2021
FORT HAYS STATE UNIVERSITY
DOCTOR OF NURSING PRACTICE
PROJECTS
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Obstructive sleep apnea (OSA) is a sleep-related breathing disorder that is often undiagnosed due to lack of screenings performed in the primary care setting. Various screening tools are available for use, but clinical screening protocols are not in place, and patients are often overlooked. Due to the alarming number of patients who remain undiagnosed, it is essential that a convenient, inexpensive, and validated screening tool be utilized in the adult primary care setting. This Doctor of Nursing Practice (DNP) project aimed to implement the use of the STOP-BANG screening tool in primary care to increase provider identification of OSA risk factors, improve referral rates for polysomnography (PSG) testing in at-risk patients, and facilitate prompt diagnosis and treatment geared towards improving one’s quality of life. Project participants included four providers and 17 patients during the implementation period. STOP-BANG screenings were performed on adult patients in the primary care office throughout the observational period.

Patient screening sheets were evaluated for age, gender, height, weight, body mass index, and neck circumference in addition to the STOP-BANG assessment completed by nursing staff for review by the provider. In a three-month timeframe, results show an increase in provider screenings as well as improved referral rates for PSG testing. These results can be directly correlated to the implementation of the STOP-BANG screening tool in a rural clinic in Western Kansas. The ultimate goal of this project is to change clinical screening protocols by promoting early identification of OSA risk factors with the use of a validated, easy-to-use, and reliable screening tool in primary care.

Keywords: obstructive sleep apnea, primary care clinic, STOP-BANG screening tool
UTILIZATION OF AN OSA SCREENING TOOL IN PRIMARY CARE

Jaime Berry, BSN, RN
Fort Hays State University

Introduction

Problem: Obstructive sleep apnea (OSA) is a sleep-related breathing disorder that results in lack of oxygen to the brain, despite a person’s ability to breathe independently.

- Long-term adverse effects include cardiovascular disease, neurologic disorders, and metabolic dysfunction.
- Consequences of undiagnosed and untreated OSA are economically costly and can result in medically serious conditions.
- 80%-90% of adults remain undiagnosed.
- It is essential that a convenient, inexpensive, and validated screening tool be utilized in the adult primary care setting.

Purpose

Purpose: Implement the use of the STOP-BANG screening tool to increase provider identification of OSA risk factors and improve referral rates for polysomnography (PSG) testing in at-risk patients.

Objectives: Facilitate prompt diagnosis and treatment of OSA geared towards improving one’s quality of life.

Methods

Project Design
- Quality Improvement project

Project Intervention
- Increase detection and diagnosis of OSA by improving utilization of the STOP-BANG screening tool and evaluating trends in referral rates for PSG testing.

Sample
- N=17

Setting & Timeline
- Family Practice Clinic in Western Kansas
- September 2020-December 2020

Data Collection Tools
- STOP-BANG screening tool and post-intervention provider survey.

Data Analysis
- Descriptive statistical analysis based on screening tool results.

Results

PERCENT OF PATIENTS WITH OSA RISK FACTORS

Conclusion

- Providers in the clinic report the screening tool was simple and easy-to-use, beneficial to their patient population, and would recommend its use to their colleagues.
- There was an increase in provider screenings as well as improved referral rates for PSG testing.
- Greater than 50% of patients screened were classified as high risk for OSA.
- Results can be directly correlated to the implementation of the STOP-BANG screening tool and support the need to change clinical screening protocols across the state of Kansas.
- Utilizing the STOP-BANG screening tool promotes early identification of OSA risk factors, improves patient outcomes, and will reduce healthcare costs associated with undiagnosed and untreated OSA.

Limitations: Fewer patients were seen at the clinic due to the COVID pandemic, which resulted in a small sample size.

References


Acknowledgements

- There were no conflicts of interest for this project.
- Thank you to the providers and staff who contributed to the project.
- Special thanks to Dr. Valerie Yu for all her help, mentorship, and support with my project.
**Background:** “Desktop medicine” is overwhelmingly taking over primary care providers’ time during their workday. The fact that over half of Americans take at least four prescription medications every day certainly is contributing to this burden on healthcare providers. Triage departments are at the frontline of medication refill request and up to 45% of triage phone calls are regarding medication refill requests. In fact, time spent on refilling medications can take up to two hours every day which has contributed to the average workday of a family provider being up to 11.5 hours and less time spent face-to-face with patients.

**Objective:** This process improvement project, utilizing Rouse’s Complex Adaptive Systems Theory, included implementation of an algorithm and protocol to be used in a rural triage department for medication refill requests. The overall purpose was to decrease the daily number of medication refill requests the clinic’s six providers were burdened with.

**Methods:** Prior to the triage department beginning to use the protocol and algorithm, a retrospective chart review was performed utilizing Cerner’s Discern Analytics program which was able to track which medication class was requested and the gender of the caller for demographic purposes. This same process was used during the intervention period. For both periods, a t-test was used to evaluate for statistical significance. At the conclusion of the project, the six clinic providers took a post-intervention provider survey regarding their experience with the algorithm and protocol.

**Results:** Overall, the project failed to obtain its ultimate goal of reducing the number of medication refill requests for the providers. The total number of requests for the designated medication classes tracked actually increased from 249 requests in the pre-intervention period to 311 requests during the intervention period. There was statistical significance in one medication category. The percentage of callers requesting blood pressure medications and diuretics increased from 28% to 38%; at the p<0.01 level, the test was significant t(919) = -3.079, p = .002. The effect size of Cohen’s d was 0.214. Despite this increase, clinical significance was obtained based on the positive feedback from the post-intervention provider survey responses which showed that all responding providers felt the new medication refill algorithm was helpful to their practice.

**Conclusions:** The project taking place during the COVID-19 pandemic certainly did not help the project attain its goal as fewer people visited the clinics, and more people were allowed to call in for medication refills with less restrictions. Despite this limitation and the lack of the project obtaining its anticipated statistical significance, clinical significance was obtained based on the feedback from the triage department and physicians thus indicating sustainability for the algorithm in the clinic.

**Keywords:** medication refill request, algorithm, triage department
MEDICATION REFILL REQUESTS:
UTILIZATION OF AN ALGORITHM AND PROTOCOL IN A TRIAGE DEPARTMENT

JAYLA D. EDGAR, BSN, RN

BACKGROUND
- 45% of phone calls are about medication refill requests (Farrell et al., 2006; Jordan, 2011).
- Time spent refilling medications can take up to 2 hours of a provider’s time each week.
- Over half of Americans take at least one prescription medication every day (Brown, 2019).
- Providers are spending more time on both phone calls and face-to-face visits with patients.
- Rural Midwest is seeing severe provider and nurse shortages.

PURPOSE
Create and implement a medication refill request algorithm for the triage department nurses to use in an effort to decrease the daily amount of refill requests TCHS providers were receiving in their inbox thus leading to increased provider satisfaction with the medication refill request process.

MATERIAL & METHODS
Project Design
Problem Improvement project
Quantitative Evaluation
Setting
Small, rural community clinic in rural Nebraska
Patients 2 physicians, 3 nurse practitioners
Sample
Convenience sample of patients for a request of one of the filled medication categories.
Pre-Intervention cohort (n = 249), June 8, 2020 – August 14, 2020
Intervention cohort (n = 311), September 14, 2020 – November 23, 2020
Instruments
Medication refill request algorithm and policy
SurveyMonkey online survey
Plan
1. Development of a medication refill request algorithm in collaboration with TCHS’ clinic providers.
2. Perform pre-intervention chart review of 11-week pre-intervention refill data.
3. Provide educational sessions to the triage department regarding the new policy and algorithm.
4. Implement protocol over an 11-week time frame with weekly/monthly meetings as needed with the triage department and providers.
5. Retrospective chart review to analyze intervention period refill data and refill request utilization.
6. Send out email inviting providers to post-intervention period 5-question survey.

MEASURABLE OUTCOMES
- Differences in patients requesting medication refill requests by gender using an ANOVA test
- Average age of patients requesting medication refill requests through the triage department using an ANOVA test
- The average number of daily medication refill requests prior to and after implementation of the algorithm protocol using an independent samples t-test
- Mean, median, and mode for medication classes to determine which class is being requested most often and how many of each class is being requested daily
- Provider satisfaction with the algorithm utilizing a Survey Monkey 5-question Likert-style survey

RESULTS

<table>
<thead>
<tr>
<th>Medication Category</th>
<th>Pre</th>
<th>Post</th>
<th>M</th>
<th>SD</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Blood Pressure/ Diuretics</td>
<td>427</td>
<td>494</td>
<td>.28</td>
<td>.450</td>
<td>.062*</td>
</tr>
<tr>
<td>2. Diabetes</td>
<td>427</td>
<td>494</td>
<td>.07</td>
<td>.264</td>
<td>.365</td>
</tr>
<tr>
<td>3. Thyroid</td>
<td>427</td>
<td>494</td>
<td>.03</td>
<td>.172</td>
<td>.114</td>
</tr>
<tr>
<td>4. Cholesterol</td>
<td>427</td>
<td>494</td>
<td>.06</td>
<td>.231</td>
<td>.388</td>
</tr>
<tr>
<td>5. Birth Control</td>
<td>427</td>
<td>494</td>
<td>.03</td>
<td>.168</td>
<td>.802*</td>
</tr>
<tr>
<td>6. Antidepressants</td>
<td>427</td>
<td>494</td>
<td>.11</td>
<td>.316</td>
<td>.335</td>
</tr>
</tbody>
</table>

CONCLUSIONS
- Despite the projects results not obtaining the lead investigator’s goal, the post-intervention survey responses, along with personal communication and feedback, does indicate sustainability for the project with some medication class alterations
- Further investigation and feedback from the physicians regarding their preferences for medication classes could also contribute to algorithm sustainability
- Further education regarding RN scope of practice and appropriate delegation could further contribute to algorithm sustainability such as the one created in this project and lead to decreased provider fatigue and burnout.

