, 2013 |
| Step 5 | Implement and evaluate change in practice of 2 hourly repositioning for immobile patients* Implement pilot study
* Evaluate processes, outcomes, and costs
* Develop conclusions and recommendations
 | Implement: December, 2013Evaluate: April, 2014 |
| Step 6 | Integrate and maintain change in practice• Communicate recommended change to stakeholders and other healthcare facilities• Integrate into standards of practice to stakeholders and other healthcare facilities• Monitor process and outcomes periodically to make sure prevention interventions are still concurrent with evidence-based practices• Celebrate and disseminate results of project  | July, 2014 |

**Project Evaluation**

Effective September 2013, Florida Hospital will follow a guideline that includes mandatory repositioning every two hours for immobile patients who are unable to turn themselves. Patients will be repositioned every two hours to see if pressure ulcers can be prevented. This data will be collected on all immobile patients who are repositioned every two hours. An evaluation can be made by comparing the incidence of pressure ulcers before the implementation of mandatory repositioning. After weekly meeting and bi annual skills fair meetings, results will show if two hourly repositioning is effective. If the number of pressure ulcers present decreases after the initiation of repositioning every two hours, the intervention will be considered successful.

**Dissemination of EBP**

Distribution of this evidence based practice can be implemented and encouraged in several different ways. Holding a seminar in which effective turning positions are taught to the staff can be helpful to ensure that proper repositioning is occurring when applied to patients. Random monitoring check-ups to make sure that the staff are repositioning on time could also be encouraged. The use of the new EarlySense machines is another great way to implement effective repositioning. Having monthly meetings for staff to see whether or not the use of the machines are benefiting can also be encouraged. If it is beneficial, it would be effective to expand the use on other floors throughout the hospital. Since Florida Hospital Tampa is the first in the state to use this system, sharing the evidence with other surrounding facilities would be highly recommended if this is shown to be an effective way of preventing pressure ulcers. This information can be shared through the web, through service meetings will the team coordinators who can then pass on the news to staff, or through basic staff meetings where the new information can be introduced.

All in all, studies have proven that frequent repositioning is effective in the prevention of developing pressure ulcers. The practices that have been implemented at the clinical setting should continue per evidence-based practice.

References

Hagisawa, S.A., & Ferguson-Pell, M. (2008). Evidence supporting the use of two-hourly turning for pressure ulcer prevention. *Journal of Tissue Viability,17,* 76-81. doi: 10.1016/j.jtv.2007.10.001

Florida Hospital (2013). Florida hospital tampa is first in the state to implement earlysense proactive patient monitoring system. Retrieved from https://www.floridahospital.com/tampa/news/florida-hospital-tampa-first-state-implement-earlysense-proactive-patient-monitoring-system.

Reddy, M., Sudeep, G.S., & Rochon, P.A. (2009). Preventing pressure ulcers: A systematic review. *Journal of the American Medical Association, 296*(8), 974-984. doi:10.1001/jama.296.8.974

Rich, S.E., Margolis, D., Shardell, M., Hawkes, W.G., Miller, R.R., Amr, S., & Baumgarten, M. (2011). Frequent manual repositioning and incidence of pressure ulcers among bed-bound elderly hip fracture patients. *Wound Repair and Regeneration: Official Publication of the Would Healing Society*, *19*(1), 10-18. doi:10.1111/j.1524-475X.2010.00644

Still, M.D., Cross, L.C., Dunlab, M., Rencher, R., Larkins, E.R., Carpenter, D.L., …Coopersmith, C.M. (2013). The turn team: A novel strategy for reducing

pressure ulcers in the surgical intensive care unit. *Journal of the American College of Surgeons*, *216* (3), 373-379*.* doi:101016/jjamcollsurg2012.12.001

Vanderwee, K., Grypdonck, M.H.F., Bacquer, D.D., & Defloor, T. (2007). Effectiveness of turning with unequal time intervals on the incidence of pressure ulcer lesions. *Journal of Advanced Learning*, 57 *(1).* 59-68. doi:101111/j1365 -2648.2006.04060