

The Art and Complexity of Primary Care Clinicians' Preventive Counseling Decisions: Obesity as a Case Study

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ABSTRACT

PURPOSE Studies have often shown low rates of preventive counseling in primary care, and interventions aimed at improving counseling rates have had disappointing results. Using obesity as a case study, we looked for factors that influence clinicians' decisions to include preventive counseling in the brief primary care encounter.

METHODS A sequential, mixed methods study was conducted among clinicians in RIOS (Research Involving Outpatient Settings) Net, a Southwestern US practice-based research network. Thirty primary care clinicians participated in in-depth interviews or analytic focus groups, and 75% of 195 network members responded to a survey used to estimate the frequency of factors influencing decisions to undertake preventive counseling.

RESULTS Clinicians described a complex set of factors that influence decisions to provide preventive counseling for obesity. These can be grouped into 2 sets of factors: (1) relatively stable factors that "set the stage" for the encounter, such as the clinician's life values, definitions of success, and the availability of community resources; and (2) factors that are more dynamic, exerting their influence "as the door opens" into the examination room. These factors include the patient's agenda and receptivity to the proposed counseling, as well as the presence of teachable moments. Clinician, patient, and external factors are found in both groups.

CONCLUSIONS Clinician decisions to include obesity and other types of preventive counseling in the brief encounter reflect the art and complexity of management of the encounter. Future efforts to enhance the delivery of preventive counseling will need to move beyond linear models of behavior change to recognize this complex environment.

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INTRODUCTION

Preventive counseling services are an essential component of primary care. Nevertheless, research has consistently shown low rates of preventive services counseling in everyday primary care practice.¹⁻⁶ Several well-documented barriers to preventive counseling delivery in the brief clinical encounter include lack of clinician self-efficacy and knowledge, limited time, and poor reimbursement for preventive services.⁷⁻¹⁰ Most interventions that have been tested in an attempt to improve the frequency of preventive counseling delivery have targeted these same barriers.¹¹⁻¹³ Surprisingly, these interventions have had, in general, disappointing results.¹⁴⁻¹⁷ Indeed, even a strong inclination by the clinician to provide preventive counseling care does not ensure its delivery.¹⁸ In light of these disappointing results and with the continued growth in importance of behavior-related conditions for which preventive counseling has an important role, the need to better understand the process of preventive counseling in the primary care encounter, as well as the reasons for its limited delivery, has become compelling.

An important step toward understanding the process of preventive counseling in the primary care encounter is to examine how primary care clinicians manage the many competing demands they confront in brief encounters.^{19,20} A fuller understanding of these dynamics may provide direction for the development of more effective solutions to the preventive counseling gap in primary care.²¹ We report findings from a multimethod study examining clinician perceptions about delivering preventive counseling in the brief primary care encounter using obesity counseling as a case study.

We chose obesity because of its confirmed links to increased mortality²² and evidence that primary care clinicians infrequently address this counseling topic with their overweight patients.^{23,24} Although it is clear that widespread adoption of healthy behaviors, such as obesity prevention, is a challenge that extends well beyond the clinical examination room, we focus here on the role that clinicians play in preventive counseling.

METHODS

Study Design and Setting

We conducted a sequential mixed methods study using both qualitative and quantitative methods, including individual in-depth interviews, focus groups, and a survey.²⁵ The sequence of data collection was aimed at identifying and describing important factors that clinicians perceive to influence their decisions to include preventive counseling in the brief encounter and then estimating the frequency of these factors. The research team included a medical anthropologist, a family physician, an internist, and a pediatrician. The study protocol was reviewed and approved by the 4 appropriate institutional review boards.

