THE UNIVERSITY OF VERMONT

COLLEGE OF NURSING AND HEALTH SCIENCES

DEPARTMENT OF NURSING

Doctor of Nursing Practice Program

Evidence-Based-Practice Colloquium

Zoom 1

9:00 – 9:20
Jacqueline Bray "Improving Surveillance of Hepatitis C Infections Among Patients Receiving Medication Treatment for Opioid Use Disorder "

9:20 – 9:40
Caitlin Gerity "Improving Behavioral Health and Social Determinants of Health Screening in Primary Care Through Implementation of Evidence-Based Tools"

9:40 – 10:00
Page Tomlinson "An Initiative to Educate and Support Young Adults Diagnosed with Hypertension"

10:10 - 10:30
Erin Leighton "Telehealth Visits for Common Concerns in a Primary Care Setting: Establishing a Protocol"

10:30 – 10:50
Kate Judge "From Evidence into Practice: Promoting Continued and Exclusive Breastfeeding in Rural Eastern Uganda"

10:50 – 11:10
Nicole Valcour "Collaborative Design of Program evaluation of public health interventions in Kamuli, Uganda"

11:10 – 11:30
Lydia Sachs "Transcutaneous Bilirubinometry in a Rural Teaching Hospital: A Quality Improvement Assessment"

11:35 – 11:55
Rachel Greene "Clinical Management of Postpartum Hemorrhage in Community Birthing Hospitals in Vermont: A Gap Analysis to Promote Best Practice"

11:55 – 12:15
Elisa Vautier "Improving Diagnosis of Alzheimer's Disease and Related Dementia in Primary Care"

12:15 – 12:35
Kimberly Ward "Evidence Based Treatment for Excessive Alcohol Consumption and Concurrent Hypertension"

Zoom 2

9:00 – 9:20
Karen Gibbs "Improving Nurses' Attitudes, Beliefs, and Practices in Screening for Suicide Risk in Hospitalized Patients "

9:20 – 9:40
Julie Desrochers "Evaluation of Clinician Prescribing Practices for Contraceptive Care: A Quality Improvement Collaboration"

9:40 – 10:00
Nadia Fletcher "Assessing Maternal Satisfaction of Perinatal Care Provided In A Rural Ob/Gyn And Midwifery Clinic"

10:10 - 10:30
Jessica Okrant "Development of a Medical Surveillance Program: Recommendations for At-Risk employees"

10:30 – 10:50
Murphy Neenan "Essential Trauma Documentation: Redesigning a Community Hospital's Trauma Flow Sheet"

10:50 – 11:10
Maria Crosby "Screening for palliative care services in an assisted living facility"

11:10 – 11:30
Kiersten Wulff "Evaluating a pilot volunteer doula program at an academic medical center in Vermont"

11:35 – 11:55
Lyndsey Gates "Diversifying the Healthcare Workforce: Transition of the Combat Medic to Baccalaureate-Prepared Nurse "

11:55 – 12:15
Katherine Pouliot Rose "Development of a Hospital-wide Policy for Pediatric Needle Procedures at the University of Vermont Medical Center"

12:15 – 12:35
Brianna Johnson "Measuring the Impact of Rise VT: Evaluating community-based obesity prevention initiatives with a standardized intensity score"

Date: Wednesday, April 15, 2020 **Time:** 9 – 1pm

Location: Zoom 1 & Zoom 2

Title: Improving Surveillance of Hepatitis C Infections Among Patients Receiving Medication Treatment for Opioid Use Disorder

Jacqueline Bray, BA, RN, DNPc
Advisors: Deborah Wachtel, DNP, MPH, APRN
Robin Sherman, APRN-BC

Purpose: Despiteharm reduction efforts to reduce comorbidities, Hepatitis C virus (HCV) infections amongindividuals with opioid use disorder tripled between 2010 and 2015 in the United States. Shifting the disease burden from chronic to acute HCV, could result in $12 billion cumulativesavings to Medicaid over two years.Patients receiving medication for OUD (mOUD) remain at risk for HCV, yet many mOUD programsonlyscreen patients uponadmission. This project aims to implement a HCV re-screening protocol in a mOUD program, determine protocol sustainability, and secondarily evaluate need for HCV point of care testing.
Methods: Patients enrolled ina mOUD program with an unknown or negative HCV antibody upon admission, were assessed for HCVrisk factors, and promptedto opt in/out of re-screening. Participants were offered an onsite venipuncture. Patients declining, were asked if they'd reconsider if blood sample were obtained via finger stick.Stakeholders provided feedback via an online survey regarding the sustainability ofintegrating HCV surveillance.
Results: Out of the 496 eligible patients, 429 (86%) completed the survey. Of 124 (29%) patients interested in rescreening, 52 (41%) completed a venipuncture. Of these, 9 (17%) tested positive for HCV antibody and 7 (14%) had a detectable HCV viral load.Of patients who declined re-screening, n=185 (52%), endorsed amenability to finger stick. All stakeholders (n=24) agreed that rescreening was easy to implement and appropriate to integrate into current practice.
Conclusions: Provision of less invasive screening modalities may increase rescreening uptake. Introducing opportunities for HCV re-screening leads to earlier detection and subsequent treatment initiation, and may also increase identification rates overall. Integration of HCV screening services at mOUD treatment programs provides a sustainable approach to HCV surveillance, and has the potential reduce the public health burden of infectious disease.
Keywords: Opioid Use Disorder, Hepatitis C Virus, Infectious disease surveillance

Improving Nurses' Attitudes, Beliefs, and Practices in Screening for Suicide Risk in Hospitalized Patients

Karen B. Gibbs BSN, RN, DNPc
Advisors:
Brenda Hamel-Bissell Ed.D,RN
Prema Menon MD,Ph.D

Purpose: Forty-seven thousand deaths from suicide occur annually in the United States. Nurses' attitude, education and self-confidence toward suicide prevent compliance with requisite suicide risk assessment screenings. Providing nurses with facts about suicide, intervention methods, structured screening tools, and referral resources have been shown to change attitudes and increase screening rates. This quality improvement project provided nurses with education on suicide in order to improve rates of suicide risk screenings on in-patient units at a 550-bed academic medical center.

