Application Design in a Community Health Prevention Program

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INTRODUCTION

The need to provide health preventive services to low-income populations with little access to health care is documented in the literature. Individuals in this population typically lack health insurance and a means of receiving medical care. Under-served individuals have been unable to participate in the national prevention goals outlined for the year 2000.[1] The lack of preventive health measures is reflected in the high incidence of preventable and chronic diseases found in this population.[1,2]

Traditional paper systems can not meet the demands of patient outcome analysis.[3] The challenge for a community health services staff planning to deliver a preventive health program in a low-income neighborhood, but inexperienced with computers and information systems, was to plan a computerized application for patient information and outcome evaluation. A key question guided the application design: What patient information is needed to provide program services that have the potential of positively impacting on this target population?

The nursing staff are very experienced with applying their practice knowledge to patient care; however, computer inexperience blocked the transference of this understanding to system design. The nurses' task was the application of this same knowledge to a computer program. Collaboration was necessary, and Peplau's Theory provided the framework for transformation.[4]

METHODOLOGY

The computerized database was developed by referring to Peplau's Interpersonal Process. This theory presents a Three Step Strategy for transforming nursing practice knowledge into nursing knowledge.

Step I of Peplau's Theory proposes that an important foundation of nursing knowledge is derived from the observations made in nursing practice. After identifying the preventive services for the targeted population, the focus of decision making rested on answering questions: What type of information do nurses need to collect and disseminate for their practice and for other designated services? What is required to achieve an efficient, user-friendly system for data collection, retrieval and outcome evaluation? Data collection tools were reviewed for their applicability to the projected needs. The current iteration reflects a compilation of various tools, previous paper forms and added data for outcome evaluation.

Peplau explains *Step 2* as categorizing data observed by the practicing nurse. This categorization process is the key to explaining patient information. Several approaches to nursing documentation were reviewed for the assessment model of this data base. A standard systems model was selected since other health care workers will be providing primary care at this same site. The systems model seemed most applicable for a case management approach.

In *Step 3,* Peplau proposes that the truth in nursing knowledge is dependent upon helping clients increase their self-understanding and development. The applicability lies in identifying patient data impacted by nursing interventions which relate to outcomes. This data becomes part of nursing knowledge.

As system development and application is refined, it is hoped this design will have applicability in other low-income clinic sites. Future plans include adding client education components to the system.

References

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