REFERENCES
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Post-Intervention Provider Survey Responses

<table>
<thead>
<tr>
<th>Question</th>
<th>Very Unsatisfied</th>
<th>Unsatisfied</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you feel that the new medication refill algorithm was helpful to your practice?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*4**
Patients with severe mental illness are at an increased risk for poor health outcomes and have an estimated shorter life span than the general population. Many medications used to manage severe mental illness increase the risk for adverse health events such as metabolic syndrome. Adherence to current metabolic and therapeutic drug monitoring recommendations is essential to aiding this population in achieving and maintaining better health status. Guidelines and recommendations for monitoring these types of medications have been developed by multiple entities including a joint panel of the American Diabetes Association and the American Psychiatric Association, but non-adherence still occurs. The purpose of this project was to increase compliance rates with the metabolic monitoring recommendations currently in place in an outpatient mental health facility through the implementation of a clinical worksheet and provider education. After a review of current literature, a quasi-experimental uncontrolled before and after project was implemented in which 100 charts for active patients age 18-65 were audited from a generated list based upon random diagnosis and antipsychotic medication prescription using existing administrative data in an electronic health record specific to the outpatient facility where the project was implemented. After a three month implementation period of the interventions, a second list of 100 charts was generated using the same criteria and audited for a potential increase in compliance rates for the chart elements related to metabolic monitoring which include; patient/family history, blood pressure, body mass index, lipid panel, and fasting plasma glucose/hemoglobin A1C. Statistical analysis was conducted using the existing data obtained and recorded in each of the metabolic monitoring elements and a single upper-tailed z-test for the difference in two proportions was performed for each of the following characteristics; fasting lipid, hemoglobin A1C or fasting plasma glucose, blood pressure, body mass index, health history, and overall chart compliance. The results of this project did not demonstrate an increase in overall compliance rates or for the individual areas identified in metabolic monitoring of patients prescribed antipsychotic medications after the implementation of a clinical worksheet and education, but it was able to identify a gap in care for this specific population as well as additional barriers to metabolic monitoring adherence. The overall objectives for this quality improvement initiative included; increasing identification of patients at risk for metabolic disturbances, increasing chart compliance with the current recommended metabolic monitoring guidelines and outpatient policies, increasing communication with outpatient providers concerning patient electronic health records (EHR) with missing monitoring data, and decreasing the time needed to have follow-up contact with patients and their primary care providers that have been identified as “at-risk” for metabolic disturbances. Due to the low levels of compliance, an increase in identification of “at-risk” patients and follow-up care could not be evaluated. However, 100% of providers were contacted with the missing chart elements that are required for metabolic monitoring after both chart audits. Non-adherence to current recommendations continues to be an issue in this setting, increasing the risk for negative health outcomes in the mental health population prescribed antipsychotic medications. It is recommended that additional studies be conducted into evaluating effective interventions as well as identifying additional barriers to metabolic monitoring.
Metabolic Monitoring Compliance Rates
Sierra Gilmartin BSN RN, DNP Student
Fort Hays State University

Introduction

Purpose:
Identify a change in the outpatient setting by using a clinician worksheet to increase provider compliance with current metabolic monitoring guidelines of patients prescribed antipsychotic medications within the correct time frames and improve patient outcomes.

Background:
- According to the National Alliance on Mental Illness (2018), approximately 1 in 5 U.S. adults in the U.S. (18.5%)—experiences mental illness in a given year.
- Roughly 3.5% of Americans have a mental health disability which means that the mental disorder is severe enough to be considered severely limiting (Jenns, Stoddard, & Kraus, 2006).
- It is estimated that the variance in mental illness costs America $193.2 Billion in lost earnings per year (National Alliance on Mental Illness, 2018).
- Patients taking antipsychotics are at an increased risk of cardiovascular disease and diabetes (Bell) proving red and monitoring of these conditions is important (JNCAs, 2017).
- Individuals being discharged as psychiatric patients are nearly twice as likely to die as the general population (Parran, Strain, & Morris, 2001).
- People with diabetes and schizophrenia or bipolar disorder have a 50% higher risk of death than diabetes without a mental illness (Vinegar, Gulpin, Hippsley-Cox, and Whyte (2003).

Significance:
The project is significant because the findings demonstrate the interventions implemented did not increase compliance rates with metabolic monitoring. The project did identify a gap in care in a specific population as well as additional barriers to adherence with metabolic monitoring recommendations.

Problem and Objectives

Problem:
- Metabolic syndrome is the term used to describe a grouping of risk factors associated with insulin resistance that has a correlation with the development of coronary artery disease, type 2 diabetes, and cardiovascular disease (Kher, 2017).
- Patients with mental health issues at an increased risk for negative outcomes related to risk for metabolic syndrome and provider non-adherence to recommended monitoring guidelines.

Objectives:
- Increase communication with providers concerning missing metabolic monitoring elements.
- Increase identification of patients with metabolic disturbances.
- Increase chart compliance with metabolic monitoring.
- Decrease follow-up time for patients identified as at risk for metabolic syndrome.

Review of Literature

Patients with severe mental illness are at an increased risk for poor health outcomes and have an estimated shorter lifespan than the general population. Research that evaluates specific interventions that have been implemented to increase provider adherence to current recommended metabolic monitoring is limited.

A literature review found that most studies have research that focuses on the risk factors associated with mental illness and the prescribing of psychotropic medications. A review of the literature found that:
- Individuals with “major mental illnesses have an increased prevalence of overweight and obesity, hypertension, dyslipidemia, hypertension, and smoking, and substantially greater mortality” (Newcomer, 2017).
- Current research indicates that patients with severe mental illness lose 25-30 years of potential life (Newcomer, 2017).
- Out of three individuals diagnosed with schizophrenia have also been diagnosed with metabolic syndrome, one out of every four patients has been diagnosed with diabetes (Amman, 2015).
- One study that followed 30 patients showed that coronary heart disease was the leading cause of death in patients with severe mental illness (Newcomer, 2017).
- Michalson and Meyer (2007) explain that olanzapine and clozapine have shown weight gain of 13 kg within the first year of use while medications such as risperidone and seroquel show “mean annual weight gains of 2.5 kg” (Michalson and Meyer, 2007).
- Michalson and Meyer (2007) state that “CATE/1 analysis revealed marked under-treatment of cardiovascular problems such as diabetes, hypertension, and dyslipidemia in schizophrenia patients.”

Methodology

Research Question:
In a patient receiving psychiatric medications in an outpatient setting, implementing a clinician worksheet and requiring staff to assess for results of the lab value results data driven to medical drug monitoring as well as metabolic monitoring to guide metabolic and laboratory monitoring, would the intervention increase provider adherence to current recommendations as measured by compliance statistics via chart auditing within a three month period.

Research Design:
Quantitative descriptive design as a quasi-experimental uncontrolled before and after study.

Population:
All actively licensed providers prescribing psychiatric medications requiring metabolic monitoring to adult patients with mental illness.

Setting:
Outpatient clinic.

Sample:
Providers prescribing to active patients age 18-65.

Interventions:
- Metabolic monitoring clinical worksheet
- Provider reference sheet with current guidelines
- Educational PowerPoint

Data Collection Instrument:
- Pre-existing administrative data via electronic health record platform
- Provider clinical information: age, sex, diagnosis, antipsychotic prescribed, metabolic monitoring characteristics

Clinical Practice Guideline for Initiative: Joint Consensus Statement by the American Diabetes Association and the American Psychiatric Association

Data Analysis: Statistical analysis focusing on the rate of compliance using a single upper-tailed t-test for the difference of two proportions

Results

Statistical analysis concerning the compliance rate for each chart element did not show a significant increase between the compliance rate at initiation and the compliance rate post-implementation of a clinical worksheet.

Personal/Family History (100% compliant at both audits)
- Total (n = 43,659, p > 0.05)
- Individual (n = 43,569, p > 0.05)

Hemoglobin AIC (n = 42,419, p > 0.05)
- Blood Pressure (n = 42,429, p > 0.05)
- Body Mass Index (n = 43,569, p > 0.05)
- Overall Compliance (n = 43,659, p > 0.05)

“Hi-Risk” patients identified at initiation (3/4) and at conclusion (1/4) based on compliant chart

Increased communication with outpatient providers and provider orders

Identified a gap in care that the target population.

Conclusion

- All providers with missing metabolic monitoring characteristics in the charts were contacted after both audits, increasing communication with prescribers.
- All patients identified as “at-risk” for metabolic complications had follow-up with a medical provider when the results of the monitoring was received.
- The project was able to increase ordering for laboratory results as orders had been placed in charts at the time of the second chart audit.
- Additional barriers to adherence to metabolic monitoring guidelines were identified including: inability to afford medication co-pays, denial for same physicians, and perceived risk for infection of COVID-19 in public areas.
- The results demonstrated that most of the charts that were compliant for metabolic monitoring were an at-risk for metabolic complications.
- The project identified a gap in care for the population the organization serves.

Limitations:
Few patients were seen in person due to the COVID-19 pandemic resulting in a limited ability to conduct metabolic monitoring. Charts were also audited at a three-month interval reducing the ability for providers to contact charts. Due to the random nature of the chart audits, different providers were audited resulting in lower providers audited during the second audit.

Implications:
Utilization of a metabolic monitoring tool and adherence to recommended guidelines decreases the risk for complications to this already vulnerable population and can improve patient outcomes and quality of life.

References

Acknowledgements

- Thank you to the providers and nurses who contributed to the project and its outcomes.
- Thank you to Dr. Terrington for her continued support and knowledgeable contributions.
- No conflicts of interest were identified for this project.
The purpose of this quality improvement project was to help lower the serum phosphorus levels of patients receiving hemodialysis while living in the nursing home. Many of these individuals had higher than average serum phosphorus levels than patients who did not live in the nursing home setting. Nursing home patients have their medications and diet managed for them by nursing home staff. An educational video was created and presented to combat any source of knowledge deficit the staff may have relating to hyperphosphatemia or elevated serum phosphorus. Following the educational video, laboratory values were reviewed to highlight if the intervention impacted the patient’s baseline serum phosphorus. The principal objective was to improve the health and quality of life for hemodialysis patients living in local nursing homes.

*Keywords*: hyperphosphatemia, serum phosphorus, chronic kidney disease, hemodialysis diet, staff education, phosphorus binders, and medication administration
Phosphorus Balance: A Quality Improvement Project
Patti Gutowski, RN, BSN, DNP student
Fort Hays State University

**Background**
- Approximately 10-15% of the area hemodialysis patients live in local nursing homes (NH).
- 40% of hemodialysis patients average above the recommended serum phosphorus level (Rastogi, 2021).
- Majority of the local NH population identified had phosphorus levels over target.
- The highest mortality rate is related to cardiovascular disease, which is responsible for more than 50% of deaths in patients with end stage renal disease (ESRD) (Askar, A. M. (2015)).
- At baseline 63.63% percent of the patient’s serum phosphorus levels were above the target range of <3.0 mg/dL.