Methods: Attitudes to Suicide Prevention (ASP) surveys were administered on two medical units to determine current attitudes about suicide. An online tutorial providing information about suicide, the Columbia Suicide Severity Rating Scale (CSSRS) used by the institution, personal stories of suicide, and referral resources was used to deliver education. Education efficacy on attitude change was evaluated with pre and post surveys. Rates of risk assessments screens were reviewed in the electronic health records one month before and after the intervention.

Results:
155 nurses received surveys and intervention. 29 pre-surveys and 15 post surveys were returned. Surveys indicate no statistically significant changes in attitude. Comments indicate a desire for education. Review of screening rates of CSSRS for one month before and after the intervention indicate a 7% increase in completion on the units receiving education compared to a 2% decrease of completion on an aggregation of medical-surgical units not receiving education.

Conclusions:
Providing education on suicide, screening tools, referral resources, and preparation for difficult conversations is demonstrated to increase screening rates and is desired by nurses. Providing an online learning module is an easy way for organizations to provide education to their staff. Providing screening by trained and competent nurses ensures patients will gain access to the mental health care that they need.

Keywords: suicide prevention, suicide risk screen, nurses' attitudes

Improving Behavioral Health and Social Determinants of Health Screening in Primary Care

Caitlin Gerity, BA, RN, DNPc
Advisor: Deborah Wachtel, DNP, MPH, APRN

Purpose: Detection and intervention of depression, substance use disorder, and social determinants of health (SDOH) in primary care improves quality of life,prevents complications, reduces health care costs and inequities, and leads to health promotion[1,2]. This project aimed to increase behavioral health and SDOH screening rates through implementation of a screening process utilizing validatedpatient questionnairesin a community-based internal medicine office.
Methods: A pre-intervention needs assessment was conducted with the providers who participated in this project: Provider A and Provider B. A process was then developed for screening patients at annual exam visits, utilizing the Patient Health Questionnaire (PHQ)-2, the Single Alcohol and Substance Abuse Screening Questions, and a SDOH Questionnaire.The Plan-Do-Study-Act (PDSA) method was used for implementing the process in a step-wise approach. Effectiveness of the project was measured through electronic health record (EHR) reportsof percentages of patients screened.
Results: Data on screening rates were collected via EHR reports. Pre-intervention, Provider A's screening rates for total patients (N = 696) were 15%;6 months following implementation, rates increased to 42%. Provider B's pre-intervention rates for total patients (N = 755) were 35%; post-intervention rates increased to 58%. Data via interviews with staff regarding their experience with the implementation werecollected each biweekly PDSA cycle, identifying areas needing clarification and improvement. The process was finalized after three cycles.
Conclusions: Implementing a standardized process to screen patients for behavioral health and SDOH improved screening rates in this small practice.Aftersix months, Provider A's screening rates increased 280% and Provider B's rates 166%.The PDSA method allowed for an organized approach to implementation. Limitation of this intervention includes a small practice site. Further study at a larger practice would be recommended to determine impact on a larger scale.
Keywords: screening, behavioral health, social determinants of health, primary care

References

1. de la Vega, P. B., Losi, S., Martinez, L. S., Bovell-Ammon, A., Garg, A., James, T., ... &Mishuris, R. G. (2019). Implementing an EHR-based screening and referral system to address social determinants of health in primary care. *Medical care, 57*, S133-S139.

2. Mulvaney-Day, N., Marshall, T., Piscopo, K. D., Korsen, N., Lynch, S., Karnell, L. H., ... &Ghose, S. S. (2018). Screening for behavioral health conditions in primary care settings: A systematic review of the literature. *Journal of general internal medicine, 33*(3), 335-346.

Title: Evaluation of Clinician Prescribing Practices for Contraceptive Care: A Quality Improvement Collaboration

Name: Julie Desrochers Holland, MPH, RN, DNPc
Advisors: Faculty advisor: Christina Harlow, DNP, APRN, FNP-BC
Project community/agency advisor: Mark Young

Purpose: Primary care providers (PCPs) have the training and opportunity to provide contraceptive care. Unplanned pregnancy is a major public health issue for which up to 50% of the population is at overall lifetime risk. Reproductive life planning during healthcare visits can reduce rates of unintended pregnancy, initiating pathways toward contraception or preconception planning. Preconception counseling can prevent adverse maternal and child health outcomes. Studies suggest contraceptive counseling protocols and reproductive intent screening are effective tools. PCPs have opportunity to screen and provide appropriate interventions. This project compares and contrasts clinician practices with international and national guidelines. The purpose is to evaluate preventive reproductive healthcare practices in a primary care setting, identifying opportunities to meet the contraceptive healthcare needs of people of reproductive age.

Methods: This initiative queried PCPs and practice managers in two directed surveys at seven central Vermont family practice clinics with a total of 46 providers. The surveys contained validated questions from three large United States policy groups, requesting information on patient population, screening, counseling, prescribing practices, and practice resources. Data were analyzed using frequencies, questions grouped thematically, and results compared to best practices available from national and international bodies.

Results:17 providers (37%) and five practice managers (71%) completed the respective surveys. 53% of responding clinicians (n=9) reported routinely assessing reproductive intent. Responses were compared to national and international best practice guidelines. Recommendations were made to the practice group in the realms of patient experience, access to care and service provision.

Conclusions: This project can inform future policy and clinical education initiatives. Implementation will allow other practices to implement quality contraceptive care outside of the traditional reproductive healthcare setting, increasing access and decreasing barriers to obtaining contraception and reproductive healthcare for those at risk for unintended pregnancy.

