Depression Screening in Primary Care: A Quality Improvement Project
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Introduction

• 8.1% of Americans suffer from depression.
• Depression negatively impacts work, home, social activities, and societal costs.
• Patients are hesitant to report mental health concerns due to stigma of mental illness.
• Depression screening occurs in 4.2% of primary care clinics (1).

Routine screening with a validated tool such as the (PHQ) of all adult patients can lead to early identification with resultant improvement in quality of life and decreased incidence of suicide.

Methods

• Mixed method study design with 336 adult participants.
• Conducted in a family practice clinic in Spring 2020.
• Exclusion criteria: antepartum and postpartum, children, and geriatric individuals.
• Overall prevalence of individuals with a history of depression was 33%.

Prevalence of Depression

Clinical Question

In adult primary care patients ages 18-64, does the routine use of a depression screening tool lead to more diagnosis and treatment of those with depression compared to an objective measurement?

Findings

• 32% of patients screened positive for depression with use of the PHQ versus 3% of people who the provider identified with traditional assessment techniques.
• Due to electronic health record limitations, only 17.5% of patients were officially diagnosed with depression. That is a 14.5% difference instead of going off the total PHQ-9 score of 5 to diagnose.
• 11.3% of patients had a NEW diagnosis of depression with the PHQ versus 0.8% with the provider’s assessment.
• 28.8% of participants found depressive symptoms caused at least some difficulty with work, home, or getting along with other people.

Outcomes

• Use of the PHQ is a thorough and effective way to screen for depression.
• Improved screening techniques can lead to more identification and treatment with resultant lowered incidence of suicide.
• Primary care practice is the ideal location for health care screening.

Acknowledgements

Thank you for the contributions that were useful and added to the success of this project from Shelly Wells, PhD, APRN-CNS, Wayne McMillin, PhD, Laura Hofferber, APRN-CNP, and Lindsay Garinger, APRN-CNP.

References

References upon request.
Introduction
Substance use disorder (SUD) is widespread in the United States (U.S.). There were approximately 21 million people in need of substance use treatment in the U.S. in 2017, which equates to 1 in 13 Americans over the age of 12 with a substance use disorder (Substance Abuse and Mental Health Services Administration, 2018). However, substance use disorder is a family disease with a negative impact on the emotional and physical well-being of all adults and children in the family unit through intrapersonal relationship distress and unhealthy family functioning (Shumway, Schonian, Bradshaw, & Hays, 2017). The far-reaching effects of SUD far surpass the 21 million people in need of treatment.

Addiction is worsening throughout the rural areas of America. Rural America has become plagued with higher rates of alcohol, methamphetamine, and heroin use, as well as prescription drug abuse, than most inner-city areas (Meit et al., 2014). Additionally, these areas have limited addiction treatment centers compared to urban areas where there is a broader array of options to meet the needs of the clients (Pullen & Oser, 2014). Building reliable social support systems for rural Americans is necessary to support long-term recovery in rural dwellers.

Objectives
- The objective of Detox for Families project is to offer an alternative family support and therapy program to strengthen the social capital for substance users.
- Decrease the financial and travel burden for rural population to participate in addiction treatment and family therapy sessions

Research Question
Does participation in a one-day seminar increase readiness to change of substance users and family members while decreasing family dysfunction?

Materials and Methods
Participants attended a one-day family therapy seminar consisting of 4 modules. Pre and Post Assessments were collected for data analysis.

Module 1
- Introduction and description of daily schedule
- Discussed concepts of family as a system, homeostasis, and generational transmission
- Ended with participants creating a genogram with a focus on family and emotional relationships

Module 2
- Discussion of the function of family in substance misuse treatment
- Ambivalence and coping strategies were identified
- Healthy and unhealthy boundary setting
- Session ended with participants discussing their role within the family and setting limits and healthy boundary

Module 3
- Discussion of the Stage of Change (precontemplation, contemplation, preparation, action, and maintenance)
- Session ended with an activity for participants to identify their stage of change and discuss what is necessary to advance to the next stage

