Healthy People 2020 and Education For Health
Successful Practices for Clinical Health Professions

Vine School Health Center
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ABSTRACT:
The Vine School Health Center is a school-based health clinic that has been in existence since 1996 in an underserved area of Knox County. It is a cooperative effort of the University of Tennessee (UTK), College of Nursing and the Knox County Schools. Its mission is to serve students ages 3 to 21 years of age who are unable to access health care; half of the children served last year were insured through the state Medicaid program and forty percent were uninsured. During the 2010/2011 school year there were 966 health care visits to the clinic (542 physical examinations and 424 acute care visits), and 559 immunizations were given. In 2009/2010 there were 1148 health care visits to the clinic (677 physical examinations and 471 acute care visits), and 853 immunizations were given. Support for the clinic is from private foundation grants, patient fees, and in-kind contributions by both the College of Nursing and the Knox County School District. For the past ten years evaluation of services provided at the school-based health clinic for school-aged children and adolescents has been rated as being 99% to 100% satisfactory or excellent by parents. The clinic serves as a clinical site primarily for undergraduate baccalaureate and NP (graduate) students and an experiential site for high school students interested in health careers. Other disciplines at UTK, health education, architecture, industrial engineering, and public health, have utilized the clinic for a variety of classroom opportunities or assignments.

EDUCATIONAL METHODS OR APPROACHES USED:
Clinical experiences are required for nursing students at the undergraduate and graduate levels. Instructional methods include modeling, direct instruction between clinical faculty and students, experiential learning by students with an opportunity to provide direct care. This opportunity is unique for undergraduate nursing students as interactions and skills opportunities with children are limited in the tertiary settings. At the VSHC, nursing students acquire vital signs, laboratory specimens, and screen vision and hearing on children of all ages. Additionally, multiple vaccines are given. These actions require assessment of the child's developmental and cognitive abilities and the elicitation of the child's cooperation, skills requiring knowledge and independent thought with action. For the graduate nurse practitioner student, independence and initiative are expected along with creativity to assist in solving children's health problems that may arise as a result of environmental or social conditions.

PROJECT DESCRIPTION:
The Vine School Health Center was established in 1996 through the collaborative efforts of the Knox County School System, Knox County Department of Public Health and the University of Tennessee College of Nursing. The three primary objectives of this joint effort were to:

- Deliver pediatric primary care services to a medically underserved urban population;
- Demonstrate the effectiveness of a nurse-managed clinic as a primary health care delivery site;
- Provide clinical experiences in primary care and community health for master's and doctor of nursing practice (DNP) and baccalaureate nursing students at the University of Tennessee.

During the initial year, the center occupied a two-room faculty lounge in the main building of the school located in East Knoxville. Due to a growing demand for services the clinic was relocated to a renovated warehouse that once housed the school's autoshop vocational program. This space was converted into a
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modern health care center complete with four examination rooms, lab space, office, screening room and a spacious waiting room. The renovation was made possible by a successful community fund-drive spearheaded by Dr. Nan Gaylord. After the new health center opened it was staffed by a nurse’s aide five days a week. Initially, her work was supplemented with nurse practitioner coverage from two to four days a week depending on public health department funds and the availability of faculty nurse practitioners at UTK.

In 2001, the Knox County Public Health Department became unable to assist the health center with nurse practitioner staffing and physician coverage because of a budget shortfall. In order to fill the staffing gap for the 2001-02 school years, Dr. Gaylord recruited volunteers from the nurse practitioner faculty at the University of Tennessee and the clinic was able to continue to provide services. Following this crisis the clinic was awarded funding as the result of an external grant aimed at providing health services to children in state custody. This facilitated the hiring of an additional NP for two days a week over a two year period. In 2005 private foundation money provided for a full-time NP who would be available to serve the children on a daily basis throughout the school year. Foundation monies are available for the next 1 1/2 years for ongoing salary support of the nurse practitioner position. Presently, two pediatric NPs who also serve as clinical faculty in the college of nursing share the position. Additionally, physician coverage is provided via a contract with Larry Rodgers, MD, a faculty pediatrician in UTKs Department of Pediatrics. Patient fees support the contract with Dr. Rodgers and provide the administrative assistant’s salary.

