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Research article

Physician perceptions of primary prevention: qualitative base for the conceptual shaping of a practice intervention tool

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Abstract

Background: A practice intervention must have its basis in an understanding of the physician and practice to secure its benefit and relevancy. We used a formative process to characterize primary care physician attitudes, needs, and practice obstacles regarding primary prevention. The characterization will provide the conceptual framework for the development of a practice tool to facilitate routine delivery of primary preventive care.

Methods: A focus group of primary care physician Opinion Leaders was audio-taped, transcribed, and qualitatively analyzed to identify emergent themes that described physicians' perceptions of prevention in daily practice.

Results: The conceptual worth of primary prevention, including behavioral counseling, was high, but its practice was significantly countered by the predominant clinical emphasis on and rewards for secondary care. In addition, lack of health behavior training, perceived low self-efficacy, and patient resistance to change were key deterrents to primary prevention delivery. Also, the preventive focus in primary care is not on cancer, but on predominant chronic nonmalignant conditions.

Conclusions: The success of the future practice tool will be largely dependent on its ability to "fit" primary prevention into the clinical culture of diagnoses and treatment sustained by physicians, patients, and payers. The tool's message output must be formatted to facilitate physician delivery of patient-tailored behavioral counseling in an accurate, confident, and efficacious manner. Also, the tool's health behavior messages should be behavior-specific, not disease-specific, to draw on shared risk behaviors of numerous diseases and increase the likelihood of perceived salience and utility of the tool in primary care.

Background

Primary care physicians, by virtue of their position and function in healthcare, are key to the delivery of preventive care [1]. However, routine integration of primary pre-

vention into practice has been sub-optimal, resulting in lost opportunities to decrease morbidity and mortality [2]. For example, though the Preventive Services Task Force [3,4] recommends that preventive services be a part of every medical visit, studies report a compliance rate of only 20% to 60% [5–7].

Studies of barriers to implementation of preventive services have concluded that a) changing physician practices requires altering their routine practice environment [8]and b) the integration of a systematic well-organized methodology into the primary practice environment is key to increasing the rate of prevention services delivery [9]. The long-term goal of this study is a web-based primary care practice tool to facilitate physician-delivered health behavior counseling. The organization of the tool's printed output will assist the physician in risk identification and prioritization and delivery of patient-tailored evidence-based health behavior recommendations at the time of the clinic visit. Previous studies have shown that the introduction of appropriate support and tools has resulted in physician-reported increased self-efficacy in changing patient behavior [10,11]and increased rates of risk counseling [12,13]. An efficient integrated practice tool could also advance physicians and patients to view chronic and acute care visits, in addition to well care visits, as opportunities to deliver preventive services.

When developing such a tool, sole reliance on past studies of barriers [14–18] is not advised, as barriers in one setting may not be generalizable to another [19]. Formative assessment is necessary to identify barriers, universal and indigenous, in the intended environment. In addition, before any intervention tool can be developed and introduced, its claims of benefit and relevancy to the intended practice environment must be evidence-based. Finally, whether the conceptual credibility of the intervention can produce behavioral change is largely dependent on its ability to translate to real world application and benefit in the context of the intended user's environment. The "sell of health" as the product has not been sufficient, as evidenced by the lack of routine preventive care delivery. To overcome attitudes and office systems that often emphasize treatment versus preventive care, the tool must be developed and "sold" on points salient and compelling to physician values, beliefs, and experiences [20,21]. In sum, a comprehensive assessment of the targeted environment is essential to the process of intervention development and application.

The PRECEDE-PROCEED model [22], a comprehensive health promotion-planning model, provided the framework for this study's incremental progression towards intervention visualization, development, and adoption. Physician formative involvement in the tool development began with the convening of a focus group of 12 peer-identified primary care physician Opinion Leaders. The aims of the focus group were to a) identify conceptual themes that characterize primary care physician attitudes, deterrents, and practice environments regarding preventive care and, on the basis of the findings, b) establish the conceptual framework of an intervention tool that will best meet the needs of primary care practices.