Module 4
- The topics of hope, healthy coping, achievements, relationships, choice, and unique identity development
- Participants discussed what their life would look like without addiction
- Encouraged participants to continue family and individual therapy

Tools
- Family Assessment Device - General Functioning Scale
  - Assesses problematic family functioning and family cohesiveness through structural, organizational, and transactional characteristics of families.
  - Higher scores indicate more dysfunction
- Modified Parental Motivation Inventory
  - Measures Readiness to change in family members
- Socrates 8A and 8D
  - Measures Readiness to change in substance users
  - Measures in three categories - Ambivalence, recognizing need for change, and taking steps

Results

Family Assessment Device - General Functioning Scale

Modified Parental Motivation Inventory

Socrates 8A and 8D

- Ambivalence
- Recognizing Need for Change
- Taking Steps

Discussion
- The results of the study show that Structural Family Therapy can reduce the dysfunction in families with addiction. The intervention’s focus on communication, identity, family cohesion, and hope prepared families to identify their strengths and weaknesses better and allow healthy boundary setting to occur. The Family assessment device results showed that participants were more likely to discuss feelings with one another, although they recognized that there were unhealthy feelings in the family. Family members also felt more accepted for their unique position in the family. These improvements in communication and identity lead to a more exceptional ability for the family to make decisions and solve problems.
- Readiness to Change for families members revealed a modest change but did not produce significant results
- Readiness to change for substance users showed an increase in ambivalence but little to no change in recognition and taking steps

Conclusion
The Family members can be an excellent resource for substance users during the recovery process. Unfortunately, due to the timing in conjunction with Covid-19, this study will need to be repeated to establish the full effectiveness of structural family therapy in combination with addiction treatment. There are currently plans to expand the research and include a six-week group in the metropolitan area and compare the results to a one-day seminar at a time when COVID-19 has less of an impact on the results.

Acknowledgments and contact information
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Development of Clinical Education and Diabetes Self Management Strategies for Diabetes in Rural Health

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Abstract

Problem statement: The prevalence and cost of diabetes in the United States is steadily rising. American Diabetes Association guidelines state that patients with diabetes should receive self-management education. Availability of diabetes education in rural communities is nonexistent. Due to time constraints, primary care providers are unable to provide quality diabetic education in the clinic setting.

Purpose: The purpose of this project is to determine if diabetes education provided by a trained Registered Nurse (RN) in a clinic setting would be a cost-effective means of delivering self-management education in a rural health clinic.

Materials/Methods

• Materials: A pamphlet was developed by the Principal Investigator (PI). The following self-management skills were explained: blood glucose monitoring, exercise, recommended meal plans, medications, foot care, dental care, eye care, smoking cessation and stress reduction. The remaining educational material was purchased from the American Diabetes Association which consisted of Choose Your Foods, Plan Your Meals, a Plan Your Portions Placemat, a Blood Glucose Log Book, and Where do I Begin information booklet. Plan Your Meals, Choose Your Foods and Where do I Begin is also available in Spanish version.

• The RN was employed full-time by the Critical Access Hospital (CAH). Since the Rural Health Clinic is physically attached to the CAH, the RN could be called to the clinic to deliver education.

• Participants: 15 adult patients with Type 2 diabetes of a rural health clinic in a community of approximately 5,000 residents.

• Questionnaires: Pre-test and Post-test questionnaires were developed by the PI and tested for face validity. The reading level was considered during development.

Methods: A needs analysis revealed that almost all of the diabetic patients in the RHC have not been able to participate in a formal diabetes education program. Most cited reasons were lack of a Certified Diabetic Educator (CDE) within 100 miles of the clinic to the deliver education.

Results

This project was to begin in March, 2020. Due to the current pandemic, results of the study could not be conducted. However, for the evaluation plan, data would have been gathered in June, 2020. The data would have been analyzed with SPSS using the Student t-test to determine statistical significance. The statistical analysis would be used to determine if there was a positive relationship between a nursing educational intervention and a decrease in Hemoglobin A1C levels.