Keywords: Contraception, Contraceptive Management, Reproductive Life Planning

An Initiative to Educate and Support Young Adults Diagnosed with Hypertension

Page Tomlinson, BS, RN, DNPc
Advisor: Margaret Aitken, DNP, APRN

Significance: Hypertension is a common diagnosis in the US with significant long-term effects. While guidelines for optimal blood pressure managementexist for adults diagnosed with hypertension, young adults lag behind older adults in treatment and control[3].The young adult is arguably more capableof lifestyle changes, primarily due to fewer physical limitations than older adults.Promotion of disease self-management is the most effective way to engage young adults in seeking control over their blood pressure[1,2]. Lifestyle modificationas a young adult decreasescosts of care and risk for cardiovascular events, while lack of guidance and support at this stage of life may increase risk for cardiac events over their lifetime.

Objective: Enhance disease self-management in young adults aged 18-39 years at a local primary care office.

Methods. Patients aged 18-39 years with diagnosis of hypertension were identified. A questionnaire on self-efficacy in hypertension management was sent and preference for lifestyle modifcation counseling (LMC) was assessed. LMC was offered in their preferred format at their convenience. Follow up calls were placed and semi-structured interviews conducted. Provider survey conducted.

Results: Low patient survey response. Three patients discussed their experience of being diagnosed with hypertension in semi-structured interviews. Fourteen patients were not interested in discussing their experience or receiving LMC. High provider survey response. Patient information handout created.

Conclusions. While the literature demonstrates the positive effect of LMC on outcomes in young adults diagnosed with hypertension, efforts to engage this populationproved challenging. Young adults desire consistent guidance and support with lifestyle modification yet areunwilling to engage in lifestyle modificationfor a diagnosis when they are asymptomatic and do not have rapport with the offering provider. Future areas of application should seek to engage this population in lifestyle modification despite a lack of symptoms.

Key Words:hypertension,young adult, support, lifestyle modification

References:

1. Johnson, H., Olson, A., Lamantia, J., Kind, A., Pandhi, N., Mendonça, E., Craven, M., & Smith, M. (2015). Documented lifestyle education among young adults with incident hypertension. *Journal of General Internal Medicine,30*(5), 556-64.

2. Trento, M., & Porta, M. (2012). Structured and Persistently Reinforced Patient Education Can Work. *BMJ: British Medical Journal* 345, e5100.

Assessing Maternal Satisfaction of Perinatal Care Provided In A Rural Ob/Gyn And Midwifery Clinic

Nadia S. Fletcher, RN, BSN, DNPc
Christina Harlow, DNP, APRN

Purpose: Women's childbirth experiencecan have long-term consequences on overall health and well-being. Positive experiences can lead to maternal empowerment and ease of transition into motherhood, while negative experiences are associated with poor maternal health outcomes like postpartum depression and requests for cesarean delivery in subsequent births (Nilver, 2017). Evaluating women's perspectives of maternal care received allows for appropriate assessment and improvements in the quality of care provided to ensure positive, evidence-based and respectful care. The purpose of this project is to develop a formalized method of evaluating patient's satisfaction with perinatal care delivered at a rural Ob/Gyn and Midwifery clinic with the intent of improving care.

Methods: A childbirth experience questionnaire was developed using a validated tool, the Norwegian Pregnancy and Maternity Care Patients' Experiences Questionnaire (PreMaPEQ), and direct input from providers and the Senior Director of Quality and Risk Management. The questionnaire was administered to patients of this clinic at their two-week postpartum visitover a 74 day period.

Results: Across 25 questionnaires, high ratings were observed for Pregnancy Experience questions (mean=3.71/4), Birthing Center Experience (mean=3.79/4), with slightly lower ratings for the Postpartum Experience (mean=3.41/4). Handouts (76%) and verbal communications (88%) were the preferred modalities of communication. Open-ended questions revealed that individuals were very happy with their experience, wouldn't change their experience and had selected the clinic based on proximity to home and positive references.

Conclusions: This project identified several areas for potential quality improvement, including coordination among midwives and physicians caring for the same patient; physician accessibility; education on the health and development of newborns; education on coping with baby blues and postpartum depression; and delivering information to patients mostly in the form of verbal education/discussion and handouts/written information.The results of this project can help inform quality improvement initiatives targeted at improving aspects of perinatal care.

Key Words: Childbirth experience, maternal care, perinatal setting, quality improvement, validated tools.

Nilver, H., Begley, C., & Berg, M. (2017). Measuring women's childbirth experiences: a systematic review for identification and analysis of validated instruments. *BMC Pregnancy and Childbirth*. Doi: 10.1186/s12884-017-1356-y. https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-017-1356-y

Telehealth Visits for Common Concerns in a Primary Care Setting: Establishing a Protocol

Erin Leighton,, BS, RN, DNPc
Advisor: Margaret Aitken, DNP, APRN
Site Mentor: Jennifer Allaire, MS, APRN

ABSTRACT

Background: Vermont has identified several barriers to accessing healthcare includingweather conditions, rurality, lack of public transportation systems, and busy schedules (State of Vermont, 2015). Telehealthmitigates these barriers, providing a safe and effective option on par with in-person visits,while lowering overall healthcare costs and increasing patient satisfaction(Halpren and Ruder et al., 2019; Player et al., 2018; Yamamoto, 2014).

Purpose: The purpose of this project was to expand telehealth visits in a nurse practitioner-run primary care practice, via designing effective protocols and educating clinicians on telehealth use, requirements, documentation, and billing in order to complete telehealth visits successfully.