Methods

Focus group methods

The Primary Care Advisory Board of Western New York (WNY) represents over 500 physicians associated with 13 primary care practices throughout WNY. The Department of Family Medicine (DFM) of the State University of New York at Buffalo School of Medicine and Biomedical Sciences is a leading provider of medical care to the underserved and underrepresented populations in WNY. Members of the Advisory Board and DFM applied their knowledge of the regional physician community and assisted in the identification of 19 Opinion Leaders among WNY Family Practice, Internal Medicine, and General Practice primary care physicians (PCP) to be invited to participate in a semi-directed audio-taped focus group discussion. Opinion Leaders were used to establish a communications channel into the existing regional physician social network, and in acknowledgement of the mediating effects of Opinion Leaders on the diffusion and acceptance of new ideas and products, such as the future practice tool [23]. Opinion Leader sampling was used to obtain the sought significant conceptual variation that stems from the Opinion Leaders' vast experience and influence [24,25]. To enhance the likelihood of variation among the identified Opinion Leaders, the Advisory Board members and DFM were directed to provide names of Opinion Leaders physicians from a range of practice locations (i.e., urban, suburban, rural), patient population characteristics (e.g., age, insurance status), primary care specialty, and both genders, in addition to considering the physicians' perceived stature among peers. Each Opinion Leader was mailed an invitational letter that briefly explained the study and the general intent of the physician discussion. One week following the mailing, the lead researcher called each physician's office to answer any questions and determine physician availability for participation. Twelve physicians consented and participated in the single focus group (63% participation rate). Each participant was provided either an honorarium or a Palm IIIxe organizer at the conclusion of the focus group. The 2-hour audio-taped focus group was conducted at a focus group research facility in Buffalo, New York in March 2001. Seven male and five female physicians participated and represented family medicine (n = 7) and internal medicine (n = 5) specialties.

A professional moderator led the group using a semi-structured interview guide developed by the researchers. The participants were asked about their views on the nature and goals of preventive medicine, use of primary prevention in the region, and existing tools to assist in the delivery of primary prevention. To avoid channeling the discussion, study descriptors provided to the PCP and the focus group moderator never used the phrase "cancer prevention". The Roswell Park Cancer Institute Institutional Review Board approved this research protocol.

Analysis

The focus group audiotape was transcribed verbatim. Primary data analysis was based on grounded theory methodology [24,25]. Transcripts were analyzed line-by-line, coding the text with labels that encapsulated the substantive meaning inherent in the participants' testimonies. Similar codes were clustered to rebuild the data into conceptual categories within the data. Initial categories were then subsumed into more encompassing categories. These broader categories were abstract characterizations of the data, as they accounted for numerous instances of a certain phenomena under one theoretical concept. Theoretical memos were written throughout the analysis, which provided a record of the analytic process as themes were developed. The researchers discussed the development of the themes throughout the analysis, reaching consensus on eight final emergent themes. Three of the themes focusing on perspectives of primary prevention are presented in this paper (Table 1).