**Literature Review**
- In chronic kidney disease the ability of the kidneys to eliminate phosphorus declines (Counts, 2015).
- Hyperphosphatemia pulls calcium from the bones to maintain homeostasis (Davita Kidney Care, 2020).
- High levels lead to various ailments, including xerosis, pruritis, calcifications under the skin, damage to the lungs, brittle bones, and vascular calcification (Davita Kidney Care, 2020).
- Hyperphosphatemia requires phosphate-lowering agents, i.e. phosphate binders (Sagrić et al., 2016).
- Renal osteodystrophy can be managed with phosphorus binders, activated vitamin D and a low-phosphorus diet (Davita, 2023).
- Phosphate binders are used to lower serum phosphorus levels for people with CKD with the aim to prevent progression of their renal disease (KDIGO, 2017).

**Purpose**
The purpose of this study was to evaluate if the education of the nursing home staff, who administer phosphate binders and assist with meals, would decrease serum phosphorus levels among hemodialysis patients residing in local nursing homes in my community.

**Methods**
- Needs and Feasibility: Observation of problem and discussion with Dr. Bedros, Nephrologist
- Project Design: Quality Improvement Project: Serial cross-sectional study
- Setting: Nursing home staff meeting with 1 DON, 6 RNs, 16 LPNs, and 8 CMAs
- Population: Hemodialysis patients living in the nursing home setting
- Sample Size: 11 nursing home patients
- Tools: Educational Video/retrospective chart review

**Results**
- Retrospective chart review for baseline data. At baseline, 65.65% of patients were above goal range of <5.0 mg/dL.
- Phosphorus Balance educational video was viewed one DON, 8 RNs, 16 LPNs, and 8 CMAs
- Retrospective chart review of laboratory values were observed every two weeks for a total of eight weeks.
- The serum phosphorus goal range was <5.0. Baseline data was obtained in week one and every two weeks following for a total of eight weeks. The patient’s had consistent trends in the serial analysis that are unchanged overtime.
- At week eight, 60% of patient’s phosphorus levels were above range.

**Conclusion and Future Project Areas for Growth**
There was little no change in the outcomes based on the serial data collected. However, the project’s future recreations would include education regarding additional dietary needs, anemia of chronic kidney disease, fluid overload, and fistula care and management. The outcomes revealed little to no change in serum phosphorus levels in the end. However, the collaboration during this project’s course created new professional relationships and opportunities for expansion of the project. The outcomes highlighted how to improve the process of offsets education and confirmed that there are continued community needs. Phosphorus Balance: A Quality Improvement Project was well-received in all areas of care. It is fair to say that everyone involved shared the same goals. The goal was to improve quantity and quality of life for hemodialysis patients.

A special thank you to Dr. Valerie Yu, Dr. Bedros, Sandra Iobbe, APN and all who helped guide me through this journey.

**References**
**Background:** The prevalence of Diabetes is increasing in the United States. Diabetes education is imperative to manage the disease and prevent long-term complications. Behavior change and successful management of diabetes are learned through diabetes education and achieve improved outcomes with overall health.

**Aims:** The aims of this project were to increase diabetes knowledge, provide the community with diabetes education, and increase awareness of diabetes complications.

**Method:** The project design was a quantitative quasi-experimental one group pretest and posttest using survey monkey. The project was implemented using three educational videos published on the health system Facebook page with a link to the YouTube channel. The sample included 19 adults with diabetes.

**Results:** Most of the participants had type 2 diabetes (n=15). The median length of diabetes was 6-12 years. The results demonstrated that 42% of participants did not have previous diabetes education while 47% had education with a dietician, and 26% with a certified diabetes educator. The main findings demonstrated that knowledge of diabetes was increased in areas of diet/nutrition, exercise, complications, and coping mechanisms.

**Conclusion:** The project findings support the education needed for the diabetes population within a rural community. The results highlighted increased knowledge in all areas of diabetes self-management and therefore provides individuals with a resource to solve diabetes-related issues. Lastly, this project will provide a change in practice as this is the first diabetes education implemented for the community.
Implementation of Diabetes Education: A Community Approach
Marie Haycook
Fort Hays State University

Introduction

- The prevalence of Diabetes is increasing in the United States. 34.3 million people have diabetes in the U.S., and the diagnosis has increased in the youth population (CDC, 2017).
- Diabetes self-management education is the cornerstone of chronic disease management.

1. Healthy Eating
2. Being Active
3. Monitoring
4. Taking Medication
5. Problem Solving
6. Reducing Risks
7. Healthy Coping

Purpose/Objectives

Problem:
- Most interventions are inadequate at managing diabetes in patient populations and healthcare settings.

Objectives
- Increase Diabetes knowledge
- Profilable community with resources
- Improved awareness of diabetes complications

Among adults ages 15 years and older with diabetes (P), how does diabetes education (I) affect knowledge (O) over four months (T)?

Methodology

- Quantitative quasi-experimental one group pretest and posttest.
- Rural Community, virtual education
- 19 adults age eighteen and older with diabetes
- Community needs assessment completed, revealed no diabetes education
- 3 educational videos
  - Included 7 self-care behavior handouts from ADEES
  - Pre-Survey taken before 1st video
  - Post-Survey taken after last video via Survey Monkey

Results

- This project provided the community with a sustainable resource for diabetes patients.
- This project has changed the practice of diabetes care within the health system as previously there was no diabetes education.
- The quality improvement project implemented diabetes education to provide knowledge to diabetics in the community for application to a healthy lifestyle and improved outcomes with a chronic condition. Access to care, and encourage active participation in health.

Conclusions

Acknowledgements

The Project’s author would like to thank Dr. Valerie Yu for the guidance and support with this quality improvement project.

The Project’s author would like to express the gratitude of a rural community and health system for allowing a setting for this project to take place.

References

There are many contributing factors to the variations in pediatric and adult immunization uptake, and due to these, systems need to be in place in settings that offer routine immunizations. The purpose of the project was to increase immunization rates in a Western Kansas, rural, federally qualified clinic by utilizing Advisory Committee on Immunizations recommendations. Immunizations are the safest and most successful measures to protect people of all ages against vaccine-preventable disease. Even though, there is sufficient background and research to show the number of lives and money that have been saved over the years, providers are still facing immunization hesitancy, series incompletions, and providers not having a consistent message to patients.

Implementation of the project involved utilizing the clinics current review of system sheet and adding immunizations to ask every patient at each appointment if they had recent immunizations outside of the clinic, or to discuss immunizations needed. Due to using a tool already in place, it saved time on education with staff and did not add more task to their day. The new review of system sheet was incorporated into clinic practice August 2020-December of 2020. Exclusion to collecting data involved Medicaid children 0-18, due to the primary investigator’s role in Vaccine for children State program. Pre and Post data collection involved 100 random charts being extracted from the clinic’s electronic health records. Pre data showed 35 patient records in compliance compared to 87 patient records being in compliance at the end of the project. With the 95% increase rate this was a significant increase but had limitations. These consisted of the timing coinciding with influenza season, which historically increases single immunization administration. Coronavirus 2019 decreased face to face well visits that potentially decreased follow up immunizations. It could be argued that reproducing the same results may not be achieved if implemented at a different time.

In conclusion, even though immunizations are the most cost-effective measures against vaccine preventable disease, it takes education among the medical community and the general population to achieve this goal (Bernstein, Bocchini, and Committee on infectious disease, 2017). Although COVID-19 nationally affected declining routine immunization rates, it strengthens the project proposal of increasing immunization rates and the importance of addressing immunization status at every patient appointment.

Key words: immunizations, initiation, completion, preventative services, immunization hesitancy, rural clinics
Increasing Immunization Rates in a Rural Family Practice Clinic

**INTRODUCTION**

*Research for the project was obtained through Cochrane Library, PubMed, CINAH, MEDLINE, CDC, and Healthy People 2020, with the exclusion of research more than 15 years old.*

*Inclusion included pediatric and adult population for increasing immunization rates*

**BACKGROUND**

* There are many contributing factors in pediatric and adult immunization uptake.
* Immunization rates in the United States have steadily increased, but still fall short of Healthy People 2020 goals for initiation and completion.
* Per Healthy People 2020, 33,000 lives have been saved and 14 million cases of disease have been prevented.
* Per healthy People 2020, reduction of 59.9 billion in health care cost and $33.4 billion in indirect cost.

**SIGNIFICANCE**

With the 95% increase in immunization rates at the project conclusion, it can be argued that asking about immunizations at every appointment should be integrated into the clinical review of system. This not only supports the sustainability of this project, but also the future of the clinical immunization rates. As mentioned, research by Ames, Glenten, & Levin (2017), consistent messaging among providers regarding immunizations has shown the largest impact on increasing overall immunization uptake of patients.

**PROBLEMS and OBJECTIVES**

**PROBLEMS**

* Providers continue to face immunization hesitancy.
* Kansas immunization rates for school age children for completion is 74.7% (National Immunization Survey, 2018).
* Compliance vs. Documentation within the clinic setting not capturing current immunization status

**OBJECTIVES**

* Increase clinic overall immunization rates
* Promote status updates in clinical charts, obtain immunizations at current visit, or need for immunizations outside of clinic
* Concerns of the family regarding immunizations can be addressed by the provider

**RESULTS**

* Predisposing factors of caregivers need to be addressed.
* Healthcare providers have the largest role and are the trusted source to parents for vaccine information and guidance (Chung, Scharmel, Fishel, & Frew, 2017).
* In 10 parents are using alternative vaccine schedules. Providers correlate this to time being a barrier to addressing parental concerns regarding vaccines in their practice (Eby, 2017), while parents relate to lack of health care provider recommendations, concerns of vaccine safety, and not being notified per a vaccine reminder from their provider (Berstein & Bocchini, 2017).
* Today, technology and social media are driving factors for maintaining appointments, responding to events, and staying updated with current news.
* The literature consistently supported parents and patients wanting clear, timely, and balanced information regarding risks and benefits of vaccinations. Additionally, Ames, Glenten & Leewin (2017) supported parents and patients wanting educational messaging outside of scheduled appointments or waiting for appointments.

* Mothers who sought information on the internet were more likely to choose alternative vaccine schedules, have negative attitudes toward vaccines, and accept alternative medical approaches (Vrделя, Klašper, Vercic, & Krocčnik, 2013).
* Health care professionals need increased communication methods to support vaccinations on the internet and social media.
* Health care professionals need to provide parents and patients with evidence-based resources that can be accessed on the internet and other literature such as magazines, newspapers, and journal articles.
* Literature consistently supported parents and patients wanting clear, timely, and balanced information regarding the benefits and risks of vaccinations.

**METHODOLOGY**

**Research Question**

How does reviewing immunizations on the clinic’s review of systems form at every appointment, compared to the current practice of not reviewing immunizations on the current review of systems form at every visit, affect immunization rates within three months?