Methods: Infrastructure for telehealth: a workflow protocol, patient education materials, procurement of technological resources including iPads, and necessary, HIPAA compliant, secure accounts. Materials were presented at a practice meeting, with all clinicians and the practice supervisor present, including a complete walk-through mock video visit. A six question survey was administered post-presentation using the Likert scale and one opened ended question to identify gaps in knowledge.Descriptive statistics were used to analyze survey results.

Results: Surveys from 7 APRNs, and 1 MD (n=8) indicated that presentation and live video visit walk through were effective as 100% of clinicians agreed that it enhanced their knowledge and confidence across all measured responses, with 75% or more strongly agreeing with items 2, 3 and 4 that specifically assessed presentation effectiveness. The protocol was successfully implemented on January 17th, 2020 after the educational presentation. Telehealth appointments are available for booking daily and are being used with no major flaws in the protocol identified.

Conclusion: A formal protocol for implementation of expanded telehealth use was designed and established into the daily workflow, creating a quality improvement practice change at this clinic. Providing clinician education was associated with increased provider knowledge and confidence.

Key Words: Telehealth, Telemedicine, Primary Care, Telehealth Protocol, Video Visits.

Development of a Medical Surveillance Program:Recommendations for At-Risk Employees

Jessica Okrant, BS, RN, OCN, DNPc
Advisor: Dr. Stuart Whitney, EdD, RN, CNL

Purpose: This project sought to evaluate current policies and procedures regarding HD exposure workplace practices at large academic medical centers in the Northeast, improve education of HD exposure, and developa standardized medical surveillance program (MSP)atone large academic health network.

Methods: Large academic medical centers in the Northeast were contacted to provide information about current workplace practices. Semi-structured interviews (N=14)were conducted to determinecurrent workplace practices & policies at each (N=14) institution. Data from interviews, current policies and procedures wasevaluatedto create a proposed MSP. Data was presented to stakeholders.A post-presentation survey and discussioninformed feasibility and determined next steps for implementation.

Results: Information from 14 medical centers was analyzed. The post-presentation survey identified obstacles for implementation including: Need for an occupational medicine provider;A record keeping system;Monitoring on an ongoing basis; andDefining population at-risk to survey. Eight of nine stakeholders filled out the post-presentation survey.All respondents supported development of a standardized MSP. 87.5% of respondents advocated for hiring of an occupational medicine provider to successfully implement an MSP.

Conclusion: Stakeholders supported development of a standardized MSP within the target academic health network and advocated for an occupational medicine provider at each institution in the network for successful implementation. The data from this study will guide policy change &future implementation of an MSP.

Key Words: medical surveillance, hazardous drug exposure, Employee health

From Evidence to Practice:
Promoting Continued and Exclusive Breastfeeding in Rural Eastern Uganda

Katherine Judge, R.N., DNPc
Advisor: HendrikaMaltby, RN, Ph.D
In collaboration with: Kadijah Manjelem

Purpose: Malnutrition is responsible for about one third of deaths globally among children under the age of five. Over 65% of these deaths, often associated with inappropriate feeding practices, occur during the first year of life and disproportionately affect those living in resource poor countries. Breastfeeding has been established as a uniquely protective and effective measure in providing infants with the nutrients they need for healthy growth and development. According to Ugandan demographic surveys (2016), less than 43% of infants age 4-5 months are breastfed.

Methods: The objective of the project was to equip Community Health Educators (CHEs) with evidence-based practice guidelines for promoting continued exclusive breastfeeding to postpartum women. This project was implemented through the Foundation for International Medical Relief of Children (FIMRC) clinic in Bumwalukani, Uganda. WHO validated educational training video, sourced from the Global Health Media, was disseminated among CHEs.Quantitative surveys were used to evaluate the meaningfulness of the intervention. Culturally contextual barriers were assessed by qualitative interviews conducted with clinical staff members and local mothers.

Results: The educational training video was disseminated to forty-two health workers. Video efficacy was established by pre-and post-surveys. Results showed strong community understanding of breastfeeding and that the intervention improved CHE comfort helping women breastfeed, no statistical difference was found in pre and post survey results.Themes identified through qualitative interviews regarding barriers to breastfeeding included: return to work, potable water access, lack of storage for expressed breast milk, and pain. Additionally, the clinic adopted a new screening tool to be used during post-partum homevisits.

Conclusions: Multiple determinants can influence breastfeeding practices at structural, community, and individual levels. Interventions at any level can improve rates of breastfeeding. Continued effort to seek sustainable means to promote breastfeeding initiatives has the potential to reduce global infant malnutrition.

Key Words: breastfeeding, malnutrition, vulnerability, infant growth and development.

Essential trauma Care Documentation
Redesigning a Community Hospital's Trauma Flow Sheet

Murphy Neenan, BS, RN, CEN, DNPc
Stuart Whitney, Ed.D., RN, CNL
Jessica Cullen, RN &JavadMashkuri, MD

Purpose*:* Poor or absent trauma documentation has negative consequences on continuity of care, errors related to treatment, poor validity when used as a data source, and increased time to order completion (Lorenzetti et al., 2018; Jones, 2016). Nursing staff at a Vermont community hospital emergency department (ED) expressed frustration when utilizing the existing trauma flow sheet. The purpose of this project was to redesign and implement an evidence-supported trauma flow sheet for efficient, accurate, and comprehensive **documentation of trauma encounters.**

Methods*:* A new emergency department trauma flow sheet was developed through a formal focus group session and semi-structured interviews. Both members of the ED nursing and provider staff participated in development efforts. A PDSA model for quality improvement was introduced to facilitate future initiatives to improve trauma documentation and associated workflows. Qualitative thematic analysis was the primary method of analysis, while descriptive statistics and frequencies were utilized to report data related to the operationalization efforts of the project.

Results*:* Nearly 29% of stretcher-side nursing staff (n= 15) and 72% ED provider staff (n= 13) participated in the iterative process. The five most frequent themes from the focus group included: recommendations, standard of care, ease of use, use patterns, and foresight. Success of the project was evaluated by the adoption of the ED trauma flow sheet into clinical practice on January 1st, 2020.

