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Comments

Advanced Practice Nurses are called to be leaders in healthcare initiatives and are uniquely prepared to implement changes in healthcare through program planning. This paper discusses an APN designed primary care provider educational program on tuberculosis in the foreign born. Recommendations are given to assist APNs in establishing similar programs.

**APNS AND PROGRAM PLANNING:
AN EXAMPLE OF A PRIMARY CARE PROVIDER
EDUCATIONAL PROGRAM ON TB
IN THE US FOREIGN BORN**

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ABSTRACT

APNs are called to be leaders in healthcare initiatives and are uniquely prepared to implement changes in healthcare through program planning. This paper discusses an APN designed primary care provider educational program on tuberculosis in the foreign born. Recommendations are given to assist APNs in establishing similar programs.

Keywords

Advanced practice nurse, program planning, primary care, tuberculosis, foreign born

APNS AND PROGRAM PLANNING: AN EXAMPLE OF A PRIMARY CARE PROVIDER EDUCATIONAL PROGRAM ON TB IN THE US FOREIGN BORN

A recent publication from the Institute of Nursing (IOM) titled “The Future of Nursing” called for nurses to function at the full extent of their education and training and to be full partners in redesigning healthcare in the US.¹ Nurses are educated to identify health problems and to develop and implement plans for improvement. Advanced Practice Nurses (APNs), as leaders in nursing, have the responsibility of being leaders in healthcare change. One way to implement changes in healthcare is through developing programs that will have an effect on patient care. APNs are uniquely prepared to plan, implement, and evaluate programs in healthcare. This article describes an educational program designed and implemented by an APN as part of the degree requirements for the Doctor of Nursing Practice (DNP) degree. Specific recommendations on program planning are given in order to assist APNs in implementing their own healthcare programs.

APNs and Program Planning

The healthcare climate of today calls for more leadership initiatives by APNs. The Patient Protection and Affordable Care Act (PPACA) passed in 2010 includes initiatives such as implementation of nurse led clinics and an increase in nurse practitioners practicing in primary care as part of healthcare reform.² The PPACA also outlines requirements for documentation of safety and quality of care by hospitals and providers, and describes penalties if these standards are not met. Healthcare workers and organizations will be held more accountable for the care they give, and APNs are well positioned to develop programs to improve patient care and measure healthcare outcomes.

The American Association of Colleges of Nursing (AACN) has outlined key essentials for competency at the masters and the doctoral level for all APNs.^{3,4} The core themes of the essentials can be applied to program planning and its implementation. Essential II at both the master's and doctoral level describes how APNs are prepared to be leaders and effect organizational change.^{3,4} APNs have a systems thinking perspective and can see the larger picture in organizations in order to identify system issues.⁵ Through program planning, APNs can use these skills to plan and evaluate programs that improve outcomes and ensure patient safety. The importance of research translation and evidence based practice as stated in DNP Essential III and in master's Essential IV calls for identifying gaps in practice and using research and evidence based methodologies to design interventions that can improve care.^{3,4} Since APNs are usually practicing clinicians they have the unique ability to use their practice experiences in order to identify issues and develop programs that can measure the effect of interventions. In DNP essential VII and Master's Essential VIII the care of whole populations and preventative care is outlined as being an integral part of APN preparation.^{3,4} Collecting data on populations and analyzing clinical data in order to measure outcomes and plan changes to improve patient care are considered an integral part of the APN role. By using the competencies outlined in the essentials APNs are well prepared to plan effective healthcare programs.