**Research Design**

* Project took place in a rural Western KS. Clinic. Population 85.4% white, 14.4% Hispanic of Latino, 0.13% African American
* Sample size included all clinic population with the exclusion of children on Medicaid due to primary investigators involvement with Medicaid. N = 100 pre and N = 100 Post with manual extraction from clinic electronic health records.

**CONCLUSION**

**LIMITATIONS**

* Time was a factor with flu season during the project, which would make reproducing the same result at a different time not resulting in the same as this project.
* COVID-19 visits were transitioned to telehealth, which resulted in delay in well visits, and consistency in staff.

**IMPLICATIONS**

* Systemic approach to addressing immunizations, clinics will provide consistency in care.
* Individual level leads to community prevention of vaccine preventable disease leading to increased population health.

**ACKNOWLEDGMENT**

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Reference


Antimicrobial stewardship programs are demonstrated throughout the medical profession. Inappropriate and frequent antibiotic prescribing is leading to resistant strains of bacteria, increased risks of secondary infections, and increasing health care costs. A quality improvement initiative was performed in a rural midwestern primary care clinic in order to improve patient satisfaction when an antibiotic is not prescribed through an educational handout and verbal teachings. The educational handout used was a CDC handout about facts and information regarding antibiotic use, adverse reactions, and antibiotic resistance and the strain on health care. All patients roomed for a general practice or urgent care visit were provided both verbal teachings and a CDC handout on antimicrobials stewardship. Press Ganey surveys were used for a data collection tool to measure patient satisfaction pre- and post-project implementation. The data conveyed that patients demonstrated overall satisfaction when an antibiotic was prescribed. This was demonstrated by a mean of 93.75 (M= 93.75, SD²= 6.41) when no antibiotic was prescribed, compared to a mean of 95.10 (M= 95.10, SD²= 16.63) when an antibiotic was prescribed. Patients also had improved overall satisfaction when education was provided. The mean of patient satisfaction who did not receive an educational handout, prior to project implementation, was 93.42 (M= 93.42, SD²= 6.90). The mean of patient satisfaction when an educational handout was given, along with verbal education, was 95.76 (M= 95.76, SD²= 9.58). The research was able to demonstrate a positive correlation between patient satisfaction and education. Patients display higher satisfaction rates when antibiotics are prescribed in comparison to when they are not. Conclusions can be made that education is important in regards to patient satisfaction and compliance of care, but patients’ satisfaction is still motivated on whether or not an antibiotic is prescribed.
Implementation of an Antimicrobial Stewardship Program in a Rural Primary Care Clinic
Amanda Thies
Fort Hays State University

Introduction:
- Antibiotic overuse and inappropriate prescribing is a worldwide issue. It has lead to antibiotic resistant organisms, and places patients at risk for secondary infections.
- In 2019, the CDC reported over 35,000 deaths related to antibiotic resistant organisms, and 2.8 million infections. [1]
- It is estimated that by 2050, 10 million deaths will have occurred related to antibiotic resistant organisms [2]
- Clostridium difficile infections (CDIs) have become one of the most prevalent health-care associated diseases. [3]
- 40% of antibiotic prescribing is for a viral illness, breast of the most common. [4]
- Research supports patients requesting antibiotics, or attitudes towards expecting antibiotics, is correlated with overprescribing or inappropriate prescribing [4]

Purpose:
The purpose of the study was to perform education on antibiotic stewardship and improve patient satisfaction when an antibiotic was not prescribed.

Methodology:

Project Design:
- The DNP Project was a Quality Improvement initiative.
- In a midwestern primary care clinic, the staff implemented a CDC patient handout, along with verbal education to patients to improve patient satisfaction when an antibiotic was not prescribed.

Project Intervention:
- The project intervention is a CDC educational handout and verbal education
- All patients being seen as a primary care clinic received both forms of education.

Sampling:
- The sample population was anyone seeking medical attention at a rural primary care clinic.
- Convenience sampling was used, and no recruitment was used in the sampling process.
- The project sample size at baseline N = 22, performance goal = 156

Data Collection:
- Data was collected through an emailed derived survey.
- Texas General surveys were the surveys utilized for the project. Pretest General surveys have been utilized in health care for 30 years.
- The surveys measured:
  - Overall patient satisfaction.
  - If an antibiotic was prescribed during the visit.
  - If the patient received an educational handout during the visit.

Mean of patient satisfaction when not receiving an antibiotic: 93.75 (M = 93.75, SD = 6.41) .
Mean when patients received an antibiotic: 95.10 (M = 95.10, SD = 16.63)
Patients were more satisfied when an antibiotic was prescribed.

Mean of patient satisfaction when not receiving education: 93.42 (M = 93.42, SD = 6.90) .
Mean when patient received education on antibiotic stewardship: 95.76 (M = 95.76, SD = 9.58).
Patients were more satisfied when education was received.

Results:

- Paired t-test was used for data analysis.
- Allows for comparison of two measurements for the group of participants towards the hypothesized value.
- Excel SPC software was used for data evaluation.

Conclusion:

Implications for Future Sustainability:
- Antimicrobial stewardship education can improve patient satisfaction in a primary care clinic.
- The project provided both evidence practical and sustainable for future project, if education and handouts were provided when an antibiotic was not indicated.

Implications for Practice Change:
- The CDC and WHO have multiple educational tools available for providers to promote antimicrobial stewardship.
- Satisfied patients appreciate education and explanations, and are more likely to be compliant with their care. [7]

Recommendations:
- Continued research and knowledge progression on antimicrobial stewardship will lead to better patient outcomes in the future.
- Education can empower patients. The CDC and providers onsite to prescribe antibiotics when they are indicated, to allow for the best treatment for the patient.

References:

Acknowledgements:
- Thank you to the clinic and clinic staff for their help in performing this project.
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- A special thank you to Dr. Meeking. Thank you for the support, mentorship, and guidance in this project.
Hamda Awaal  
DNP, PMHNP, AGNP-C

**Introduction:** This proposal discusses a best practice guide to the formulation and implementation of process improvements in the control of high blood pressure (BP) in underserved communities (Cifu & Davis, 2017). Many factors generate ineffective BP controls in the urban cities, factors such as poor health habits and medication noncompliance behaviors (Kario et al., 2018). With this backdrop, high BP prevalence among the underserved, low income, and minority populations were the result of lack of health access, behavior, and adherence challenges within these communities. **Purpose:** Therefore, the purpose of this study was to promote healthy habits to improve blood pressure control. After the study, fifty percent (50%) of the participants were expected to complete the program by returning filled out health entry logs into the clinic every week. The outcome variable was the patient’s participation in health log entry to improve management adherence. The explanatory variables were lifestyle modification and medication compliance (Banks, 2019). An educational tool was created to increase the patient’s knowledge about the importance of taking part in blood pressure management. **Methods:** In essence, the quantitative approach in a quasi-experimental style and using the non-equivalent group with a pre-and post-testing was the study design (Holcomb, 2016). Sample and setting were in the local clinic with an anticipated sample size of n=50 hypertensive participants.

**Results:** The results favored promoting a healthy habit to improve blood pressure management adherence intervention using the “take charge tool” created for the community clinic, with significantly higher regard of engagement and participation (0.0023, p < 0.05) where the p-value of 0.0023 was less than 0.05 that had the null hypothesis rejected (π = 0.5). The interventional study of engaging patients in the participation of program using the monitoring tool had sufficient information to suggest the participation in the program was greater than 50%. The achieved power of the study was 0.6216 which is considered medium to high in nature. **Conclusion:** The study’s demonstrated clinical effectiveness and a meaningful improvement in patients’ engagement rate in monitoring their blood pressure during the twelve weeks by showing the willingness to manage their conditions in collaboration with the clinicians at the clinic (Tang et al., 2020). The project concluded that home blood pressure measurement demonstrated by the community clinic study resulted in positive engagement with hypertensive management adherence. **Keywords:** hypertension, medication, behavior modification, monitoring tool, patient education, treatment compliance, blood pressure control, management adherence
Implementing a Home-Based Health Entry Log for an Urban Clinic – A Quality Improvement Project
Hamda H Awaal, PMHNP, AGNP-C, DNP Student
Fort Hays State University - Department: School of Nursing

INTRODUCTION
Uncontrolled primary blood pressure many times stems from poor management and lack of compliance from the patient (AHA, 2018). The CDC (2015) reported 1 in 3 adults or about 75 million individuals has high blood pressure in the United States. However, only a shade over half (54%) of these individuals have their high blood pressure under control due to various reasons (CDC, 2015). This project's significance is the lack of patient's health concerning and particularly healthcare management adherence by the clinic population led the clinic owner to welcome such a program. Self-BP monitoring by logging blood pressures into the tool appeared very encouraging to motivate the clinic population to adhere to lifestyle modifications such as exercise/reading labels and be compliant with taking their medications as instructed.

PURPOSE & SPECIFIC OBJECTIVES
Purpose: Promoting Healthy Habits to Improve Blood Pressure Management Adherence
1) Health Entry Log: Subjects will agree to participate in the program for 4 weeks.
2) Behavioral Modification: Subjects will engage in taking part in the care by taking the BP daily for 4 weeks.
3) Lifestyle Modification: Subjects will commit to daily activities such as exercise, reading food labels, and being honest in reporting missing medication doses/refsills for 4 weeks.

METHODLOGY
Proposed Research Question: How can implementing a home-based measuring log improve management adherence in hypertensive patients in a community clinic within 50 days? The project's need was to implement a Home-Based Health Entry Log for an Urban Clinic: A Quality Improvement Project. Formulates a Home-based Health Entry Log that will be given to each hypertensive patient as a care guide to follow—promoting Healthy Habits to Improve Blood Pressure Management Adherence in a poorly BP-controlled clinic. The Project Design used was the qualitative method in a quasi-experimental style, using the non-equivalent group (Glass, 2016).
Variables: limit errors, only three explanatory variables were utilized, including diet modification, medication compliance, and activity engagement.
Ethical Consideration: University's IRB processes were completed, and consent with full disclosures was obtained.
Potential Limitations: The project sample size was (n=50), participants age 25-55 with blood pressure, excursions are less than 25, above 65 with without BP, and non-English speaking patients with uncontrolled BP.

RESULTS
1. The intended Health Entry Log goal was 50% of the subjects will agree to participate in the program for four weeks. The actual results indicated 70% of participants took part in the plans. 2. The intended Behavioral Modification goal was 50% of the subjects will be engaged to complete the intervention by taking part in the care to measure their BP daily for four weeks. The actual showed 66% achieved the intervention in the four weeks. 3. The intended Lifestyle Modification was about 50% to commit to daily activities such as exercise, reading food labels, and being honest in reporting missing medication doses/refsills for four weeks. However, the actual, registered 70% of the participants documented exercising, daily weights, filled out any missing medication & read labels.