The next evaluation would be performed on the Registered Nurse delivering the intervention. Communication should be clear, concise, and nonthreatening. The Registered Nurse must be knowledgeable in the content area and allow open communication with the patients. The Interprofessional Collaborator Assessment Rubric will be used to evaluate the Registered Nurse. This assessment measures respectful communication and communication strategies.

A cost analysis of the intervention would have been completed to determine if the program was sustainable.

Conclusions

• Project would show this is a cost-effective educational strategy to delivering diabetes education. The largest incurred expense would be the Registered Nurse’s salary and training if she decided to continue her education and become a Certified Diabetic Educator (CDE).

• The results of the pre-test/post-test questionnaires would show an increase in knowledge after the three-month period of the project.

• This project would help decrease healthcare costs and improve the quality of life for diabetes in rural areas.

Acknowledgements or Contact

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Dr. Wayne McMillin, PhD, and
Mary Rose, RN

PI: Kim Trekell, BSN, RN, DNP Candidate
Educating College Males to Increase HPV Vaccination

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Introduction

Most common sexually transmitted infection (STI) in the United States
Approximately 79 million Americans in their late teens and early 20s are infected
Over 150 different types of HPV strains
HPV is spread by having vaginal, oral or anal sex and by skin to skin touching during sexual activity
HPV causes genital warts and cervical, vaginal, penile, anal, and oropharyngeal (throat, oral) cancers.
Oral cancer is the most prevalent cancer caused by HPV in the U.S.
Over 53,260 cases of HPV related oral cancer annually and twice as common in men than women.

Problem Statement

College aged males are lacking in knowledge about HPV and the benefits of HPV vaccination.

Methods

Quantitative study
Quasi-experimental with pre and post survey
To take place in a college fraternity
Pre-survey with informed consent: demographic information, HPV knowledge information, and information on sexual experience
Lecture and supplemental information
Vaccines offered
Post-survey one month later: HPV knowledge, intentions toward getting HPV vaccination, seeking further information on HPV, changing sexual behavior

Sustainability and Implications

University Health Centers on most campuses
Fraternities-29 at local university, 2900 members
Decrease the occurrence of oral, anal cancers and genital warts
Increase their quality of life
Decrease hospital costs and medical expenses, $200,000 first two years after diagnosis of oral cancer

Manuscript and Journal Selection

Journal of American College Health
Journal read by professors, college health professionals: administrators, health educators, nurses, nurse practitioners, physicians, physician assistants, psychologists and peer educators.
They print preventive and clinical medicine and health promotion and education among many other health related subjects

Viewpoint article: Contains my viewpoint on how student health centers can be utilized to increase HPV education and promote vaccination

Ideas for Student Health Centers

Keep web pages current
Educate all staff members in the office
Have links on your web page
Dedicated emails
Advertise throughout campus
Utilize social media and mobile apps
Attend big Greek events
Create a Health Center Student Ambassador’s program

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References upon request
Maximizing Early Recognition of Infection for Better Patient Outcomes in Long-Term Care Facilities
Abigail Degan, BSN, RN
Northwestern Oklahoma State University

PURPOSE
- This project attempted to determine whether a long-term care (LTC) staff educational intervention targeting infection and sepsis prevention and early identification decreased rates of infection and associated emergency department and hospital admissions in LTC residents, thereby improving patient quality-of-life.

BACKGROUND
- Sepsis and other preventable infections contribute significantly to increased rates of morbidity and mortality within the geriatric population.
- There are an estimated 1.3 million LTC residents within the United States.
- Infections may often be difficult to detect in the geriatric population.
- Common LTC infections: urinary tract infections, gastroenteritis, Clostridium difficile, pressure ulcers, diabetic wounds, and cellulitis.
- Education focused on prevention and early identification of infection will decrease infection rates in LTC facilities and improve quality of life.

OBJECTIVES
- Educational interventions, aimed at reducing infection through prevention and early identification techniques, will reduce infection rates.
- By improving infection rates, LTC residents will experience greater quality of life, reduced healthcare costs, and staff will feel more confident in their care.