The study was conducted in RIOS (Research Involving Outpatient Settings) Net, a practice-based research network in New Mexico. The more than 200 member clinicians of RIOS Net are 58% family physicians, 8% general internists, 19% general pediatricians, and 15% nurse-practitioners and physician assistants practicing in community health centers, Indian Health Service clinics and University of New Mexico primary care sites serving low-income, predominantly Hispanic and Native American communities. RIOS Net clinician members are 55% female, have a median age between 40 and 49 years, and are 74% non-Hispanic white, 19% Hispanic, 5% Asian American, and 2% Native American. RIOS Net patients are 63% female and 31% Hispanic, 28% Native American, 25% non-Hispanic white, 12% multiethnic, 2% African American, and 2% Asian American. RIOS Net members have identified 9 high-priority health care topics, including the interrelated problems of diabetes/obesity in young persons, which served as

the impetus for this study. Additional information about RIOS Net is available at <http://hsc.unm.edu/rios/>.

Data Collection and Analysis

Step 1. Individual In-depth Interviews

Sample. Using a purposive sampling strategy guided by a priori expectations about influences on approaches to preventive counseling (clinician training, available resources, and practice and cultural context), we conducted a series of individual in-depth informant interviews among clinicians in RIOS Net.^{26,27} Our goal was to identify the full range of relevant responses; therefore, we sampled by clinician type (mid-level practitioner, family physician or internist, and pediatrician), type of setting (community health center, Indian Health Service, and academic), practice location (rural and urban), and years of practice experience.

Data collection. A semistructured interview guide (available online-only in Supplemental Appendix 1 at <http://www.annfamned.org/cgi/content/full/4/4/327/DC1>) explored the factors influencing delivery of preventive counseling and reflections on competing demands in the brief primary care encounter as a case study. Recall of a recent patient encounter was used to ground the discussion. Six pilot interviews were conducted with other members of RIOS Net. Interviews were all conducted by one member of the research team (AS), and lasted between 45 and 60 minutes. All interviews were tape recorded and transcribed.

Data analysis. Using an immersion/crystallization process, 4 members of the research team independently reviewed sets of 2 to 3 transcripts at a time.²⁸ The team met after each set was reviewed to discuss emerging themes and to modify the interview guide as needed to test ongoing interpretations and to further examine anomalous responses. Transcripts were also imported into NVivo for coding and text retrieval.²⁹ Ongoing analysis and data collection continued until data saturation had been achieved. Through this iterative process we developed a preliminary theoretical framework, reviewed during an analytic retreat by an outside qualitative research consultant (BFC), that we further refined in subsequent data collection steps.

Step 2. Analytic Focus Groups

Sample. Ten RIOS Net clinicians not interviewed in step 1 participated in 2 analytic focus groups. We used this step as a mechanism to have clinicians refine, confirm, or disconfirm our preliminary interpretations while also providing new data for analysis. Group members were recruited using the step 1 sampling criteria.

Data collection. Group sessions began with an overview of the step 1 interview findings and our preliminary model. We asked participants to comment



on each element of the model and, where appropriate, to propose revisions. Each group interview was tape-recorded and transcribed.

Data analysis. Using a similar immersion/crystallization approach, the group transcripts were reviewed both independently and then collaboratively by the research team and assessed primarily for comparability to the analytic framework. We sought responses that were potentially disconfirming. Transcripts were again imported into NVivo. We used the refined analytic model for the final step of the research.

Step 3. Network Survey

Sample. We mailed a survey questionnaire to all RIOS Net clinicians (available online-only in Supplemental Appendix 2 at <http://www.annfammed.org/cgi/content/full/4/4/327/DC1>).

Data collection. The survey focused on providing frequencies of agreement with factors identified in the qualitative steps of the study. The research team developed the survey instrument and piloted it with 13 clinicians for further refinement. Specific items asked for respondent agreement with, for example, reasons for and barriers to preventive counseling (again focusing on obesity counseling), definitions of success in counseling, and resources that could enhance effectiveness in counseling. Standard mail survey techniques were used, augmented by network e-mail listserv messages to members. Three periodic drawings among respondents for \$75 gift certificates were offered as response incentives.