Needs Assessment

In developing the primary care provider program a review of the literature, data from the World Health Organization (WHO) and the Centers for Disease Control (CDC), public health official opinion, and expert opinion were all used to determine the need for improved TB screening of the foreign born in primary care settings. Tuberculosis (TB) ranks among the top 10 killers in the world, and it is estimated that one third of the world's population is infected with

the TB bacillus.⁶ The burden of TB is great for the US foreign born population, with the rate of TB being 10 times greater in the foreign born than in the general US population.⁷ A disconnect was found between public health and primary care providers, with many of these practitioners lacking proper knowledge about TB and not doing proper screening and referral for treatment.⁸ Griffiths et al. found that provider education programs on TB increased screening for TB as well as the detection of latent and active TB in the population.⁹ Cain et al. revealed that foreigners were not being properly screened for active and latent TB when entering the US, and found that about 30% of the foreign born were not being screened at all.¹⁰ Saraiya et al. also found that at least 25% of foreign born were not being properly screened for TB and recommended education for physicians on proper screening for TB.¹¹ The needs assessment revealed that education is needed at the primary care level to encourage proper screening and referral for treatment of TB in the foreign born population.

Educational Program

The purpose of this educational intervention was to increase primary care provider screening and knowledge about TB in the US foreign born population. The main objectives for this program were to significantly increase primary care provider knowledge level about TB and to significantly increase the incidence of primary care provider screening of TB in the foreign born population one month after the educational intervention. An educational program about the problem of TB in the US foreign born population, the lack of effective screening by primary care providers, and the current screening recommendations for this population was developed for primary care providers. The program sample population included 30 Medical Doctors (MDs), Doctors of Osteopathic Medicine (DOs), and Nurse Practitioners (NPs) who worked at a large family medicine residency clinic in Rochester, New York. The patient population at the clinic

included a large number of foreign born. To guide the development of the program, Leininger's theory of Transcultural Nursing and program theory were both used.^{12,13} Leininger emphasizes giving culturally competent care, which is an important consideration in caring for the foreign born population. Program theory concepts were applied which utilized the relationships of cause, effect and impact to help design an intervention that would effect provider knowledge level and screening practices.

The educational program was developed into a DVD that included information about TB in the foreign born, general TB information, and proper screening and referral recommendations by the CDC. The content of the program was verified by the Clinical Coordinator for the local health department TB clinic, an expert in tuberculosis. The DVD program was presented to the providers at the clinic on three different occasions over two weeks. Providers who could not participate in the presentations were able to view the DVD on their own time. The educational program was evaluated using a pretest-posttest survey to measure provider knowledge of TB and screening practices before and after the intervention. A 16 question pre-program survey developed by the author was given to all providers to determine their current knowledge of TB and TB screening in the immigrant population. The survey included TB knowledge questions, screening practices, and demographics. The survey was developed with the assistance of a doctorally prepared researcher who was an expert in instrument design. It was also reviewed for content validity by the Clinical Coordinator for the local county health department TB clinic. Pre surveys were completed before viewing the DVD program. The post surveys were completed four to six weeks after the DVD program intervention by all who participated. The data from the pre and post surveys was analyzed and compared using descriptive statistics to see if there were any significant changes in TB knowledge and screening practices after the program.

Analysis of the results revealed that there was a statistically significant increase in one of the screening practice questions and in five of the knowledge questions. Provider screening practices for TB were increased slightly after the educational program while provider knowledge was increased more significantly. The stated goal and objectives were met through the program, although it was found to be more difficult to influence provider screening practices than to increase provider knowledge. It was concluded that educational programs can influence provider knowledge and practice, and can be used to improve the care of TB in the foreign born population.

Planning a Program

There are many different program planning approaches that can be used by APN's in addressing health problems.¹⁴ Program planning in health can essentially be described as problem solving, and many times does not occur in a linear fashion. There are certain steps, however, that if taken will make it easier to develop an effective program.

Define and Characterize the Health Problem

The first step in designing a program is identifying a health problem.¹⁴ Through direct contact with patients, APN's can see trends develop that may reveal problems in patient care, patient safety, or patient outcomes. APN's can also look at the organizational and population level to uncover trends in patient health. In the program described, TB in the US foreign born population was the identified health problem. TB and lack of provider screening was identified through the clinical experience of the writer and also through recognizing the recurrence of the problem in the literature.