METHODS
- Educational interventions, aimed at reducing infection through prevention and early identification techniques, will reduce infection rates.
- By improving infection rates, LTC residents will experience greater quality of life, reduced healthcare costs, and staff will feel more confident in their care.

RESULTS
- Paired t-test to evaluate the difference between the combined pre- and post-intervention tests at each facility.
- Chart review of April and May 2019 were to be completed in each facility. Every documented infection that occurred within this timeframe will be included in the analysis.
- Long-term care residents were to be tracked post-intervention during the months of April and May 2020.
- A paired t-test to evaluate the difference between the two data sets and evaluate whether the identified LTC facilities have incorporated the education intervention into their practice, contributing to decreased rates of infection.
- One-way ANOVA to evaluate differences between pre-test results between each identified LTC facility, post-test results will also be analyzed.
- Post-intervention infection rates of each identified LTC facility also utilizing one-way ANOVA.

GERIATRIC NURSING JOURNAL
- Due to COVID-19 pandemic, this project was unable to be implemented due to LTC facilities not allowing non-essential persons into their facilities.
- Article focusing on the need to periodically educate LTC staff to assure the safety of residents as well as positive outcomes as it is related to infection recognition and prevention will be submitted to the Geriatric Nursing Journal.

IMPLICATIONS FOR PRACTICE
- Importance of regular staff infection control education.
- Recognition that infection control is multi-faceted.
- Improved quality of life.
- Improved staff confidence in their care.
- Lower healthcare costs.

REFERENCES
- References available upon request.
Promoting Reading Aloud to Infants
Rebecca Reilly, M.Ed., BSN, RN
Wisdom Family Foundation Doctoral Program in Rural Nursing Practice

Introduction
Reading aloud to infants:
- Stimulates cognitive development
- Builds early literacy skills
- Promotes school readiness
- Improves child-parent relationship

Charge from the American Academy of Pediatrics:
- Literacy promotion at every well-child exam
- Begin during infancy
- Use a variety of options to encourage parents to create daily routines

Barriers to Literacy Promotion:
- Time Constraints
- Overhead Costs
- Many families are not currently engaged in literacy rich activities

Identified need:
An effective, efficient and cost-effective method of literacy promotion

Objectives
Use a educational video to enhance literacy promotion at well-child visits

- Improve parent attitudes about reading aloud
- Importance of reading
- Benefit of reading

Increase the likelihood of reading aloud
- Commit to weekly/daily planned reading time

Material and Methods
Experimental Design consisting of 3 groups:
- Control
- Intervention
- Acute Care

- Parents participate in a traditional well-child check
- Receive traditional anticipatory guidance only

- Parents access a video about reading aloud before a well-child check
- Video plus traditional anticipatory guidance

- Parents access a video about reading aloud before a sick child visit
- No traditional anticipatory guidance

Sampling Procedure:
Convenience Sample
- Parents of children one week to 12 months
- English speaking

Systematic Sampling
- Alternating assignment between control and intervention
- Parents with a sick child appointment assigned to acute care group

Final Sample
- Control - 17 parents
- Intervention - 18 parents
- Acute Care - 12 parents

Measurement:
Parent Survey
- 11 items (demographics, attitude, future reading plans)
- Likert scale responses
- Completed after clinic visit

Analysis
- ANOVA with post-hoc testing
- Pearson correlations

Results
The video intervention had a positive impact on study objectives:

<table>
<thead>
<tr>
<th></th>
<th>Mean Likert Scale Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading is Beneficial</td>
<td>4.12</td>
</tr>
<tr>
<td>Reading is Important</td>
<td>4.07</td>
</tr>
<tr>
<td>Reading is a Plan for Reading</td>
<td>4.12</td>
</tr>
<tr>
<td>Likelihood to Increase Reading Time</td>
<td>4.06</td>
</tr>
</tbody>
</table>

Demographics
- No significant correlation between demographic data and objectives