EVALUATION
31 out of 50 responded to Pre and Post Survey questions. Not all the 50 completed the intervention as instructed. Five subjects out of the 35 did not meet all the required fields correctly. 31 of the 30 that responded Post-Intervention Test showed the majority were females. The data analysis used for analysis the results was Z-Test for a Proportion to compare outcomes. 33 out of 59 participants (67%) reported their blood pressure in one week (Hollonam, 2016). By week 4 (n=35 out 50), 70% of the participants recorded their blood pressure daily. The 35 participants who returned their health log entry reported a mean age of 488 (SD=9.61), mean weight of 297.80 (SD=33.99), and a mean height of 5.53 (SD=3.37), respectively. Of the 35 subjects who participated in the program, 13 (37.1%) were males, and 22 (62.9%) were females.

PRACTICE IMPLICATIONS
Researchers have shown that self-measuring of blood pressure in a home setting provides more accurate blood pressure measurements compared to those taken in a clinical setting (Rodrigues et al., 2020). Some patients suffer from temporary elevated blood pressure. This is the result of “white coat hypertension” syndrome which is due to the fear and anxiety they feel in a clinical environment. Home monitoring of blood pressure is a very easy and inexpensive way to manage blood pressure both for patients and clinicians. (Rodrigues et al., 2020). This analysis shows a positive response to the clinic where thirty-five out of fifty patients responded, that’s a 70 percent response rate. Enthusiasm for study was also strong as 16 percent of responders fully completed the program log entries or the “TAKE CHARGE” blood pressure monitoring tool. A home monitoring tool also allows for multiple blood pressure measurements daily that provides the best average to accurately know if the patient’s blood pressure is controlled or not (Rodrigues et al., 2020).

CONCLUSIONS
High blood pressure is one of the leading chronic conditions that affect almost every household, not only in the nation but the world at large (American Heart Association, 2019). Highlighting the effectiveness of home monitoring of blood pressure frequencies decreases the mortality. Implementing the “TAKE CHARGE” tool to help the community clinic take charge of their care management has been successful looking to be rewarding in the future. This project’s success was guided by the Health Belief Model, where the concept of self-efficacy leads to adopting positive preventive health behaviors (Richards et al., 2019).

REFERENCES
Patient safety is at the forefront of health care delivery. Providers must understand how to identify and communicate their existence in hand-off communications and from nurses to providers. In long-term care (LTC), providers are not at facilities daily and rely heavily on nursing staff to provide efficient and accurate information over the phone.

The situation, background, assessment, and recommendation (SBAR) tool was implemented to improve nurse-to-provider communication regarding sleep-deprived Alzheimer’s disease (AD) patients in LTC. The study facility had previously experienced a Department of Health (DOH) infraction in promptly reporting a patient’s change in condition. Therefore, implementing the SBAR tool in the LTC arena could provide the missing link in improved outcomes and patient safety.

The study aims to introduce the SBAR tool while evaluating staff compliance with documentation and communication. A cross-sectional, qualitative, observational design was utilized to determine whether the SBAR tool was adopted by staff as a communication tool in documenting AD patients’ behavioral changes. Convenience sampling was utilized for ease of collecting from the nursing and patient population at hand. The p-value of 0.2703 is greater than the significance level of 0.05. There is insufficient information to suggest the rate of SBAR tool completion exceeded 90%. Therefore, the study did not reject the null hypothesis.

The SBAR tool facilitated clear and concise communication among staff and providers. Utilization enabled the organization of staff thoughts and communication while providing cues to information that needed to be shared with providers. The SBAR tool’s follow-up documentation allowed loops in communication to be closed, thus potentially eliminating DOH infractions.

Keywords: SBAR tool, nurse-to-provider communication, electronic health record (EHR)
The Use of the SBAR Tool for Communication In Sleep-Deprived Alzheimer’s Patients

Andrea Demers, ACNP-BC
Nurs 959 DNP Project III
Fort Hays State University

Introduction

Problem & Purpose
The incidence of Alzheimer’s disease (AD) among the elderly population has increased significantly. AD is the most prevalent type of dementia (Gorens et al., 2018; Marder & Heilman, 2010). Based on the significant amount of research on sleep-deprived AD patients, it is important that providers understand how to identify and communicate the situation in hand-off communication, as well as nurses to the provider. It is crucial for patient communication to be accurate, clear, and concise to facilitate the flow of information and feedback loops for continuity of care (Marzec et al. 2016; The Joint Commission, 2017; Wenger & Hard, 2017; Pappaz et al. 2009; Stagl & Themann, 2013). The SBAR tool was implemented to improve communication among staff and providers.

Methodology

Design & Methodology
BG – a long-term rehabilitation center located in Wakefield, Rhode Island from August-December 2020

Quantitative cross-sectional observational design

Data Collection
The data are stored in the patient’s electronic health record (EHR) under patient documentation.

Nurses verbally consented (N=22) from September-December 2020

Identified Alzheimer’s patients with behaviors and sleep deprived

The SBAR tool utilized during this time (N=70) were compared to a possible use (N=70) for the same time period

FHSU Institutional Review Board approval was obtained prior to the start of the study.

Statistical Analysis
Prior to their shift for (40-30) minute in-person sessions

Sessions occurred at various times throughout the week for a 2-week timeframe providing enough time for all shifts to be complete.

Efficacy
All nursing staff (N=22)

All Alzheimer’s patients (N=70)

Error and results
Observational study

Ethical Consideration
Uphold value in improving the public’s health (Fris & Lohr, 2014)

Assessment of manipulation, confidentiality, minimizing risks, and obtain appropriate consents will be maintained (Fris & Sellers, 2014).

Limitations

Those participants who decline utilizing the SBAR tool

Time frame of study decreased significance from small sample size

Data

A one sample t-test for a ratio versus a constant upper-tailed test was used. No significant differences were found (p > 0.05, expected p-value of 0.05)

The sample proportion was 0.02 with a standard error of 0.03. The z-test statistic was 0.02 with a final p-value of 0.703

Since the p-value of 0.703 is greater than the significance level of 0.05, there is insufficient evidence to suggest the rate of SBAR tool completion exceeds 90%

The study did not reject the null hypothesis.

Findings

No difference in SBAR tool use

Conclusion

SBAR

• Extending the length of the study would have recruited more SBAR tools and improved the significance levels

• Future research in an extended study will examine if the SBAR tool will reduce hospitalizations, improve patient outcomes, and reduce medication risks.

• Facility will improve communication by use of the SBAR tool

• Close the loop of documentation

• Timely reporting of changes in behavior

• Reduce risk of DOH fines, penalties

• Increase quality of care

• Staff stakeholders adopt SBAR tool

Further Research

• Extended study timeframe

• Examine if the SBAR tool will reduce hospitalizations, improve patient outcomes, and reduce medication risks.

References


The purpose of this project is to investigate the impact of home visits on medication compliance in patients with access barriers to care. While the literature demonstrates that home visits have positive impacts on patient wellness, there is a dearth of information on home visits in general, and there is virtually no information about medication compliance with home visits in the United States. The Health Belief Model was utilized for this study by focusing on an action, i.e. home visits, that will promote wellness. A descriptive model was utilized for data analysis using information collected in a pre-intervention and post-intervention survey. Ethical considerations were addressed utilizing Health Insurance Portability and Accountability Act of 1996 rules and accepted ethical health care practice. The study was determined to be Institutional Review Board exempt by Fort Hays State University. The study was completed in a rural community health center with a population of less than 30,000 in the Kiowa catchment area of Elbert County, Colorado. The convenience sample was adult males and females living with health and mobility issues who were surveyed utilizing a pre-intervention and post-intervention modified simplified medication adherence questionnaire (m-SMAQ). Results demonstrated a positive impact on medication compliance/number of missed doses and taking medication in a timely fashion with 80% compliance in the pre-intervention phase and 100% in the post intervention phase. The study had dubious results regarding patients remembering to take medications. Implications for practice are to increase home visits in an attempt to encourage medication compliance. Implications for the profession are to do further research on home visits. Defining specifics of the impact of home visits on medication compliance provides a lexicon and framework for the practice.

Keywords: Home visits, medication compliance, rural
Impact of Home Visits on Medication Compliance

Fort Hays State University: NURS 959: DNP Project III
Amanda Judd

Problem
This project was done to determine the impact of primary care home visits on medication compliance.

Key Objectives
A descriptive study was done with a pre- and post-intervention survey to determine if home visits had any impact on the following:
- Whether the patient takes medication on time
- Whether the patient has discontinued medication due to feeling bad
- Has the patient forgotten to take their medication
- Has the patient forgotten to take their medication on the weekend
- How many times the patient has failed to take their medication

Evidence Based Initiative
The Health Belief Model was originally developed by the U.S. Public Health Service as a mid-range theory to evaluate reasons that people fail to adopt strategies for wellness (Boston University School of Public Health, 2019). This model focuses on:
- Avoiding illness
- Beliefs that an action will promote wellness
- Defined terms of the model are as follows: perceived susceptibility, perceived severity, perceived barriers, perceived benefits, due to action, and self-efficacy (Boston University School of Public Health, 2019).

As a mid-range theory, the Health Belief Model was applicable to this project. The impact that home visits have on medication utilizes the Health Belief Model by inferring issues that create barriers to wellness. Additionally, the concept of home visits for individuals theoretically would promote wellness.

Setting
This project was based in a community health center in the Kiowa catchment area in Elbert County, Colorado.
- This is a rural area with no urgent care facilities, hospitals, or public transportation within the county.
- It is approximately 50 miles from Denver, Colorado.
- Video telehealth as an alternative to office visits was often not possible due to the lack of high-speed internet access.

Population
- Population: Approximately 25,000 individuals, with a median age of 46.1
- The study focuses on low-income, Medicaid and Medicare patients.
- These are individuals who are living with access barriers such as health and mobility challenges.
- Seven patients were identified for the study, two individuals declined home visits and participation in the medication compliance study, five accepted.
- There were no participants lost to follow-up.

(References: Jans, 2016; World Population Review, 2020.)

Outcomes
Medication compliance changed over the study in the following ways:
- All patients were failing to take medication as prescribed 1-3 times or less.
- There was a 20% increase in taking medications on time.
- There was a reported increase in forgetting to take medications.
- There was no impact on the need to discontinue medications or forgetting to take medications on the weekends.

(Pre- and post-intervention number of times that patients failed to take medications.)

Recommendations for Practice
- Development of a formal home visit structure including rationale, home visit preparation, home visit components, safety and security guidelines, medical equipment, documentation, travel, accountability, team composition, billing and coding guidelines, and general safety considerations is important.
- Provider advocacy for appropriate reimbursement to ensure sustainability is a priority.