Once a problem is identified a needs assessment needs to be completed. The target population, or defined population for the health problem, must be identified. In this example the

target population was the US foreign born population. Those for whom the program is intended, or the target audience, may be different than the target population. In this program primary care providers were the target audience and the target population was the foreign born. A review of the literature, data from leading agencies such as the CDC and the WHO, public health official opinion, and expert opinion were used for the needs assessment on the foreign born population and TB. Through the information collected in the needs assessment it was possible to more clearly define and characterize the health problem.¹⁴

Health Program Development

Determining what type of program would best address the health problem is the next step. Describing and understanding the problem using a theory conceptualizes the problem in order to better explain it. The theories used in the development of the TB program were Leininger's Transcultural Nursing theory and also general Program Theory.^{12,13} Using these theories the author was able to demonstrate the importance of culturally competent care in the foreign born and how an educational intervention program could be used to impact provider screening practices and knowledge of TB in this population.

Program stakeholders and available resources must be determined to plan the appropriate intervention. A stakeholder is described as any entity that might be affected by the outcomes of the planned program.¹⁵ Stakeholders can include funding organizations, project managers, program staff, scholars, and health professionals.¹⁴ In this program, the stakeholders were determined to be individual healthcare providers and healthcare organizations such as the department of health and a primary care clinic, health payers such as insurance companies and government agencies, the foreign born population, patients with TB, and the general public. The stakeholders should have input into the development of the program from the beginning, and can

help in increasing buy-in for the program.¹⁴ Assessment of the available organizational resources is also vital to the success of the program. Limitation of resources, especially financial ones, must be taken into account and planned for. Some possible resources to consider are office space, personnel, and technical support that are available for the program.

In planning the program intervention, there are criteria that need to be considered in order to develop an appropriate intervention.¹⁴ The intervention should be evidence-based; therefore a literature review needs to be completed. The intervention should be specific for the target population and can be tailored to a target audience in order to impact the larger target population. The intervention should lead to health gains. This criteria can be a difficult one to meet, as it should be possible to link the intervention with a decrease in a given health problem. The intervention should be feasible to implement at a reasonable cost and should be acceptable to the target audience, agencies, and stakeholders. Lastly, to have a relevant health program it must address larger societal issues and priorities. This should be taken into account when conducting the review of literature and needs assessment. The program may be designed to address smaller community or group needs but must be in line with general public health priorities. For development of this educational program, an extensive review of the literature and a needs assessment were done so that an evidence-based, feasible program relevant to the foreign born population was conducted.

Program Implementation and Evaluation

Program goals, objectives, and evaluation methods need to be outlined before the program can be implemented. A timeline is necessary and should include all of the events necessary to plan, implement, and evaluate the program.¹⁴ A timeline allows the program planner to anticipate critical deadlines for the project and the time span needed from project start to

project end. The goal stated for the program described in this paper was to evaluate the knowledge and practices of TB screening by primary care providers and provide an educational program that increased TB screening and awareness of TB in the foreign born population. The main objectives for this program were to significantly increase primary care provider knowledge levels about TB and to significantly increase the incidence of primary care provider screening of TB in the foreign born population one month after the educational intervention. The final step is to evaluate the program. Program evaluation is cyclical and should take place at all stages of the development and implementation of the program.¹⁴ The main purpose for program evaluation is to measure the effectiveness of the program to make strategic improvements in the program for the future.

Conclusion

In today's changing healthcare environment APNs are being called to be leaders in developing healthcare solutions for the future. Leading program planning initiatives is one way that APNs can impact the health of populations. APNs, with their specific education and training, have the foundation to be leaders in this changing healthcare environment. An example of a TB program planned and implemented by a doctorally prepared APN has been demonstrated, as well as general guidelines for health program planning. APNs must be empowered to take on the challenge of implementing program planning initiatives. Through this empowerment, APN's can positively impact the lives of patients, communities, and the general population.

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