The program has been successful and continued to exist partly because of the sustained commitment of UTKs, College of Nursing and its faculty to a strong clinical site for students. Additionally, the importance of maintaining a faculty practice is understood and that this practice should provide a service to the community. These efforts are appreciated by The Knox County School district. While valuable to all students, this service is understood as especially vital for those students who are otherwise unable to access care and/or who have academic difficulties as a result of health problems. This collaborative endeavor is successful partly because of the mutual responsiveness of Knox County School District and UTK College of Nursing. The two entities work together well and are quick to respond to each others requests and concerns.

Moreover, this experience is viewed by participating undergraduate and graduate students as very beneficial; evaluations of their experiences are overwhelmingly positive. Parent evaluation of the care provided by students and nurse practitioners continues to be rated 100% satisfactory or excellent.

At the undergraduate level the Vine Clinic experience is offered in a 5 credit-hour course NURS 404: Health Promotion, Maintainance & Restoration in Children, Adolescents & Families. Students have the opportunity to observe and participate in individual health counseling on nutrition, exercise, safety, discipline, chronic illness education, and school performance with children evaluated in the clinic. Additionally, some undergraduates enrolled in another 5-credit-hour required course NURS 382: Health Promotion & Maintenance in Community have the opportunity to teach health education classes in the clinic school and other Knox county schools as part of their community health project requirement. Such classes include information on nutrition, exercise, smoking, alcohol/drugs, hand-washing, relationships, good choices, and the utilization of one of the approved sex education programs. More information on curriculum is available at http://nursing.utk.edu/doc/BSNcurr2011.pdf. Graduate pediatric nurse practitioner students are required to spend six days of their clinical rotation at the clinic however a significant portion of students choose to extend their practicum at the Health Center. Family nurse practitioner (FNP) students also have the option of clinical practice in the clinic as part of their pediatric rotation. Access to graduate clinical courses descriptions is available at http://nursing.utk.edu/academics/MSN/showcase.aspx
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As noted above, the Knox County Health Department (KCHD) no longer provides direct care services for the Health Center, although a good working relationship continues. Bi-directional referrals are made as appropriate; the nurse managed school health clinic sends patients to the KCHD and the reverse occurs as well. Additionally, KCHD's dental clinic is very responsive to emergent referrals and they provided active support for UTK College of Nursing’s recent grant to provide fluoride treatment to children seen in the Vine Health Clinic.

HEALTHY PEOPLE OBJECTIVE ADDRESSED:
The Vine School-Based Clinic project was envisioned as a way to improve the health of an underserved population of children and in so-doing optimize their development and future wellbeing. It addresses several recommendations of Healthy People 2020 especially ECBP 12-16

ECBP - 12 - 16 Increase the inclusion of core clinical prevention and population health content in health professions education. Prevention starts in childhood and the health problems frequently addressed in individual encounters include weight management, elevated cholesterol, activity, nutrition and safety. Many handouts are prepared and discussed with families during their health visits both when well or ill.

Additional targeted health outcomes from Healthy People 2020's topical area is: Access to Care and three objectives are listed below.

Objective 1: Increase the proportion of persons with health insurance. Objective 2: Reduce the proportion of individuals who are unable to obtain or delay in obtaining necessary medical care or prescription medicines. Objective 3: Increase the proportion of persons who have a specific source of ongoing care

The Vine School Health Center increases access to primary care by:

- providing information about the state insurance plan to all uninsured families and assistance when needed
- providing follow-up care for ER visits and information regarding the primary care available through the school
- discovering what the parents would have done if they had not had access to Vine's NP and provide information about the primary care services available
- being responsive to increasing needs for primary care services at additional schools

PROGRAM OR COURSE GOALS:

Number of students enrolled/participating in 2010-2011 school year: 122

Last year there were 100 undergraduate nursing students and 22 NP graduate students who had clinical experiences in the Vine School Health Center. Three pre-nursing students from other UTK departments also volunteered time at the clinic answering the phones and helping as directed.

