Tailored Educational Approaches for Consumer Health (TEACH): A Model System for Addressing Health Communication

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Introduction

The Consumer Health Education Institute (CHEDI) at the University of Virginia has developed a model system to improve the quality and effectiveness of patient education and health communication. This multidisciplinary model draws from medicine, education, informatics, evaluation, marketing and psychology. Our goal is to create a suite of tools to assist practitioners 1) **assess** patients' & consumers' personal characteristics and preferences for health information, 2) **segment** patients & consumers into groups that minimize differences within groups and maximizes differences between groups and 3) **match** groups to the health information that most directly meets their needs and preferences.

Methods & Results

Assess:
Prior to creating an assessment instrument, we conducted an extensive literature review to determine possible factors upon which the population might be differentiated. Potential factors (e.g., attitudes about health, cognitive ability, health activity, health literacy, locus of control, personal health status, risk-taking, social support) were evaluated for the strength and type of available evidence. Evidence for a given factor was categorized as *causal* if adapting an educational intervention based upon the factor led to increased knowledge, behavior change or other desired health outcome. Evidence was categorized as *correlational* if the factor has only been found to be with correlated these outcomes. Each type of evidence was ranked based on the level of support found in the literature. A total of 19 factors were reviewed, ranked, and prioritized for inclusion in the assessment instrument. We developed both a written and a telephone stratified random sample survey to measure 17 of these factors. These factors were used to create the variables in the segmentation analysis.

Segment:
Cluster analysis was used to identify different segments based on factors related to health information needs (e.g., health status, health system utilization, etc.) and information seeking behaviors (e.g., health literacy, internet use, learning styles, etc.). Five segments were identified. The segments were compared by demographic, psychographic, and life style/behavior factors to validate that discrete segments were identified. These groups are described according to the presence or absence of factors.

Example Segment Description:
- Has chronic illnesses that may include heart disease, high blood pressure, and stroke
- Relies on professional sources of information
- Does not use a computer or the Internet
- Scores low on literacy, health literacy and numeracy

Match
For each segment we identified corresponding educational and delivery requirements, based on the characteristics identified in the segmentation process.

Example Requirements for Health Education:
- Support healthy behaviors and compliance
- Stress authority of sources of information
- Do not develop computer or internet materials
- Utilize auditory educational style, lower literacy material, few numbers and avoid medical jargon

A scorecard methodology is used to match existing health education materials with the appropriate segment or to guide design of new materials.

Conclusions

We have demonstrated that patients and health consumers have different health information needs and preferences which show promise as a basis for selecting or designing the most appropriate materials or programs.

Acknowledgement