Conclusions*:* An interprofessional approach of seeking, analyzing, and presenting stakeholder input is an effective strategy for the development of documentation tools. The introduction of the PDSA model for quality improvement allows for future improvements to trauma documentation and care to be sustained. Implications for practice related to this project include: mitigation of cumbersome documentation, opportunities for cognitive offloading for ED staff, and empowerment of stretcher-side nurses to lead care in critical scenarios in the ED (Dror&Harnad, n.d.).

Keywords*: emergency department, trauma, documentation*

Collaborative Design of Program evaluation of public health interventions in Kamuli, Uganda

Nicole Valcour, MPH, MA, RN, DNPc
Faculty Advisor: Hendrika Maltby, PhD, RN, FACN
Project Community/Agency Advisor: Loretta Charles, MSN, MPH, FNP-BC

Purpose. A well-designed evaluation can be the key to delivering the greatest impact from public health programs[1]. The purpose of this project is to design an evaluation of public health interventions in Kamuli, Uganda. The University of Vermont Public Health Nursing program has been working for ten years with two NGO's in the communities surrounding Kamuli, Uganda in the implementation of evidence-based improvements in household sanitation, safety and hygiene. Feedback from the community has been positive, but no formal evaluation has been carried out.

Methods. During the 2-week Study Abroad trip that UVM students made to Kamuli in December 2019/January 2020, the three groups engaged in a collaborative and iterative process that resulted in an evaluation tool to be implemented on the next trip. This process included meetings with group leaders and a field test of questions and methods. We utilized a participatory approach, ensuring that key local stakeholders and the community were involved in every step of the process, including data collection and decision-making.[2]

Results. A collaboratively designed, mixed methods evaluation plan was designed and field tested. Some themes from the surveys included the convenience that the interventions allowed, but also maintenance issues, and concerns of cost of repair when weather events such as flooding destroy the interventions.An evaluation manual was created to be implemented by the three organizations in December 2020.

Conclusions. Using the principles of participatory evaluation, we designed an evaluation tool that incorporates the perspectives and priorities of all groups involved. Our shared goal of improving program performance by understanding how the interventions have been received and continue to be used are embedded in the final evaluation plan.

Keywords. Evaluation, participatory, public health, Uganda

1. Barstow, C. K., Nagel, C. L., Clasen, T. F., & Thomas, E. A. (2016). Process evaluation and assessment of use of a large-scale water filter and cookstove program in Rwanda. *BMC Public Health*, *16*(1), 1–19. https://doi-org.ezproxy.uvm.edu/10.1186/s12889-016-3237-0
2. Kananura, R., Ekirapa-Kiracho, E., Paina, L., Bumba, A., Mulekwa, G., Nakiganda-Busiku, D., . . Peters, D. (2017). Participatory monitoring and evaluation approaches that influence decision-making: Lessons from a maternal and newborn study in Eastern Uganda. *Health Research Policy and Systems,15*(Suppl 2), 107.

Maria Delia Crosby
DNP Quality Improvement Project
Academic Advisor: Rosemary Dale, Ed.D., APRN - UVM College of Nursing
Community Advisor: Eileen Curtis, MSN, RN –Converse Home

1. Title	Screening for palliative care services in an assisted living facility
2. Abstract:	**Background:**Palliative care services remain under-utilized, even as evidence suggests that early palliative care leads to positive health outcomes, reduced ED visits, and substantial cost savings. Barriers include a lack of knowledge of palliative care services in the community, and under-utilization of validated assessment tools, including a symptom checklist. **Purpose:**1. To determine whether the integration of validated community-based palliative care screening tool in an assisted living setting will identify older adults with unmet palliative care needs. 2. To determine if tool implementation could lead to a referral for palliative care consultation. **Methods:**A screening tool developed by Brookdale-Weill Cornell Palliative Care Consortium was used to identify potential candidates for a palliative care consult. Using ACEP Palliative Care toolkit criteria, candidates were selected from the health records of 63 residents living in an assisted living facility. Nurses received education on basic skills in palliative care and the use of the 22-item screening tool. A positive screen is determined if a participant reports experiencing two or more items within a domain "all the time" in at least two domains. Each resident's primary care provider was notified, and positive results were shared. **Results:**Of the 31 residents screened, 45% screened positive for palliative care needs, and 100% consented to referral to primary care providers for a palliative care consult. Inclusion of the screening tool in the new resident admission packet was a resulting practice change adopted by the facility. **Conclusions & Implications:** Palliative care screening in assisted living facilities can increase palliative care consultation and utilization among older adults with chronic illnesses. Implications of utilizing this screening tool are: enhance quality of life for older adults living in assisted living facilities, empower older adult-community clinicians, and improve the coordination of care with primary care. KEYWORDS: palliative care, screening, assessment, older adult, community-based, assisted living

Transcutaneous Bilirubin Measurement in a RuralTeaching Hospital: A Quality Improvement Assessment

Lydia Sachs, MA, RN, DNPc
Advisor: Jean Pelski, PhD, APRN, NNP-C

Purpose: Up to 84% of term neonates develop jaundice, asign of hyperbilirubinemia that warrants bilirubin measurement (Muchowski, 2014). The AAP recommends systematic evaluation of hyperbilirubinemia risk for every infant. Serum bilirubin tests involve needle sticks, introducinganxiety, pain, and cost (Lago et al., 2017; AAP Subcommittee on Hyperbilirubinemia, 2004). Transcutaneous bilirubin (TcB) measures bilirubin without needle sticks, may offer reduced costs, but is less accurate, and may increase phototherapy rates (Pratesi, et al., 2016; Kuzniewicz et al., 2009). This project aimed to determine the effect of TcB measurementon needle sticks, phototherapy rates, and cost of bilirubin measurement at a rural teaching hospital.