Professional Recommendations
- Practice change: Increasing home visits in cases of poor medication compliance and access barriers.
- Future Research: Impact of home visits on compliance will provide a lexicon and framework for practice.
- Nursing Education: Incorporate home visits in clinicals and practicums.
- Health Policy Change: Incentive and reimbursement in all cases of home visits.

Limitations
- COVID-19 restrictions and concerns
- Small sample size
- Patient recall
- Diversity limitations, i.e., older population, higher education

Conclusion
This study sought to look at medication compliance in home visits. As there was limited data, this was known to be a preliminary study. There was a positive impact on medication compliance in most areas, although not all areas showed improvement. Evaluating the impact of home visits on medication compliance is an issue that needs further research to determine outcomes for patients.

References
The project's purpose was to increase the seasonal influenza vaccination rate among healthcare workers through multifaceted interventional education. Approximately 20% of healthcare workers get infected with influenza each year, causing nosocomial outbreaks and staff shortages. Healthcare workers exposed to influenza pathogens caused an imminent threat to their patients' safety. The burden of influenza on the population each year is significant. During the past 30 years, healthcare-associated influenza outbreaks have been reported in nearly all 50 states. Influenza outbreaks have been associated with unvaccinated healthcare workers contributing substantial morbidity and mortality rates to the patients who were in healthcare facilities. Despite decades of efforts and broad recommendations for the immunization of healthcare workers globally, the HCWs' influenza vaccine rate was 44.1%, far below the Healthy People 2020 target goal for HCWs' 90%. (2018-2019) far below the Healthy People 2020's goal of 90%. The project design was descriptive, non-empirical with cross-sectional pre-and post-surveys questionnaires collected to investigate healthcare workers' knowledge, beliefs, and perceptions. Interventional education was carried out based on the pre-survey, aiming to increase the influenza vaccination rate. The project's tools were questionnaires and education materials were utilized PowerPoint with a live chat, advanced information sheets, and CDC flyers through participants' email. Statistical analyses used in this project include frequency distributions. Findings show that multifaceted education and live chat effectively motivated healthcare workers to increase the 2020 influenza vaccination uptake by 10.5%, perceptions of "Getting vaccination was to protect myself and family" by 72% advanced, "Protect patients from getting influenza" by 61%, and "Consider myself at risk due to age, health, sick friends, and family" by 51% improved. These were astonishing advances through multifaceted interventions. The project provided information regarding healthcare workers' motivations to better the efficacy of future health regarding influenza preventive measures. This project's purpose to assess the knowledge, beliefs, and perception of HCWs against influenza vaccination through pre-and post-surveys to increase the influenza vaccination rates through education was well met. The project's findings and recommendations could reduce healthcare workers' risk of acquiring and transmitting influenza to vulnerable patients, thereby saving lives related to morbidity, mortality, and associated medical burdens. This project provided enlightening information regarding healthcare workers' motivations to better the efficacy of future health promotion regarding preventive measures for influenza. Multifaceted education helped healthcare workers' knowledge promotion, changed vaccine perceptions, and expressed the desire to get influenza vaccination willingly instead of accepting the employers' or mandatory job requirements. The researcher recommends all healthcare employers continue multifaceted interventions to improve the vaccination rate among healthcare workers and contribute to patients' health and community health.

**Keywords:** Influenza, Influenza Vaccination, Healthcare Workers
Abstract

Purpose
To investigate the knowledge, belief, and perception of healthcare workers using presurvey, then, educate them based on the survey, aiming to increase the influenza vaccination rate.

Methodology
A descriptive, quasi-experimental, cross-sectional presurvey assessed healthcare workers’ (n=60) knowledge, perception, and attitudes of seasonal influenza vaccination. Based on the presurvey results, multifaceted interventional education developed. Post survey measured the changes and vaccination rate to examine whether the education affected the concepts. Health belief model provided the framework for the motivation.

Results
The 2020 influenza vaccination uptake 10.5% increased. Getting vaccinated was to protect one’s family and self 72% advanced, protect patients from getting influenza 52% improved and consider themselves at risk due to age, health, sick friends, or family 51% developed. These are excellent gaining from multifaceted education. Forty-nine percent expressed that their decision to receive the seasonal flu vaccine was affected by COVID-19.

Implication for practice
The vaccination strategy’s most effective process was providing the vaccine at the workplace showing 50.0% (n=15), and the second-best intervention was to assign the patient’s doctor/office’s office as 36.7%. The multifaceted interventions brought tremendous success, demonstrating that multifaceted intervention profiles for HCWs recommended at healthcare employers continue multidimensional interventions to improve the vaccination rate among HCWs and contribute to patients’ health.

Methods

Influenza vaccination rate

Knowledge, perception, improved

Improved knowledge, perception, influenza

The COVID-19 affected the decision

Conclusion

This project demonstrated that multifaceted interventional education through PowerPoint, Question and Answer session, targeted informational flyers, and best CDC flyers for healthcare workers promoted significant improvements.

Future Implication

The findings from this project provided enlightening information regarding the motivations of HCWs to better the efficacy of future health promotion regarding preventive measures for influenza.

References

In the United States, influenza outbreaks have been associated with unvaccinated nurses (Monte, 2010; Music, 2012; Reid, 2015). The HCWs contributed significantly to the morbidity and mortality rates of the patients who were in healthcare facilities by not getting vaccinated and getting infected (Reid, 2015). During the past 30 years, healthcare-associated influenza outbreaks have been reported in nearly all 50 states (Stewart & Cox, 2011). 20% of healthcare workers are infected with influenza each year (Yosh & Poland, 2020). Infected HCWs cause nosocomial outbreaks and staff shortages bringing a substantial burden on the health of people, and the annual cost (Amedio et al., 2014).
The Human Papillomavirus (HPV) is a sexually transmitted virus responsible for approximately 26,000 cases of newly diagnosed cancers annually. There is a strong correlation between the virus and cervical cancer. In 2006 a vaccine to prevent the virus was developed. Despite the overwhelming research supporting the HPV vaccine having the potential to eradicate cancers caused by the virus, compliance has been low. The U.S. Department of Health and Human Services Healthy People 2020 released a goal for 80% of all adolescents to complete the two-dose HPV vaccine series by 2020. The rate of HPV compliance in a small town in western Kansas was 37% in 2019. Provider attitude and willingness to promote the vaccine are among the most motivating factors to improve compliance.

The project's purpose was to assess the health care workers' knowledge in a rural clinic in western Kansas and evaluate the effectiveness of initiating a provider-focused education intervention to improve knowledge regarding the vaccine. The research design included a pre and post-education survey to assess the health care providers' current knowledge regarding the HPV vaccine. The education was presented in a PowerPoint presentation. The effectiveness of the initiative was measured by comparing the answers on the pre and post questionnaires. Finally, a quality indicator was attached to the charts in the targeted population, reminding providers to discuss the vaccine at each visit. Results of the initiative suggested an overall improvement in provider compliance with increased vaccine knowledge.

*Keywords:* Human Papillomavirus, Human Papillomavirus vaccine, compliance, provider recommendation, HPV

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Improving Provider Knowledge of the Human Papillomavirus Vaccine
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Research Mentor: Dr. Deborah Tomlinson

Introduction
Improving Human Papillomavirus (HPV) vaccination coverage in the United States will require health care providers to recommend the vaccine more effectively and consistently. HPV consists of more than 200 closely related viruses that are most commonly sexually transmitted and credited for approximately 26,000 cases of newly diagnosed cancers annually (Palmer, Carrico, & Costanzo, 2015). A vaccine was developed to prevent the virus in 2006. Since that time, the CDC has developed guidelines relating to the timeliness, possible side effects, and the efficacy of the vaccine (Kowen et al., 2017). Despite the overwhelming research supporting the HPV vaccine, compliance has been low, and providers do not consistently recommend the vaccine. Lack of knowledge is the most identified reason for the inconsistency.

Key Objectives
- HPV compliance nationwide is lower than the Healthy People 2020 goal of 80%.
- The HPV vaccine protects against certain common cancers and should be aggressively marketed.
- Cervical pre-cancers have dropped significantly in the teenage girl population that received the vaccine (Kowen et al., 2018).
- Providers do not consistently recommend the vaccine for various reasons, including, but not limited to, lack of knowledge or personal bias.
- Parents that hear about the HPV vaccine from healthcare providers are associated with improved compliance and accuracy in HPV vaccine knowledge (Lai et al., 2017).
- Physician recommendation has the single most significant effect on parent’s uptake of HPV vaccines for their children (Newman et al., 2017).

Methods

Evidence based Initiative
Purpose: To determine if providing a formalized HPV vaccine education initiative that included the most up-to-date information, guidelines, and communication strategies increases healthcare providers’ knowledge regarding the vaccine compared to their knowledge base before the intervention. The study was also aimed at determining if there is an increase in provider’s knowledge would equate to an increase in their willingness to recommend the vaccine.

Project design:
- Identifying provider knowledge, comfort, and experiences regarding the HPV vaccine.
- All the providers and staff at a family health clinic participated in the education intervention
- A pre-education questionnaire was completed
- An online PowerPoint presentation provided HPV and HPV vaccine education on the most up-to-date, evidence-based information on the guidelines, efficacy, importance, and communication strategies to prompt discussions between providers and families.
- A post-education questionnaire was completed
- A quality indicator was attached to the charts in the targeted population for providers to document “discussed” the vaccine was added to the chart. A goal of 80% compliance was established.

Setting: Staff from two sites in a rural town in Western Kansas.
Population: Four nurse practitioners, seven registered nurses.

Outcomes
Data
- A random chart review of 100 charts of patients between the ages of 12-18 was completed looking for the “discussed” notation on the HPV vaccine quality indicator.
- A t-test was used to compare the number of “met” indicators against the stated goal of 80% completion.

The clinic achieved 74%:
- 65 charts were male patients, and 35 were female
- No significant difference in the education provided between males and females.
- Comparison between wellness, acute visits, and teainhealth visits
- Significant difference between the two groups.
- The wellness visits or sports physicals had 68% compliance with the indicator.

Adult health visits 36% compliance

An evaluation of the provided education’s effectiveness was made by comparing the pre and post-education questionnaire results:
- A significant improvement (more remarkable than a 2 number increase) between the pre and post-education questionnaire regarding the provider’s belief on the importance, discussing the vaccine, understanding of guideline recommendations, and willingness to discuss and recommend the vaccine.
- Identified obstacles:
  - Telehealth visits: new process, missed opportunities
  - Altered acute visits during COVID pandemic

Study Weaknesses
- Sample size (number of healthcare providers) not large enough to confirm validity.