Table 1: Summary of Emergent Themes

Physicians' Perspectives about Primary Prevention
_Three distinct conceptions of prevention: _Traditional model of prevention: primary (avoid disease), secondary (modify disease), and tertiary (ameliorate disease). _Public health model: epidemiological-based prevention practiced largely outside of the clinic realm (e.g., sanitation, vaccination programs). _Wellness model: state of high functioning of mind, body, and spirit across the health/disease spectrum. *Summary*: Physicians acknowledge and strongly endorse the benefits of primary prevention. However, medical training emphasis on secondary prevention (treatment) resulted in physicians feeling unskilled to deal with issues of primary prevention and health promotion, regardless of their conceptualization of prevention.
Physicians' View of Patients' Perspectives of Preventive Care
_Patients typically entered the clinical arena seeking secondary prevention. _The lay media (i.e., television, advertisement, print, Internet) often influenced and distorted patients' perceptions of their risks and health care needs and wants. _Patients were predominantly interested in quick fixes to their health care needs. _Patients expressed "ignorant bliss" (i.e., if they weren't experiencing or knowledgeable about disease symptoms, then their health was not in jeopardy). *Summary*: Physicians had to overcome the barriers associated with patients' mindsets and notions of risk in order to provide preventive care.
Focusing on Behavioral Change
_Physicians wanted patients to accept more personal responsibility for their own health. _Unwilling patients were difficult to motivate and unlikely to change, regardless of suggested change method. _Physicians' lack of behavioral change training was a significant impediment to promoting patient behavioral change. *Summary*: Behavioral change was perceived as an important base to the promotion of primary prevention and wellness. However, physician delivery of health behavioral counseling was hampered by physicians' lack of training in behavioral change concepts and techniques and perceived low self-efficacy.

Results

Theme 1: physicians' perspectives about primary prevention

This theme emerged from physicians' perspectives about what constituted primary prevention and preventive medicine in the health care arena. Physicians offered three models of prevention: a traditional model based on their medical training, a public health model, and a contemporary wellness model.

The first model, a traditional conception of preventive medicine, highlighted primary, secondary, and tertiary levels of care. This "textbook" definition of prevention was learned in medical school and guided the physician's role in disease prevention and management:

"Three levels of prevention: primary, secondary and tertiary. A-M-A: Avoid disease, Modify disease, Ameliorate disease."

The physicians unanimously stated that, of the levels of preventive care, secondary prevention was most stressed in their medical training. Their training focused on the diagnosis and treatment of presenting conditions, which tangentially de-prioritized primary prevention in clinical care:

"We were trained to use intervention rather that prevention."

The second model offered a population-level approach to primary prevention. This public or community health model was based on early epidemiological advances, such as the prevention of infectious diseases through government sanitation and vaccination efforts. The main implication of the public health model was that governmental public health agencies, not clinical practices, were the bodies responsible for delivery of primary prevention. Participants also noted that community level prevention could be particularly difficult to achieve in certain populations due to socioeconomic factors, such as age, ethnicity, income, and existing level of disease burden. Physicians felt relatively unprepared to deal with underlying factors affecting primary prevention that they perceived to be outside their realm of control.

Physicians noted the importance of the contemporary model of wellness that went beyond traditional notions of medical care or public health. Wellness, not simply a matter of being disease-free, was characterized as a state of high functioning that integrated mind, body, and spirit. Primary prevention, though an important factor of wellness, was only one component in a more abstract conception of good health:

"Wellness is the goal of prevention, essentially, and wellness is not just the absence of disease, it's the presence of satisfaction with one's mental and physical well being at the same time. So wellness is an outgrowth of prevention."

As much as wellness was an ideal health status, physicians believed that wellness was a difficult and complex status to achieve:

"...we throw that terminology out a lot, but it's really quite complicated to keep people healthy....for the physician, for the patient, for the society as a whole."

Wellness was expressed as a broad concept that went beyond most physicians' medical school training and education.

Theme 2: PCP view of patients' perspectives of preventive care

Patients sought care with an existing frame of mind that dictated their expectations of the office visit. According to the PCPs, patients typically entered examination rooms seeking treatment for acute or chronic conditions; few specifically sought primary preventive care. The relatively small number of proactive requests for preventive care was often limited to patients with memberships in HMO's that promoted wellness visits.

The physicians reported the lay media (i.e., television, advertisement, print, Internet) to be a significant influencer of patients' perspectives and mindsets about their health care needs. Patients were increasingly informed and predisposed by consumer-direct marketing and popular ideas about health, which often lead to patients' media-skewed perceptions of health needs and goals:

"...Yes, it's a very vogue, in thing right now...to get the total body CT scan. It only costs seven-hundred dollars and they're doing it in California, and so that sets a thought process in a patient's mind that 'Well, if I do this and everything is okay, I must be well', and that's completely off base."