Methods: A retrospective data analysis compared rates of bilirubin screening, needle stick testing, and phototherapy treatment for a three-month period prior to the introduction of TcB measurement with a three-month period following introduction. Rate differences were calculated with SPSS statistical package. A comparison of error test determined statistical significance. The institution's billing and purchasing department provided cost data.

Results:
The introduction of TcB measurement increased hyperbilirubinemia screening from 21.1% to 83%, which was statistically significant. It decreased the rate of needle stick testing from 21.1% to 20.6%, which was clinically but not statistically significant. Phototherapy treatment increased from 3.1% to 3.9%, which was not statistically significant. The charge for transcutaneous measurement was $33.00 less per incidence than needle stick testing.

Conclusions:
This quality improvement assessment demonstrates that TcB screening increases systematic assessment for hyperbilirubinemia, thereby increasing adherence to AAP recommendations for hyperbilirubinemia screening. It decreased the rate of needle sticks for bilirubin. It may or may not increase phototherapy administration. This assessment highlights the need for formal studies to investigate an appropriate TcB threshold for needle stick testing, as well as the effect of such a threshold on needle stick testing to inform best practice.

***Key Words*:** Transcutaneous bilirubin screening, hyperbilirubinemia screening, reduced needle sticks

Evaluating a volunteer doula program at an academic medical center in Vermont

Kiersten Wulff, RN, DNP candidate
Advisor: Carol Buck-Rolland, Ed.D, APRN, PNP
Project mentor: Martha Churchill, MSN, APRN, CNM

Background:Continuous labor support isrecognized as a component of high quality maternal healthcare, yet access to doulas is not universal. Hospital-based doula programscan minimize barriers to continuous labor support, and evaluation of hospital-based doula programs is needed. This project evaluated a pilot volunteer doula program at an academic medical center.

Methods:Sign-in process monitored doula presence per shift. Likert scale surveys measured participant (RN and doula) perspectives. Likert scale surveys with a comment section measured patient experience. Survey resultsand sign-in sheets were analyzed using descriptive statistics. Patient comments were assessed for major themes using NVivo software.

Results:Volunteer doulas (VD) (n=74) provided support for 92 patients within 6 months (approximately 8.2% of total births during the period). Thirty-five surveys were received from VDs, and 18 from RNs. For RNs and VDs,average ratingof doula support given to the patient was 4/5(0 least – 5 most).Forty-two surveys were given to patients who received volunteer doula support, and 23 responses received (54% response rate). All patient respondents (n=23) rated feeling supported during labor as "most important" (5/5). Ninety one percent of respondents"strongly agree" (5/5) they felt supported by the VD, and that theVDhelped them to have a positive experience. Comment analysis revealed three main themes:describing the doula, being thankful for the program or the doula, and explaining what the doula did that was beneficial.

Conclusions:The volunteer programincreased access to continuous labor support. Patient response suggests the program is valuable and contributes to positive experiences. Monitoring perspectives of nurses and volunteers during the pilot stage exploresbuy-in and guides improvements. Given these initial findings,the impact of this program was positive.

Key words: continuous labor support, volunteer doula, hospital-based doula program, quality improvement, program sustainability, health program implementation

Clinical Management of Postpartum Hemorrhage in Community Birthing Hospitals in Vermont: A Gap Analysis to Promote Best Practice

Rachel Greene, RN, DNPc
Advisor: Jean Pelski, PhD, APRN, NNP-C

Purpose: Despite advances in research and medical technology, the rates of postpartum hemorrhage (PPH) continue to rise. Annually, these preventable events are the cause of one-fourth of maternal deaths worldwide.In order to manage PPH as an obstetric emergency and reduce maternal mortality and morbidity rates, the effective application of evidence-based interventions is required including timely diagnosis and immediate access to appropriate resources. The purpose of this DNP project is to conduct a gap analysis within a sampling of community birthing hospitals in Vermont to examine the existing clinical management of PPH.

Methods: Registered nurses across three hospital sites were surveyed to assess current policies and/or protocols pertaining to the clinical management of PPH in five categories: 1) systems level readiness, 2) patient level readiness, 3) recognition and prevention, 4) response, and 5) reporting and systems learning. An aggregate recommendation for a quality improvement initiative targeting clinical management of PPH was made based upon the gap analysis findings.

Results: A total of thirty-seven surveys were completed between three sites. Several evidence-based best practice recommendations were inconsistently done, not done, or unknown at all three sites. Nurses indicated that they would feel more prepared to manage a postpartum hemorrhage with more simulation drills and mock codes, a walk-through of mass transfusion protocols, easy access to hemorrhage medications, a PPH risk assessment done on all laboring mothers upon admission, and education about identification of PPH.

Conclusions: This gap analysis identified several areas for improvement across five categories among the three participating community birthing hospitals. This systematic approach to evaluation of current practice protocols and identification of improvement targets with implementation strategies using the California Maternal Quality Care Collaborative (CMQCC) OB Hemorrhage Toolkit V2.0 may enhance clinical management of PPH and thereby maternity outcomes.

