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Clinical Application of Research and Community Health for Baccalaureate Students: Impacting Houston Pediatric Immunization Rates

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Background/Purpose: Immunization coverage in Texas ranks far below the national average for children, putting them at risk for life threatening diseases (Comfort, Espinosa, Hetrick, & Bocchini, 2017). The Texas Medical Center Health Policy Institute Collaborative (TMC) funded a research study for 12 months with the UTHHealth Schools of Medicine, Public Health, Nursing, and the City of Houston. The collaborative addressed the complex issue of vaccine delinquency. The goal of the collaborative was to decrease vaccination disparities among pre-kindergarten and kindergarten students at eight high risk inner city schools in Houston, Texas.

Methods: Baccalaureate nursing students worked in interprofessional collaboration with researchers and faculty during this 12 month project. Nursing students were able to utilize their knowledge and skills from community health and research didactic courses during the project. During the 12 month project students attended meetings and focused on tasks including assisting with immunization reconciliation, immunization follow up, community assessment, and community outreach. Community outreach events focused on the target population of parents and caretakers of pre-kindergarten and kindergarten students. Settings included 8 inner city schools, vaccination clinics, and outreach events with Harris Health, a public health system. Students practiced competencies for interprofessional collaboration with their nurse preceptors and clinical faculty.

Results: Semester one students assisted school nurses with record reconciliation utilizing ImmTrac2 (Texas Immunization Registry). Students were able to acquire further “real world” nursing knowledge of current immunization schedules, reading of immunization records from around the globe, and working with ImmTrac2. In semester two the students worked with the interdisciplinary team to systematically assess the communities around the high risk schools utilizing the “Community As Partner Model” and present their findings to the collaborators (Anderson & McFarlane, 2019). Nursing students shared their findings with the collaborative research team. The findings included the immunization facilitators and barriers in the community. During semester two, nursing students continued working with ImmTrac2 and immunization reconciliation. In the final semester, Post-Hurricane Harvey, nursing students assisted school nurses with maintenance of current and new students’ immunization record compliance and referred parents to community immunization resources. The overall outcomes included significant reductions in MMR delinquency rates among pre-kindergarten and kindergarten students.

Recommendations/Conclusion: Nursing students played an integral role in reducing the vaccination delinquency rates by working on the front lines with school nurses, community agencies, and the collaborative research team. Nursing students can utilize the knowledge they acquire while in nursing school and apply the knowledge and skills on real world problems. Interprofessional collaboration integrating students with professionals is an innovative approach to population health problems. Community health clinical experiences integrated in a multi-disciplinary team can make a significant impact on real world health problems in the community, reduce health disparities, and improve health.

Title:

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References:

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Abstract Summary:

Year long interprofessional collaboration to tackle inner city elementary schools with immunization delinquency. Researchers from UTHealth, nursing students, and various community health agencies worked together to identify root causes for vaccine delinquency. Nursing students worked in the community and applied community health, research knowledge, and skills to address vaccine delinquency.

Content Outline:

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I. Introduction

A. Childhood vaccinations save lives, reduce health care costs, and prevents disability. Vulnerable populations in urban areas with limited access to medical care are at risk to have lower rates of immunization (Song, 2014). TMC Health Policy Grant, Improving Vaccination Rates within the Houston Independent School District – Closing the Vaccination Gap, incorporated student nurse participation in a multi-level interprofessional intervention program at 8 identified at-risk schools over a 12 month time period including 3 university semesters.

II. Body

A. Main Point #1 Community Health Clinical for BSN Nursing Students is a viable setting for interprofessional collaboration education and application

1. Supporting point #1 BSN prepared nurse preceptor in the school setting acted as a liaison and demonstrate interprofessional collaboration competencies

- a) School nurse preceptor supported on-site vaccination campaign in low performing schools and acted as a liaison between professions
- b) School nurse preceptor served as a role model to nursing students
- c) All three semesters, student nurses assisted school nurse preceptor with documentation and record reconciliation utilizing ImmTrac2 (Texas Immunization Registry)
- d) All three semesters, student nurses completed follow up with the family and primary care provider to support continuity of care
- e) During the second semester a community assessment utilizing a model was completed by student nurses
- f) Post Hurricane Harvey, final semester students assisted school nurses with new incoming pre-kindergarten and kindergarten student's to maintain immunization compliance and assist parents with community immunization resources if delinquent

2. Supporting point #2 Interprofessional collaboration is essential to improve accessibility of health care (Sullivan, Kiofsky, Mason, Hill, & Durkes, 2015).

- a) Interprofessional collaboration can address the complex multiple factors that impact access to care (Sullivan et al., 2015)
- b) Low vaccination rates are a complex problem and requires interprofessional collaboration between administration, school nurses, community, and healthcare providers
- c) Nursing students require interprofessional education opportunities to view and apply interprofessional collaboration in different settings (Sullivan et al., 2015)

B. Main Point #2 BSN student nurses collaborate with professional community partners to promote health and prevent disease in a population by undertaking a community assessment.

1. Supporting point #1 Student nurse complete a community assessment and share information with the interprofessional team

- a) Student nurses completed a community assessment including a windshield survey
- b) The community assessment findings were used to identify barriers and facilitators within the community
- c) Nursing student's findings, immunization facilitators and barriers in community, were shared with the research team

2. Supporting point #2 Student nurses identify Strengths and Problems and provide intervention for identified priority problem

- a) Student nurses use local, City, State and National Databases to gather community assessment data
- b) Student nurses identify problems and validate problems with school nurse
- c) Student nurses implemented interventions based on community assessment identified needs/problems

III. Conclusion

Interprofessional collaboration is essential to improve accessibility and quality of immunizations for vulnerable populations. Interprofessional collaboration is an essential competency for the BSN prepared nurses. The community clinical provides opportunities for BSN student nurses to gain experience with roles, responsibilities, communication, and teamwork for interprofessional collaboration (Sullivan et al., 2015). Nursing students played an integral role in reducing the vaccination delinquency rates by working on the front lines with school nurses, community agencies, and the research team. Community health clinical experiences integrated in a multi-disciplinary team can make a significant impact on real world health problems of the community, reduce health disparities, and improve the health of a community. Real world community health experiences also offer educational opportunities for interprofessional collaboration for student nurses.

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