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Education and Professional Studies.Nursing.01

Lauren Miller, Nancy Wilder-Pierce

Northwestern State University

Patient Portal Use in Diabetes Management

This project focuses on the use of patient portals and improvement of blood glucose levels in patient's diagnosed with diabetes in primary care clinics. Patient portal is an online-based tool, which allows the patient various points of access to their medical records including the patients list of medications with instruction on dosage, lab values that were ordered for the patient, and dates of upcoming appointments. Portals also allow communication between provider and patient, which extends education opportunities. Each portal comes with an email for the patient to ask questions that they may have, and it also allows the provider to communicate with the patient on any changes in the patient, the patient's appointment times, and even blood glucose levels that were drawn at the clinic. Portals are largely driven by financial for providers as part of federal US healthcare reform. Additionally, portals strive to improve consumers overall health. Results indicate use of patient portal is associated with better diabetes self-management. Patient with the motivation, knowledge, skills, and confidence to become actively involved in their healthcare have better health related outcomes. Patients who are non-users of portals had consistently higher blood glucose values when compared to patients who participated in portals.

Education and Professional Studies.Nursing.02

Madison Pittman, Teresa McDowell

Northwestern State University

Chest Pain Assessment Tool

Education and Professional Studies.Nursing.03

Rylee Spencer, Savannah Hill, Penny Bice

Northwestern State University

Pitocin For Laboring Mothers

Education and Professional Studies.Nursing.04

Shalyn Farrington, Kylee Loustaunau

Northwestern State University

Bedside is Best

The purpose of this project was to find the most effective way for nurses to give shift handoff so that patient safety will be improved. In the field of nursing, patient care and communication are the top priorities, yet there is no implemented standardized shift handoff protocol used in healthcare facilities or taught in nursing education. This project focused on answering the question: In patients admitted to the hospital, does desk report or bedside report with the use of SBAR decrease incidents at shift change and improve patient safety during a hospital stay? Research on this subject determined that the use of bedside report in conjunction with SBAR promoted patient safety, reduced cost to healthcare facilities, and increased both nurse accountability and critical thinking. The analysis of this data supports that in the field of nursing the implementation of bed side shift report and SBAR can greatly improve patient care and promote safety.

Education and Professional Studies.Nursing.05

Cheney Bird, TEIRNA ADAIR

Northwestern State University

No Nits, Ands, or Buts

The research project examines current recommendations for pediculosis management in school age children. Current management in many school systems is a No-Nit Policy. Each year, 12 million to 24 million days of school are missed by students suffering from lice. There is much stigma surrounding head lice infestation in the United States. Financial burden surrounding pediculosis eradication is unnecessary when considering the most current evidence based research. This research has been conducted to dispel the myths surrounding head lice in schools.

Education and Professional Studies.Nursing.06

Jessica Weidner, Mallory Stubbs, Sandra Colby

Northwestern State University

Stress and Coping in Nursing

Abstract

A strong relationship exists in the nursing profession between the effects of stress on a nurse's health and their job satisfaction. Consequences of chronic stress shows it can have a debilitating effect on an individual's health both physically and psychologically resulting in decreased work performance, absenteeism, and job turnover. Empirical evidence regarding stress reduction interventions suggests numerous positive benefits including increased functional capacity and quality of care, staff retention, and overall improvement in health and well-being. This research illustrates the effectiveness of healthy interventions on nurses experiencing occupational stress and burnout.

Sharon (Suzy) Klinger

Northwestern State University

Sepsis

Abstract

Sepsis is a complex syndrome with a wide spectrum of severity, is a common cause of death worldwide, and has easily treatable but has masked symptoms. These symptoms include decreased urination, changes in mental status, low platelets (blood clotting factors), breathing problems, abnormal heart functions, chills due to low body temperature or fever, and weakness. “Sepsis Six” resuscitation bundle of care, initiated in 2004, was used to raise awareness among hospital staff and improve the management of patients with sepsis. Bundles are groups of therapies built around the best evidence-based guidelines, which, when implemented together, produce greater benefit in terms of outcome than the individual therapeutic interventions. Upon presentation in the Emergency Room, six specific areas of sepsis care are outlined: intravenous fluids, blood cultures, antibiotics (after the blood cultures are drawn), a lactate level, oxygen, and urine output. The target population is ages 45-64 year-old patients presenting to the Emergency Room. Compliance with a bundle implies achieving all the specified goals in that bundle. The research of our study found that patients who receive the entire bundle had a crude mortality of 11.1%, which is 18.2% lower than those who received only some or none of the bundle components.

Education and Professional Studies.Nursing.08

Amber Gooch-Buchanan, Brian Moran

Northwestern State University

EtCO₂ With COPD

The use of ETCO₂ as the seventh vital sign has been a big discussion in the past few years as noninvasive monitoring has developed. Ponca City Hospital recently purchased vital sign equipment that has the capability of determining ETCO₂ non-invasively. This new availability has raised the question of the importance of its use. This literature review aims to determine a difference in capnometry values of hospitalities COPD patients compared to the general population. Results of this study were deemed inconclusive with parameters of COPD patients falling in the same set general population norms. Recommendations include the further studies of waveforms (capnography) rather than the numerical values of (capnometry) in the prediction of COPD exacerbation.