Keywords: postpartum hemorrhage, maternal morbidity and mortality, community birthing hospitals

Diversifying the Healthcare Workforce:
Transition of the Combat Medic to Baccalaureate-Prepared Nurse

Lyndsey Gates, MSN, RN, DNPc
Advisors: Jason Garbarino, DNP, RN-BC, CNL and Llynne Kiernan, DNP, MSN, RN-BC

Purpose. In 2018, Vermont was faced with a $74.7 million financial impact related to nursing shortages.[1] The creation of a combat medic to accelerated bachelor of science in nursing (BSN) program may offer a way to positivelycontribute to the nursing workforce.The purpose of this feasibility project was to combine the four sub-roles of expert practitioner, educator, researcher, and consultant, as defined by Manley (1997), to design and develop a new pathway for military combat medic entry into the nursing profession.[2]
Methods. A comparative analysis was performed to elucidate gaps in 219 different nursing skills, didactic and general education requirements, clinical hours, and transfer credits between the U.S. Army combat medic training and the BSN curriculum at a university in Vermont. Identified gaps were compared with requirements for nursing licensure. A sample of combat medicswas surveyed to determine their interest level in pursuing a BSN, desired employment setting, and intent to work at the bedside for two years or longer. Feedback was collected from faculty and administrators at the university and at schools with similar existing programs.
Results. Based on the comparative analysis, two program plans of study for 24- and 32-month completion were developed, dependent on transfer credits and demonstrated skill competencies. Of the participating combat medics, 84% reported being "very interested" and 16% reported being "interested" in pursuing an accelerated program in nursing. Furthermore, 100% of combat medic participants indicated that they would remain at the bedside for two years or longer.
Conclusion. The proposed program pathway was well-received and may offer a way to alleviate medic unemployment rates and contribute to the nursing workforce. Further research is needed to determine feasibility. Plans for further research include a cost-benefit analysis, more precise sampling to gauge interest levels, and determinants of requisite supplies, physical space, clinical placements, and faculty.
Keywords. Nurse, Military, Medic

References

1. Green Mountain Care Board. (2020, January 10). *Rural health services task force report and recommendations*. https://gmcboard.vermont.gov/sites/gmcb/files/documents/Rural%20Health%20Services%20Task%20Force-%20Act%2026%20of%202019%20-%20Report%20%26%20Recommendations.pdf
2. Manley, K. (1997). A conceptual framework for advanced practice: An action research project operationalizing an advanced practitioner/consultant nurse role. *Journal of Clinical Nursing*, *6*, 179–190.

Improving the Diagnosis of Alzheimer's Disease and Related Dementia in Primary Care

Elisa Vautier, BS, RN,DNPc
Advisor: Mary Val Palumbo, DNP, APRN, GNP-BC

Purpose: The number of Vermonters living with Alzheimer's disease and related dementia (ADRD) is expected to increase by 42% to 17,000 by the year 2025 (Richardson, 2017). Missed and delayed diagnoses impact patient safety, treatment opportunities, and increase health care costs. Contributing factors to delayed and missed diagnosis include provider education deficits, perceived difficulties of detection,and lack of tools perceived as helpful (Bradford, et al., 2009).This project assesses current practices of diagnosing ADRD in primary care, identifies barriers to diagnosis, and develops and evaluates an evidence-based tool to assist in the diagnosis and treatment of ADRD.
Methods: Semi-structured interviews of 6 Vermont primary care nurse practitioners were conducted. Informed by themes in these interviews, an electronic health record-basedSmartphrase was developed to assist NPs in the diagnosis of ADRD. The Smartphrase includes a focused history of cognitive decline informed through patient and informant interviews, objective data including laboratory evaluation and relevant screenings, medication reconciliation, physical exam findings, differential diagnoses of dementia, and resources for patient and family. Use of the ADRD diagnosis Smartphrase was promoted by dissemination of an online educational video created for primary care nurse practitioners.
Results: Identified themes included the absence of a standard pathway to diagnosis in primary care, a reactive rather than proactive approach to diagnosis, and a lack of identifiable resources for patient and family after diagnosis is established. The Smartphrase was evaluated by 9 primary care nurse practitioners. Pre- and post-survey responses supported the ease of use and utility of the tool, and all respondents reported greater knowledge of available local support services.
Conclusions*:* The ADRD Smartphrase was acceptable to a group of practicing nurse practitioners and was introduced to the Vermont Department of Health's Committee on Alzheimer's Disease for further dissemination.

Keywords*:* Dementia, diagnosis, primary care

References

Bradford, A., Kunik, M., Schulz, P., Williams, S., Singh, H. (2009). Missed and delayed diagnosis of dementia in primary care: Prevalence and contributing factors. *Alzheimer Disease & Associated Disorders, 23*(4), 306-314. doi: 10.1097/WAD.0b013e3181a6bebc

Richardson, M. (2017). Annual Report of the Commission on Alzheimer's Disease and Related Disorders [PDF File]. Retrieved from https://legislature.vermont.gov/assets/Legislative-Reports/2017-ADRD-Report.pdf

Development of Hospital-Wide Policy for Pediatric Needle Procedures at an Academic Medical Center

Katherine Rose,BS, RN, OCN, DNP_c
Faculty Advisor: Jennifer Laurent, PhD, APRN
Community Mentor: Iris Toedt-Pingel, MD

Purpose: Needle procedures are traumatic experiences for pediatric patients, and have been linked to formation of phobias and lifelong decreased healthcare utilization(Nixon et al., 2010; Noel et al., 2009). Pain management during needle procedures and hospital wide standardization of needle procedures are known to increase patient satisfaction, while decreasing long-term adverse outcomes related to seeking health care (Rosenberg et al., 2016, Friedrichsdorf et al., 2018). The purpose of this project was to develop a hospital-wide standardized policy for pediatric needle procedures at an academic medical center.
Methods: Those performingpediatric needle procedures were electronically surveyed to identify full spectrum issues regarding adoption of a pediatric needle policy. Based on survey findings and current evidenced based practices, a new policy for pain reduction strategies in pediatric needle procedures was developed. The policy was re-evaluated and refined based on feedback obtained via a follow-up survey regarding the drafted policy.
Results: Subjects (n=40) from six departments participated. Common reported barriers were patient and family response (32.5%), time constraints (22.5%), poor staff education (17.5%), and lack of access to resources (15%). Respondents reported a standardized policy would address the barriers to offering pain management and increasing access to resources needed. Post survey follow up revealed that 100% of stakeholders felt the policy was “mostly” or “definitely” feasible for adoption throughout the organization.
Conclusions: Employees endorse a standardized policy for pediatric needle procedures, and key personnel have shown their support for its adoption. Therefore, in order to decrease the likelihood of childhood trauma and increase healthcare utilization in adulthood, the academic medical center will adopt this project’s developed policy.
Key Words: pediatric, needle procedure, policy, practice standardization

References:

Nixon, R. D., Ellis, A. A., Nehmy, T. J., & Ball, S. A. (2010). Screening and predicting posttraumatic stress and depression in children following single-incident trauma. *Journal of Clinical Child & Adolescent Psychology*, *39*(4), 588-596.