Health information retrieved through the lay media had also produced patients' risk perceptions that were at times in conflict with the patients' best medical interests. For example, one physician noted the following:

"You have patients who come in who have a cholesterol of 350, and they are more concerned that they are going to have a liver side effect if they take a medicine ... than their cholesterol of 350. And so media plays a huge role in what patient's perception of what is important to them."

The physicians observed that the media had enhanced patients' expectation of a "silver bullet" cure. Some patients not willing to commence exercise or stop smoking were willing users of nutritional supplements, despite the convincing evidence of benefit for the former and less evidence for the latter. A perceived quick fix, such as a pill, avoided the more difficult issue of behavior change, and justified patients' satisfaction or complacency with their non-healthy behaviors.

Physicians stated that patients who were satisfied with their current level of health did not feel the need to change their behaviors because they were healthy for the moment. "Ignorant bliss" was a frequent basis for patients' lack of interest in changing behaviors associated with an increased risk of disease later in life.

Physicians had to contend with the reality that patients' agendas often were in conflict with their own. The disparity between patients' and physicians' health care expectations and wants deterred the delivery of primary prevention.

Theme 3: focusing on behavioral change

Throughout the discussion, behavioral change was often cited as a central issue for the promotion of wellness and primary prevention. Behavioral change was a difficult task for both patient and physician, though one that primary prevention and wellness were dependent upon. The PCPs

believed that implementing behavioral change required changing the patients' mindsets, including leading patients to accept more personal responsibility for their wellness. It would be virtually impossible to initiate behavioral change if a patient expressed no interest or willingness to change, regardless of methods employed to motivate the patient.

The physicians perceived that patients self-selected for behavioral change. Patients who were willing to change would change. Patients resistant to change would not. Perception of patient behavior as a dichotomy of compliant versus not compliant, however, seemed to thwart physician consideration of more subtle issues related to health behaviors and behavioral change.

It was reported that patients' receptivity to health promotion discussion was dynamic, and times of openness were opportunities to be capitalized upon. Physicians needed to take advantage of a willing patient, though willingness to change was characterized as random – "you never know which patient is going to listen".

Other significant barriers to behavioral change were attributed to physicians themselves. They acknowledged their lack of training, knowledge, and skill in behavioral change process and recommendation conveyance. Participants expressed a desire for tools that could help with patient behavioral change, but often had to create approaches of their own:

"I don't think that we were trained when we were in medical school, in residency, at least I was not, in effective ways of changing patient behavior. We were not trained in that. You learn it by successes and failures."

Physician acceptance of the concept and worth of promoting health behaviors was ideal, but there were considerable barriers to physician delivery, recommendation, and the follow-up of these behaviors with their patients.

Significant emergent concepts

In addition to the themes, several significant concepts emerged from the focus group. In the forefront was the observation that physicians do not perceive the purported power [26] of their recommendations in motivating patient behavioral change. The physicians generally lacked a sense of behavioral capability, expectation, and self-efficacy [27] regarding their ability to successfully recommend, produce, and sustain a change in patient health behaviors. Secondly, the diseases emphasized by the physicians were non-malignant chronic conditions, such as diabetes and heart disease, which reflected the conditions typically managed on a daily basis. Cancer was mentioned only briefly. Thirdly, the underscored health risk behaviors were tobacco use, weight control, dietary intake, and exercise. Fourth, time was the essential element for tuning-in to the patient to ensure preventive care was received, while simultaneously a constraint to offering care. Physicians did not get reimbursed for patient counseling services delivered in less than 15 minutes. Reportedly, there was no clear financial incentive for physicians to provide behavioral counseling within the context of typical visits. Fifth, existing tools to aid the delivery of preventive care, particularly written educational materials, were seen as only partially effective. Physicians were interested in finding truly effective aids:

"We do not have unlimited time, so anything that aids us technologically, check lists or whatever, is something that's going to help us with prevention."