Recommendations
- Although the goal was not achieved, there was a significant improvement. The results indicate that the providers were educate on the most up-to-date guidelines, recommendations, and efficacy of the HPV vaccine. In response there was an improvement in the strength of the provider recommendation for the vaccine.
- If appropriate, providers should discuss the vaccine at all visits, including telehealth, acute, wellness, and sports physicals, to avoid the potential of missed opportunities.

Conclusions
To improve HPV vaccine compliance, continued efforts are needed to make sure that healthcare providers and parents understand the importance of vaccinating adolescents before they become sexually active. Additional guidance for healthcare providers on strategies to better communicate HPV recommendations to patients and parents need to be available. Efforts must be implemented to reduce missed opportunities for HPV vaccination at every medical visit, including acute and maintenance appointments. Ensuring that children are protected against a virus associated with 44,000 new cancer cases each year is the responsibility of healthcare providers and families. Identifying barriers to vaccination may increase overall HPV vaccine uptake.

Vaccine Compliance

References
Background: The Centers for Disease Control (2017) reported that approximately 40,000 individuals in the United States were infected with HIV each year. Truvada has been approved for use as HIV pre-exposure prophylaxis (PrEP) and is 90 percent effective at reducing HIV transmission (Halton et al., 2019).

Purpose: The purpose of this research was to determine if an educational intervention would improve retail health providers’ knowledge, comfort, and attitudes of PrEP.

Methodology: Retail health providers were invited to participate in this survey. Pre-test questions consisted of two knowledge, 10 comfort, and 10 attitudes questions. A 15-minute video presentation was presented, followed by the pre-test questions for the post-test. Upper paired t tests analyzed attitudes and total scores; knowledge and comfort were analyzed as Wilcoxon Signed Rank tests.

Results: All of the variables for this study showed significant and powerful data from pre-test to post-test. Knowledge scores increased from pre- to post-test (Z= 253, p=<0.001). Total scores increased from pre- to post-test (t (32)=5.7155, p=<0.0001).

Conclusions: After an educational intervention, retail providers are more knowledgeable and comfortable as well as had improved attitudes regarding HIV PrEP. Retail health companies should increase education to their providers on guidelines for screening and monitoring HIV PrEP in order to increase this preventative measure that could help end the HIV epidemic in the United States.

Implications: This study shows the importance of education in regard to screening and monitoring for HIV PrEP. Education of new guidelines is vital to providers feeling knowledgeable as well as comfortable discussing and prescribing this intervention.

Keywords: HIV pre-exposure prophylaxis, retail health providers, nurse practitioners.
Improving Retail Health Providers’ Knowledge, Comfort, and Attitudes of HIV Pre-exposure Prophylaxis

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Abstract

Introduction: The Centers for Disease Control (2017) reported that approximately 40,000 individuals in the United States were infected with HIV each year. Truvada has been approved for use as HIV pre-exposure prophylaxis (PrEP) and is 90% effective at reducing HIV transmission (Halton et al., 2019). The purpose of this research was to determine if an educational intervention would improve retail health provider’s knowledge, comfort, and attitudes of PrEP.

Methods: Retail health providers were invited to participate in the survey through Facebook groups and personal emails. The survey tool was adapted from Petrol et al’s research (2017). Population: Retail health nurse practitioners were recruited to join the educational study by personal emails and posts on Facebook groups: Retail Health Nurse Practitioners, Ohio Nurse Practitioners, and Family Nurse Practitioners.

Results: All the variables for this study showed significant and positive changes in knowledge, comfort, and total scores pre- to post-test. Knowledge scores increased from pre- to post-test (Z = 133, p = 0.001). Comfort scores were improved post-test compared to pre-test (Z = 333.5, p = 0.001). Attitudes were improved post-test from pre-test scores (t(32) = 2.688, p = 0.009). Total scores increased from pre- to post-test (t(32) = 3.715, p = 0.001).

Conclusion: Summary of Key Findings: This study sought to determine if a video educational intervention would improve retail health providers’ knowledge, comfort, and attitudes of HIV PrEP. The key findings of this study did support that purpose; the video educational intervention improved retail health providers’ knowledge, comfort, and attitudes of HIV PrEP, as each variable, including total scores of the variables, showed significant improvement and power wash in all calculations.

Methodology

Population: Retail health nurse practitioners were recruited to join the educational study by personal emails and posts on Facebook groups: Retail Health Nurse Practitioners, Ohio Nurse Practitioners, and Family Nurse Practitioners.

Setting: This study was conducted remotely, and participants could complete the survey at their convenience from their home or work.

Tools/Instruments: The survey tool was adapted from Petrol et al’s research (2017). Demographic information along with basic knowledge questions about HIV PrEP were collected first. A pre-test on perceived knowledge (2 questions), comfort (10 questions), and attitudes (10 questions) of PrEP was then collected. A 15-minute YouTube video on understanding HIV was embedded in the survey to be viewed by participants. The post-test survey was administered with the same questions as the pre-test. All the steps for this project took place in SurveyMonkey. Participants average Likert score on knowledge, comfort, attitudes, and total scores pre and post-test was compiled into an Excel spreadsheet for data analysis.

Introduction

Problem: Approximately 40,000 people in the United States each year become infected with HIV. The Centers for Disease Control and Prevention (CDC, 2017). The U.S. Food and Drug Administration (FDA) approved the use of the antiretroviral medication, brand name: Truvada, in 2012 for use as pre-exposure prophylaxis (PrEP) for HIV (Halton et al., 2019). Clinical trials of Truvada have shown it to be highly effective (around 90%) at preventing HIV transmission in high-risk patients (Halton et al., 2019; Cotter et al., 2010; Jay & Goets, 2011).

Purpose: The purpose of this study was to determine if an educational intervention would improve retail health providers’ knowledge, comfort, and attitudes of PrEP.

Key Objective: Retail health providers will have a statistically significant and positive increase in their knowledge, comfort, attitudes, and total scores of PrEP based on the average Likert scale score post-intervention compared to pre-intervention.

References


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https://doi.org/10.1002/jama.1052

https://doi.org/10.1007/s10461-016-1429-1
**Purpose:** The morbidity and mortality of uncontrolled hypertension in the United States is significant. Thirty-three percent of United States adults over the age of twenty, have elevated blood pressure (Centers for Disease Control and Prevention [CDC], 2017). The number of deaths associated with essential hypertension and hypertensive renal disease were 35,316 in 2017 (CDC, 2017). The local mortality of hypertension associated deaths ranks 3rd of all counties within the state of Indiana (Indiana State Department of Health, 2017). With an aging population and increased life expectancy, prevalence of this disease will continue to increase (American Heart Association [AHA], 2018). The literature shows that limited health literacy has been associated with elevated blood pressure (Borges et al., 2019; McNaughton et al., 2014). Further, understanding and participating in one’s health plan demonstrates better self-management abilities in chronic disease (Goebers et al., 2016; Kaper et al., 2019; Muscat et al., 2019). Patients with diagnosed hypertension may have limited health literacy and not understand basic concepts of their disease, thus not participate in their treatment. This purpose of this quasi-experimental design project was to increase knowledge of hypertension in adult patients with hypertension. Additionally, it evaluated the correlation of health literacy and hypertension knowledge. The Health Belief Model was used as a theoretical framework, and validated instruments for assessments. Recognizing patient health literacy and understanding of their chronic disease can improve their health outcomes.

**Methods:** This scholarly project was a quantitative quasi-experimental design to assess if hypertension knowledge increased after educational intervention. This project used The Newest Vital Sign health literacy instrument and a modified version of Hypertension Knowledge Level Scale (Ercok, 2012) to test knowledge. Descriptive demographic data was collected. The setting was a non-profit federally qualified community health clinic in the Midwest. Due to the COVID-19 pandemic all project methods were online. Subjects were recruited through email, those that consented received link to Survey Monkey with assessments and educational video intervention, n =17. Intervention included High Blood Pressure Basic Facts that included risk factors, hypertension definitions, complications, and dietary guidance of DASH diet. 

**Results:** Statistical data analysis included Wilcoxon Signed Rank test and Spearman’s Rho Correlation. Wilcoxon signed rank test revealed significant evidence the median scores for post-test are greater than pre-test n = 17, Z = 2.636, p < 0.008. This concluded an increase hypertension knowledge test score. Spearman’s Rho correlation coefficient was negative 0.03, that showed no correlation between health literacy and hypertension knowledge.

**Conclusion:** This scholarly project showed an improvement in knowledge of hypertension among subjects post educational intervention. It did not demonstrate correlation between health literacy and hypertension knowledge. Limiting factors included small sample size, COVID-19 pandemic which enforced virtual recruitment and data collection. Due to small sample size, n=17, generalization could not be concluded. Further research either observational or experimental can benefit those with chronic disease. Knowledge of disease and health literacy are crucial factors in self-management abilities and adherence to treatments in hypertension and is worth attention from multi-discipline health care providers.
Evaluating Health Literacy and Hypertension Knowledge in Adult Patients with Hypertension

Marisa Salazar
Fort Hays State University

**Objectives**

- Increase knowledge of hypertension in adult patients
- Increase self-management abilities
- Evaluate health literacy and hypertension knowledge are correlated
- Patients understand the basic concepts of their health and their health plans to be able to participate
- Understanding and participating in care can enhance self-management abilities (Kap circ. 2015)
- Patients have higher knowledge of hypertension have shown better adherence to treatment plans (Snedeker et al., 2016)

**Conclusion**

- Increase is present, score not statistically significant
- No correlation between Health literacy and Hypertension knowledge was found
- Low sample size of only 17
- MPH assessment self-administered

**References**

Eileen Skeehan
DNP, MSN, RNC-OB, C-EFM, PWHNP-BC

Background: Childbirth moved from the home to the hospital over 100 years ago, becoming a medical model, shifting the focus of the birth experience from a natural process to providing high-tech care and medical interventions leading to a change in culture. One in three women delivers by cesarean, increasing >50% in the last 25 years in low-risk pregnant women – nulliparous, term, singleton, vertex (NTSV). The overuse of this delivery method affects adverse outcomes, placing both women and their children at increased risk for morbidity and mortality. It is the most common surgical procedure in the US, accounting for more than half of childbirth expenses, costing over $7.8 billion/year.