Noel, M., McMurtry, C. M., Chambers, C. T., & McGrath, P. J. (2009). Children's memory for painful procedures: The relationship of pain intensity, anxiety, and adult behaviors to subsequent recall. *Journal of pediatric psychology*, *35*(6), 626-636.

Rosenberg, R. E., Klejmont, L., Gallen, M., Fuller, J., Dugan, C., Budin, W., & Olsen-Gallagher, I. (2016). Making comfort count: Using quality improvement to promote pediatric procedural pain management. *Hospital pediatrics*, hpeds-2015.

Friedrichsdorf, S. J., Eull, D., Weidner, C., &Postier, A. (2018). A hospital-wide initiative to eliminate or reduce needle pain in children using lean methodology. *Pain reports*, *3*(Suppl 1).

Evidence Based Treatment for Excessive Alcohol Consumption and Concurrent Hypertension

Kimberly A. Ward BS,RN, DNPc
Faculty Advisor: Mary Val Palumbo DNP, APRN
Site Mentor: Katina Cummings Health Workforce Program Manager at VTAHEC

Purpose. Excessive alcohol consumption is a preventable risk factors for hypertension, heart disease, and stroke, which are the leading causes of death in the U.S[1].Though alcohol-related deaths number 88,000 annually in the U.S.[2], alcohol use has the lowest treatment rate ofbehavioral health disorders at 10%[3]. Excessive alcohol consumption may compromise treatment of hypertensionby primary care providers (PCP). This project aims toincrease PCP and patient awareness of the connection between hypertension and excessive alcohol use and promote screening of excess alcohol consumption.
Methods A protocol for improving alcohol screening and concurrent hypertension management was developed including: patient education materials for PCP's use; in-person educational presentations; and the use of motivational interviewing. Post-presentation and follow-up surveys assessed for increased co-management of alcohol use and hypertension by PCPs. Practice change was assessed with pre/postintervention surveys, using descriptive statistics with comments analyzed for themes.
Results. Nineteen post-presentation surveys and seven follow-up surveys were returned (response rate of 95% and 35%). Seventy-nine percent of respondents (n=15) indicated they were likely to implement a practice change. Eighteen percent of respondents (n=4) liked this treatment approach focus on using the hypertension-alcohol link todiscuss health risks without stigma. At 3-months follow-up, two providers reported appreciating the protocol not relying on medication. Three providers used the tracking log; blood pressure was reduced in at least two patients.Three of seven providers reported increased screening for alcohol use, one already screened all patients, two did not screen any patients.
Conclusions.A majority of providers were hesitant to broach alcohol use and patients were not regularly screened for alcohol consumption. Evidence based tools were well received by participating PCPs.Without universal alcohol use screening in primary care, the treatment gap will persist, and the treatment of concurrent hypertension may continue to be compromised.
Key Words:excess alcohol consumption, hypertension, primary care

1. Centers for Disease Control and Prevention, *High Blood Pressure Fact Sheet*. 2016.
2. National Institute on Alcohol Abuse and Alcoholism, *Alcohol Facts and Statistics*. 2018.
3. Watkins, K.E., et al., *Predictors of treatment initiation for alcohol use disorders in primary care.* Drug Alcohol Depend, 2018. **191**: p. 56-62.

Measuring the Impact of Rise VT: Evaluating community-based obesity prevention initiatives with a standardized intensity score

Name: Brianna Johnson, BSN, RN, OCN, DNPc
Project Advisor: Jennifer Laurent, PhD, APRN
Community Mentors: Emelia Wollenburg, MPH and Denise Smith, MS

Purpose: Children born today will lead less healthy and shorter lives than their parents, unless effective population-level interventions to reduce obesity are implemented. Research suggests that multilevel community-based initiatives are associated with future reductions in childhood obesity. The Community Programs and Policies Intensity Score (CPPI) is a standardized metric to evaluate multisector efforts over time, which has been found to correlate with future reductions in childhood obesity at the population level.The purpose of this project was to quantify the impact of a community-based initiative to reduce childhood obesity (Rise VT) using the Community Programs and Policies Intensity (CPPI) score. A secondary aim was to assess the feasibility of using the CPPI score for ongoing program planning and evaluation statewide.
Methods: Interviews with pertinent program managers were conducted to gather data related to program interventions (project duration, population reached, and strategies implemented) to yield a CPPI score in Franklin and Grand Isle (FGI) counties, Vermont. An educational session on the CPPI score for program managers and a post-presentation survey was administered to evaluate feasibility.
Results: Program managers in FGI implemented 39 interventions in FGI using 22 CDC obesity prevention strategies over a period of 6 months, resulting in an average standardized CPPI score of 0.82 [0 (low intensity) to 1 (high intensity]. Post-presentation survey results demonstrated that statewide program managers (n=13) found CPPI measurement useful for their regions.
Conclusions: The mean standardized CPPI score (0.82) in FGI was much greater than previously reported national averages, suggesting that the majority of obesity prevention efforts in these communities have strong influence, which may lead to a future decrease in childhood obesity. The CPPI score appears to be a feasible strategy to evaluate Rise VT programmatic efforts statewide.
Keywords: Childhood obesity prevention, community-based initiatives, Community Programs and Policies Intensity Score