Attitude toward Reading Aloud
- ANOVA found a significant difference between groups in reading importance, p=.01
- Video intervention resulted in a significant improvement in parent attitudes for acute care group, p=.007 after post-hoc testing

Commitment to Planned Reading Time
- ANOVA found a significant difference between groups, p=.001
- Post-hoc testing showed the intervention group, p=.0006 and the acute care group, p=.0002 had significantly higher mean scores for planned reading

Likelihood to Increase Reading
- ANOVA found a significant difference between groups
- Post-hoc testing showed the intervention group, p=.00 had a significantly higher mean score for likelihood to increase reading time

Conclusions
An educational video that reviews the benefits of reading aloud to infants and demonstrates reading aloud techniques, compared to a traditional well-child visit alone, improves parental attitudes and increases the likelihood of increasing future reading time.

The intervention video approach is:
- Effective
- Improves parent attitudes
- Improves likelihood to increase reading time

- Efficient
- Easy access to video with a QR code and smartphone
- Viewed in exam the room without prolonging the visit

- Cost Effective
- Does not require a financial investment
- No additional human resources needed

Limitations
- Self reported data
- No data of actual reading time
- Video content only viewed at one visit
- COVID-19 limited sample size

Extensions
- Utilize the intervention during the prenatal period
- Create a series of videos to be viewed during each well-child visit during infancy

For additional information contact Rebecca Reilly at rhrelly20@gmail.com
Within this project, the research question remains inconclusive that a picture aid infographic reduces the amount of urine culture contamination. A nonsignificant statistical result was found using a Chi-Square analysis with an additional Yates correction. Participants were convenience sampled (N=60) over the course of five months and urine cultures were collected at the providers discretion. The results agree with the literature that additional instruction when leaving a urine sample did not improve contamination rate. The literature also reflected that an infographic is an advantageous way to relay difficult concepts and improve learning, however, this was not the primary focus of this study. Future implications for this research could benefit other medical facilities including emergency rooms, clinician offices, urgent cares, and health departments. An infographic remains a valuable teaching tool in healthcare and future research on this subject would improve overall specimen collection practices.

**Design** – Multi-center, prospective cohort interventional study with convenience sampling. Midwestern private owned clinic.  
- Primary care, walk-in, pain management, identical clinics.  
- Independent of the intervention, unbiased.

**Methods**  

**Control group** (February 1, 2020 – April 30, 2020) (N=29)  
- Intervention used during this timeframe.

**Experimental group** (May 1, 2020 – June 25, 2020) (N=31)  
- Intervention used during this timeframe.

There was no association between the two groups. The infographics used in this project were shown to have a statistically nonsignificant (P > 0.05) impact on the rates of urine culture contamination during a clean catch urine sample.

**Literature**  

**Antibiotic Use** – In the literature there is current overuse of antibiotics with increased resistant bacteria and the need for better stewardship.  
**Infographics** – Were shown useful in teaching and communicating health science and difficult material, and better comprehension than words alone  
**Contamination** – Urine culture contamination rates have stayed consistent through different uses of written and verbal instructions with little evidence supporting infographics.

**Female Infographic**  

**Male Infographic**  

**Results**  

There was no association between the two groups. The infographics used in this project were shown to have a statistically nonsignificant (P > 0.05) impact on the rates of urine culture contamination during a clean catch urine sample.

**Conclusion**  

Inconclusive – a picture aid infographic reduces the amount of urine culture contaminations.

**Statistics** – The Chi Square and Yates correction had P values of > 0.05.

**Limitations** – Sample Size, COVID-19, Timeframe.

**Future direction**  
- Infographics in healthcare (disabilities, illiteracy, language barriers).
- Reduction in specimen contamination.
- Reduced cost and inconvenience for patients and healthcare facilities.

**2 Year significance**  

P = .389, >0.05 Statistically nonsignificant  
P = .630, >0.05 Statistically nonsignificant

The chi-square statistic is 4.4511. The p-value is .034879. Significant at p < 0.05.  
This $20 Intervention can save the clinic and patient up to $3,600 a year in repeat culture, lab, and labor costs.