Did you conduct a needs assessment as part of your planning process? ☑ Yes ☐ No

The Vine Middle School location was selected because it is in census tract 6 of Knox County, an area that was designated as a Health Professions Shortage Area (HPSA) by the Federal Register and from the population data of the three zip codes served by the school: 37914, 37915, and 37917. The urban area at that time was 87.7% African American or Black with the average household income below the federal poverty line. Over 90% of the students who attended this magnet school at that time participated in the free/reduced federal lunch program. Project Director, Dr. Nan Gaylord sent out a feasibility
questionnaire to parents in the middle school and two elementary feeder schools in the community. Of the 172 surveys returned 100% of the parents stated they would use the SBHC if available and identified services they would like to see instituted.

The latest needs survey from the 2009 National Kids Count Data Program ranks Tennessee 46th out of 50 states in terms of child well-being in the state. This demonstrates a continued need for accessible child health services. Indicators that impact that ranking include:

- 30% of children are living in families where no parent has full-time, year-round employment;
- 8% of teens ages 16 to 19 are not in school and not high school graduates and 9% are not attending school and not working;
- 22% of children live in poverty;
- 35% live in single-parent families; 33% of which are female-headed families who are receiving child support.

In addition, there are preventable diseases that impact adults and require healthy lifestyle education in childhood; 30.3% of the adults in Tennessee are overweight (Center for Disease Control and Prevention) and heart disease is the leading cause of death in Tennessee (Tennessee Department of Health). These diseases can be prevented, and one of the Center of Disease Control and Prevention’s suggested interventions, healthy lifestyle education, can be provided in local schools. The school and school health center can assist in reducing the impact of many of the social determinants of health, specifically socioeconomic status, by creating a social and physical environment that promotes good health (Healthy People, 2010). The Knox County Schools website (http://knoxschools.org/) presently reports that 42.8% of the student population is considered economically disadvantaged.

**PROFESSIONS INVOLVED:**

Although the Vine School Health Center is nurse-managed and utilized as a clinical site for nursing students at the University of Tennessee, other professions have also been interested and their participation and are welcomed. Undergraduate health education students planned educational sessions for students at the middle school in health. Undergraduate industrial engineering students evaluated the electronic health records for the clinic, nursing administration students, and presently business students are proposed for the development of the business plan for the clinic. High school students interested in health careers have shadowed the nurse practitioners through their health care careers class or by request. They have been interested in nursing, medicine, physical therapy and health teaching.

**LESSONS LEARNED/EVALUATION RESULTS:**

Successes: The continued service provided by a nurse-managed, school-based health center has been a dependable resource in the community for families, school nurses and other school personnel for 16 years. Nursing students and other prospective health care professional students are able to observe the social and environmental determinants of health along with the limited access to care so many of our nation’s children face. Solving the complicated health problems requires commitment and creativity on the part of the student and an understanding of the impact of bad decisions or uncontrollable circumstances. The recent HRSA grant for equipment will allow the services to spread to eight other schools with telehealth connections.

Challenges: The continued concern for funding leads to frequent grant writing which is time-consuming for the dienidan/administrator/professor. The impact on scholarship can be positive if successful yet
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impacts the time for other publications and teaching. Additionally, there is a tension within academia about whether it is more beneficial for Universities if faculty submit grants for research funding or funding for educational and practice initiatives. There have been three administrative changes since the initiation of clinical activities at the Vine School Health Center and administrative support is required. New administrators at our College of Nursing have however continued to encourage and support with enthusiasm the clinical services at the Vine School Health Center.

CONCLUSION:
Community collaboration and support from all involved entities is required. Long-term well-developed working relationships between health and education enhance the development of a school-based health center. A strong case for the clinic's existence should be prepared including evidence from both health statistics and community residents. There will be opposing factions but faculty should be ready to address possible arguments and how it will benefit them. Be persistent!

COMPANION MATERIALS: (Course syllabi, resource lists, tests, website, etc.)
National Assembly of School-Based Health Care http://www.nasbhc.org/
National Association of Pediatric Nurse Practitioners; Special Interest Group on School-Based Health Care http://www.napnap.org/aboutUs/SpecialInterestGroups/SchoolBasedHealthServices.aspx
National Association of School Nurses http://www.nasn.org/

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