Methods: Quasi-experimental design was used to ascertain if implementing a nurse-driven bundle (nursing education, nursing practice changes, patient education) would promote vaginal birth and decrease primary cesarean birth rate in NTSV. Sample: purposeful convenience of pre- (9/1-11/30/2019) and post-intervention (9/1-11/30/2020) birth cohorts. Nursing education for L&D RNs: YouTube videos (part I & II) (posted on online education portal) and 10-question post-test. Prenatal education: YouTube videos (English & Spanish) linked to QR codes, printed on business cards & distributed at OB offices/clinic. A retrospective birth log review included demographics and modes of birth – descriptive statistics for each cohorts’ demographics. A ratio of proportions of primary cesarean birth rates was calculated for the pre-and post-implementation groups. A z-test was applied, and a one-tailed test to test the difference between the two proportions. The online education portal report measured nursing compliance rates. CITI-trained RNs collected patient survey data.

Results: 2019 Cohort n=195 NTSV births, n=50 primary cesarean birth (25.64%). 2020 Cohort n=159 NTSV births, n=33 primary cesarean births (20.75%). The intermediate calculation of the difference in rates was 4.89%. In the analysis, p-value 0.1402 (> significance level of 0.05). The value of z= -1.0794, since zero is included in the interval, the study did not show a one-directional change. The racial distribution differed between the cohorts, with White women dominating in 2019 & Hispanic women dominating in 2020. Mean age groups for both the 2019 & 2020 Cohorts were 25-32 years old; in 2019, 54.36% of the population and decreased to 44.03% in 2020. The 33-40 years old group had the most significant change: +10.8%. Nursing education: 47/48 L&D RNs completed the education and post-test=97.9% compliance. Patient education video: 0/54 patients surveyed self-reported viewing video before giving birth.

Conclusions: The project suggests implementing a nurse-driven bundle may support physiologic birth and reduce primary cesarean birth rates in NTSV. There was insufficient evidence to suggest a decrease in the ratio between cohorts; therefore, the null hypothesis is not rejected. Although the statistical analysis did not support the project question, the project achieved clinical significance. Alternative/effective methods are needed to reach pregnant women to provide prenatal education. Creating a culture that supports vaginal birth may improve maternal and neonatal outcomes, decrease morbidity and mortality, reduce healthcare costs and financial burden.

Keywords: cesarean birth, vaginal birth, childbirth, cesarean complications, mode of delivery, NTSV
INTRODUCTION

- Birth moved from home to the hospital over 100 yrs. ago, becoming a medical model, moving the focus of the birth experience from a natural process to providing high-tech care & medical interventions leading to a change in culture (McIntire Sherrod, 2017).
- The national cesarean birth rate in 2018 was 31.9% (CDC, 2021). Cesarean is the major abdominal surgery involving maternal, neonatal, & childhood risks.

THEORETICAL FRAMEWORK

Imagena King’s middle range Theory of Goal Attainment (TGA) was the study’s framework. King’s TGA was derived from her earlier work involving personal, interpersonal, & social systems (King, 1996).

- Goal: 
  - Maternal risks: hemorrhage, ruptured uterus, unplanned hysterectomy, ICU admission.
  - Obstetric risks: NICU admission, increased LOS & breastfeeding difficulties.
  - Provider challenges: maternal comorbidities (DM, HTN, obesity), competing priorities, individual beliefs & practices, inequality, & malpractice history.
  - Consumer challenges: lack of knowledge, lack of continuous support & lack of movement in the hospital, culture of facility, acceptance of procedures.

MATERIALS & METHODS

- **Evidence-Based Practice (EBP)** project began in August 2020 using a quasi-experimental design to ascertain if implementing a nurse-driven bundle would promote vaginal birth & decrease primary cesarean birth rate in NTSV.

- **Sampling:** purposeful, convenience sample with retrospective birth log review

- **Inclusion criteria:** NTSV

- **Exclusion criteria:** maternal or neonatal high-risk factors, e.g., previous uterine surgery, malpresentation, prematurity, multiple gestation, congenital anomalies

- Sample size determined by times: pre-intervention 9/11/30/2019 (n=195) & post-intervention 9/1/13/30/2020 (n=159)

- **Setting:** Magnet-designated Level I 455-bed suburban NY community hospital L&D unit, approximately 2100 deliveries/year

RESULTS

<table>
<thead>
<tr>
<th>Birth Cohort</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met inclusion criteria</td>
<td>n=195</td>
<td>n=159</td>
</tr>
<tr>
<td>Primary cesarean rate</td>
<td>15.6% (n=50)</td>
<td>20.75% (n=33)</td>
</tr>
</tbody>
</table>

CONCLUSION

- Project suggests implementing a nurse-driven bundle may support physiologic birth & reduce primary cesarean birth rates in NTSV.
- Although no statistical significance, clinical significance was achieved.
- Alternative methods needed to reach pregnant women & provide effective prenatal education.
- Creating a culture that supports vaginal birth may improve maternal & neonatal outcomes, reduce morbidity & mortality, reduce healthcare costs & financial burden.

REFERENCES

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**Background:** Psychiatric disorders affect more than 1 billion people globally and are among the leading causes of disability worldwide in all age ranges from 5 to 75 years (Fabbri & Serretti, 2019). Medication nonadherence to psychotropic medications is prevalent in 18-70% of patients, and nonadherence is likely under-reported (Geretsegger et al., 2018). **Purpose:** This study aimed to examine the correlation between provider-led interventions and patient nonadherence to psychotropic medications. **Methods:** The participants were given surveys to assess noncompliance and their feelings about their provider and the patient-provider relationship. Provider interventions were implemented contingent upon the identified medication compliance barriers. **Results:** Data analysis of the study was inclusive due to insufficient sample size; only 2 of 17 pre-intervention surveys were completed, and no post-intervention surveys were completed. Literature supports the significant role that providers play in patient eliminating patient barriers and increasing psychotropic medication compliance. **Limitations:** The study was conducted virtually during a global pandemic and lacked a sufficient sample size for analysis. **Conclusion:** Recommendation for more research with larger sample sizes regarding the role of the provider and psychotropic adherence is indicated, but the literature supports the notion that identifying barriers, provider-led interventions, and patient and provider vested involvement results in better compliance with psychotropic medications. **Keywords:** Psychotropic, medication adherence
**Psychotropic Medication Noncompliance: Identifying compliance barriers and helping patients achieve optimal mental health**

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Fort Hays State University Department of Nursing

**ABSTRACT**

**Objectives:** To determine psychotropic medication compliance is improved with trained provider-led interventions.

**Design:** Quasi-experimental, correlational study

**Setting:** Virtual Mental Health Clinic Miami, FL

**Participants:** Outpatient Mental Health Adults

**Results/Conclusion:** More research with larger sample sizes regarding the role of the provider and psychotropic adherence is indicated but the literature supports the notion that identifying barriers, provider-led interventions, and patient and provider vested involvement results in better adherence with psychotropic medications.

**INTRODUCTION**

Medication is one of the primary treatment options used to manage a variety of mental illnesses and is indicated indefinitely for diagnoses such as bipolar disorder and schizophrenia. Medication noncompliance or nonadherence is an obstacle encountered by many patients and providers.

**Barriers**

- **Age**
- **Psychiatric comorbidities**
- **Stigma**
- **Side effects**
- **Cost**

- Associated with frequent inpatient hospitalizations.
- **Psychiatric disorders affect more than 1 billion people globally**
- Leading causes of disability worldwide in all age ranges from 5 to 75 years.
- Medication nonadherence prevalent in 25-75% of patients
- Likely under-reported (Koets, 2010).

**Key Terms**

- Psychotropic: a drug that has a primary effect on behavior, experienced, or other psychological functions.
- Medication Adherence: The extent to which a patient’s behavior corresponds with the prescribed medication dosing regimen, including time, dosing and intensity of medication intake.

**Literature Findings**

- Provider involvement and effective patient-provider communication result in improved patient adherence (Haskard-Zoller & Dillman, 2010).
- Identifying and eliminating barriers and social support is vital in increasing patient medication adherence. (Scarlett & Young, 2016).

**METHODS**

**BANDURA’S COGNITIVE MODEL**

- **BEHAVIORS**
  - Reinforcement, motivation, and experience help promote confidence.
  - Bandura (1977), self-confidence, or self-efficacy, is the belief that one can successfully perform the behavior or task required to produce the desired outcome.
  - Bandura (1986), self-efficacy is a self-consistent person can meet particular expectations.

- **ENVIRONMENT**
  - Clinical setting, virtual health clinic, outpatient mental health clinic.
  - Enhancing and maintaining treatment goals of the care team.
  - Improved patient-provider interaction.

- **Cognitive/Psychological**
  - Reinforcement, motivation, and experience help promote confidence.
  - Bandura (1986), self-efficiency, or self-efficacy is the belief that one can successfully perform the behavior or task required to produce the desired outcome.

**RESEARCH DESIGN:** Quasi-experimental, correlational study

**Sample:** Adult outpatient clients at Brown Health Miami, FL

**Research questions:** In nonadherent outpatient mental health clients, do provider-led interventions help improve psychotropic medication compliance?

**Interventions:**

- Surveys given to identify barriers to adherence and patient perception of the provider.
- Provider-led interventions.
- Post-surveys

**Independent Variables:** Provider interventions

**Dependent Variable:** Medication adherence

**Ethical Considerations:** Approval granted by the Fort Hays State University Internal Review Board (IRB).

**RESULTS**

Data collection: 17 surveys sent; 2 completed but failed to follow-up

Data Analysis: Statistical analysis was not conducted due to a lack of sufficient sample size.

**DISCUSSION**

**Implications for Nursing**

Further research on the topic of self-confidence, provider interventions, and medication adherence is highly recommended. It would be helpful for not only the nursing disciplines but also all healthcare providers to further explore the phenomena of self-confidence as it relates to medication adherence. This replication of this study on a larger scale may prove beneficial to the nursing disciplines and other healthcare providers encountering nonadherent patients.

The study findings regarding the correlation of patient self-confidence, provider interventions, and medication adherence may be a vital factor in decreasing or eliminating medication noncompliance. Conducting the study with one or more providers to help increase the sample size.

**CONCLUSION**

- Mental disorders account for 22% of disability adjusted life years globally.
- Psychiatric disorders affect more than 1 billion people globally.
- Providers serve as a resource to decrease patient disability and foster healthy living.
- Communication in medical care is highly correlated with better patient adherence.
- Encouraging providers to communicate better enhances the patient’s adherence (Haskard-Zoller & Dillman, 2010).

**Limitations:**

- Only two participants provided the data.
- Participants failed to attend their follow-up appointments. Other patients agreed to participate but failed to complete the surveys.
- COVID-19 pandemic and restricting to conduct the study by virtual means only.
- The project design was also a barrier although appropriate, patients may not reveal the truth about their nonadherence.

**REFERENCES**


Congratulations to the FHSU 2021 DNP Graduates!