Education and Professional Studies.Nursing.09

Baleigh Watson, Kelsey Short

Northwestern State University

Activity Vs. Rest Post-Concussion

Our goal for this project included finding the best available research discussing treatments for concussions in college-age athletes. One source indicated that the rate of concussions reported has increased markedly in the last 15 years. Interest from the Northwestern Oklahoma State University Athletic Division on the topic, raised our suspicion on what options were available for those affected by the injury. Much of the available research was controversial and led to different beliefs on the topic. Combining the information led us to the conclusion that returning to work or school as soon as possible and adapting responsibilities that could decrease exacerbating factors, would allow the patients to return to normal functioning and increase protective factors. Involving the physician can rule out more serious injuries, including fracture and hemorrhage and increase the efficiency of interventions. As nurses we should be implementing patient teaching about the importance of reporting symptoms early on and the benefits of maintaining a follow up schedule.

Tilly Braddock

Northwestern State University

Anticoagulation Monitoring

The purpose of our project is to evaluate the difference in INR blood level results accuracy, cost of testing, and improvement in the patient's quality of life when using portable capillary CoaguChek INR testing compared to standard laboratory method. INR stands for International Normalized Ratio and is a standardized method for reporting blood coagulation with warfarin. When starting warfarin therapy, INR testing should be done 2-3 times per week (typically performed in a lab). Careful monitoring of patients on an anticoagulant therapy is important; under-anticoagulation increases the risk of stroke, while over-anticoagulation increases the risk of hemorrhage. There are two methods of testing the PT/INR values. The first method is portable capillary CoaguChek test. The CoaguChek is a portable device for testing International Normalized Ratio. The second method is laboratory blood draw testing in the Clinic or Hospital. Multiple studies involving over 300 patients on anticoagulation therapy have been performed with similar results. These studies concluded that there was a strong positive linear relationship between the test results, although there was found to be an overestimation of approximately 0.3 INR units with the portable CoaguChek. Traditional Lab INR testing is still considered the gold standard, but the portable CoaguChek monitor is suitable for use in the clinical setting. CoaguChek monitors offer a cost effective, less stressful testing option for patients

Kathlynn Smith

University of Central Oklahoma

Many Hands Make Light Work: The History and Development of an At-Large Sigma Chapter

Sigma chapters are often “stand-alone” and associated with only one academic institution resulting in limited resources. In Oklahoma in 1982, charter members developed an at-Large chapter composed of three academic institutions, OBU, UCO, and OU resulting in the Beta Delta-at-Large Chapter. Now, the chapter represents a total of five academic institutions including OCU and SWOSU. Membership has grown with over 6,000 members being inducted and currently has 673 active members representing these five schools. With that added membership, both benefits and challenges have resulted. Benefits result in increased resources which include money, room space, and varied membership background. Challenges include communication, meeting individual needs, and scheduling conflicts.

Finances from these chapters have allowed for increased allocation of scholarships, grant awards, support of other initiatives, and general meeting expenses. Scholarships have been a focus for the chapter since chapter inception. Scholarships given are estimated to be over \$80,000 for the last ten years to both undergraduate students and graduate members. In addition, \$2,000 has been offered annually in research grant awards. Besides supporting scholarships and research grant awards, the chapter has been able to support other successful initiatives.

Being an at-Large chapter exemplifies the phrase, Many Hands Make Light Work.

Kamaree Hatfield, Sumji Sherpa

Northwestern State University

Massive Transfusion Protocol with TXA

Reducing mortality is vitally important considering that trauma injuries are the number one cause of death among Americans aged 1-46 years. Massive transfusion protocols (MTPs) grant physicians the ability to follow an algorithm during a massive hemorrhage which allows for rapid replacement of blood products. MTPs are implemented to provide consistent treatment during hemorrhage. Tranexamic acid (TXA) a hemostatic agent has been shown to decrease mortality rates in trauma patients. In addition to decreasing mortality, tranexamic acid is also a cost-effective intervention. The most recent estimated cost of 1 unit of red blood cells is \$210.74, and the charge to the patient receiving the transfusion is \$343.63. In comparison, 1 gram of TXA supplied in a 10 mL vial is estimated to cost between \$45 and \$55. Some potential side effects and adverse reactions of TXA include nausea, vomiting, and diarrhea. Contraindications include acquired defective color vision, hypersensitivity to TXA, and active intravascular clotting. A systematic review found that when tranexamic acid is administered within three hours of injury it reduces the risk of death by 10% and the risk of death due to bleeding by 15%. Researchers in the MATTERS study concluded that risk for thrombotic events related to TXA such as deep vein thrombosis and pulmonary thromboembolism were too small to assess.

Education and Professional Studies.Nursing.13

Lisa Boye

Southwestern Oklahoma State University

"Are Leftovers Really Leftovers"

Abstract:

It is well recognized that we as humans tend to be greedy consciously and unconsciously, for it is in the nature of us all to do so. We have all come to the realization that we tend to have so much to eat often, and we end up reaching a marginal point, and those food ends up in the garbage. We don't have to; those leftovers can have a "second life". According to Stanford Magazine, 21.5 million tons of food waste are generated annually in the United States. Food waste cannot be stopped, but it can be used to produce more food. Giving leftovers a second life without putting them in landfills we can control the amount of methane gas in our atmosphere. In my poster presentation, I, Lisa Boye, an international student from Liberia, hope to rise an awareness on how to recycle leftovers, and why leftovers deserve a "second life"; instead of landfills.

Education and Professional Studies.Professional Teacher Education.01

Karen Williams

East Central University

Analysis of Peer Review in Junior Physics Lab

Peer review was implemented in Junior Physics Lab the last two semesters the course was offered. The students used the rubric that was used to grade their formal lab reports to grade each other's reports before turning the reports in for grading by the professor. The effectiveness of peer review on their scores will be examined. The class scores will be compared with non-peer review classes.