Though awareness and use of existing tools and aids was minimal, physicians felt that thoughtfully engineered tools would be of great assistance. The potential of such tools is supported by observations that suitable tools have lead to increased physician self-efficacy [10,11] and rate of risk counseling [12,13].

The study analysis, based in grounded theory, was an exhaustive process that maximized the data obtained from the session. This method suited the preliminary aims of formative PCP involvement and the identification of conceptual themes to begin the characterization of PCP perceptions regarding primary prevention. Of note, the emergent concepts concurred with many of those observed in larger studies [19] and reports, such as that done by the Center for the Advancement of Health (CFAH) [28]. The CFAH collected data nationwide from 141 clinicians, researchers, program directors, and organizations in an effort to understand impediments to routine delivery of preventive care. Findings of physician and patient resistance to change in traditional roles, insufficient training and low self-efficacy in behavioral counseling, low patient motivation, and lack of relevant counseling resources corroborated those reported in this study. Nevertheless, the use of multiple focus groups would have enhanced this study's confidence in the initial characterization and generalizability. The identified concepts will be applied towards the development of a survey that will be mailed to a randomized sample, stratified by county, practice specialty, and physician gender, of WNY PCP to test and refine the characterization of regional perceptions and experiences. The focus group and survey findings will then be applied in the development of the practice tool.

Discussion

It is apparent from the focus group and literature [29] that the delivery of non-reimbursed, but critical, health behavior counseling is dependent upon the complex relation-

ship among physicians, patients, practice characteristics, and office systems. On the basis of the emergent themes and concepts, it is concluded that the future tool will need to meet the following criteria to increase the probability of the tool's perceived benefit and integration into primary care practice:

1) A tool whose design, content, and clinical saliency address the behavioral capability, expectation, and self-efficacy deficits of physicians, as these constructs are significant mediators of physician behavior;

2) A tool that produces health behavior, not disease-specific, assessments and recommendations that acknowledge and emphasize the overlapping behavioral risks among non-malignant and malignant diseases for which a given patient may be at risk; to explicate the connection between health behaviors and a number of presenting or potential illnesses;

3) A tool that presents primary prevention as a component of the broader concept of wellness; to increase the perceived relevancy or fit of primary prevention within typical visits that are predominantly viewed as occasions for secondary prevention;

4) A tool whose health behavior risk assessment and recommendations are tailored to each patient's health status and attitude toward health behavior change; the tool feedback could provide an avenue for change, and/or act as a contract between physician and patient;

5) A tool that assists the physician or other health professionals to deliver tailored health behavior recommendations and strategies in 1–3 minutes during typical clinic visits;

6) A web-based tool maintained by an outside organization, not the practice, that could be easily updated to sustain scientific accuracy and keep attuned to patient concerns prompted, in part, by lay media;

7) A tool that would act as an aid, not a replacement or add-on, to the physician-patient relationship.

If these criteria are met, the integrated practice tool could facilitate physicians and patients to view more typical clinic visits as opportunities for primary preventive care. Again, this view would be advanced if the tool more expansively framed the visit as an opportunity for wellness. The goal of wellness, a status determined by and aims tailored to the patient's situation and abilities, inherently acknowledges that human behavior is not linear and uniform, but dynamic and variable. Physician and patient success would be measured in terms of incremental progressive changes [30] versus the absolute of success or failure. Risk reduction, as well as risk elimination, would contribute to increased perceptions of behavioral capability, expectation, and self-efficacy by physicians and patients alike. Outcomes of this type of success may help establish the worth of and, thereby, the market for the routine provision of primary preventive care in all clinic visits.

Competing interests

None declared.

Authors' contributions

ALM designed and coordinated the study, participated in the analysis, and drafted the manuscript. GPB performed the analysis and participated in manuscript preparation. CK participated in the study coordination and manuscript preparation. MCM participated in the study coordination and manuscript preparation.

All authors read and approved the final manuscript.

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