Data analysis. Data were entered into a Microsoft Access database, with 10% of the entries doubly entered to assess reliability of entry. Correlation analyses were performed to assess the relationship between specific clinician characteristics and aspects of obesity counseling. Multivariate regression was used to test for the association between predictor variables, including clinician attributes, such as years of experience and practice specialty, and an outcome measure comprised of responses related to obesity counseling approaches. To determine the underlying factors related to obesity preventive counseling, maximum likelihood factor analysis with an orthogonal rotation was used. A more detailed description of the factor analysis methods is available online-only in Supplemental Appendix 3 at <http://www.annfammed.org/cgi/content/full/4/4/327/DC1> and a results table is available in Supplemental Appendix 4 at <http://www.annfammed.org/cgi/content/full/4/4/327/DC1>.

RESULTS

Demographics

Twenty of 22 clinicians contacted were interviewed, and 10 additional clinicians participated in the focus

groups (Table 1). A total of 146 of the 195 members of RIOS Net at the time of the survey completed the survey questionnaire—a 75% response rate (Supplemental Appendix 2). Chi-square tests, using several clinician characteristics, indicated that the survey respondents were representative of RIOS Net (Table 2).

Managing Competing Demands to Include Preventive Counseling in the Encounter

We identified a diverse set of factors that appear to influence whether a clinician decides to use time in

Table 1. Clinician Interview and Focus Group Participants

Characteristics	Clinician Interviews (n = 20)	Focus Groups (n = 10)
Sex, female	9	4
Practice specialty		
Family physicians	5	5
Pediatricians	5	2
Mid-level practitioners (PA, NP)	7	2
Internists	3	1
Total	20	10
Institutional setting		
University of New Mexico	9	4
Community Health Center	6	4
Indian Health Service	5	2
Total	20	10

PA = physician's assistant; NP = nurse-practitioner.

Table 2. Comparison of RIOS Net General Membership With RIOS Net Survey Respondents

Characteristics	Network Members (n = 195)	Survey Respondents (n = 146)	P Value
Sex, female, %	55	55	.959
Institutional setting, %			
University of New Mexico	29	37	
Community Health Centers	32	24	
Indian Health Service	36	35	
Private practice	3	4	.202
Practice specialty, %			
Family physicians	58	57	
Pediatricians	19	22	
Mid-level (PA, NP)	15	12	
General internists	8	9	.779
Location, %			
Rural	53	61	
Urban	47	39	.163
Years of experience, mean No. (SD)	12.1 (8.2)	11.9 (8.3)	.849

PA = physician's assistant; NP = nurse-practitioner.

the brief clinical encounter for preventive counseling. These factors fell into 2 categories: those that "set the stage" before the encounter and were relatively stable, and those that were more contextual, coming into play "as the door opens" for the encounter (Table 3).

Factors That 'Set the Stage'

We found that factors that set the stage for the encounter could be further grouped into 3 sets of influences: those related to (1) the clinician, (2) those related to the patient, and (3) those that were external.

Clinician. The most important influences that related to the clinician appeared to be the clinician's life values, definitions of success, and the perceived effectiveness of the specific preventive counseling tool. With obesity counseling as our example, clinicians noted the high prevalence of obese patients and the lack of success in helping patients achieve sustained weight loss. The clinician's values about health and wellness, formed through personal and professional experiences, and the value of living in an ideal health state motivated them nevertheless to continue to spend time on this prevention topic. Indeed, in the questionnaire when asked to select the most important factor in their decision to provide obesity counseling during the encounter, most (65%) clinicians chose the response, "My personal belief that the nonobese have a better quality of life."

Clinician's definitions of success also appeared to influence how they approached preventive counseling. Most clinicians reported a counseling goal aimed at improving general health habits and wellness rather than at achieving a recommended weight. As one clinician remarked, "Success is anything that has a favorable impact on their health."

Most survey respondents (53%) agreed with this statement and selected definitions of success for obesity counseling that did not involve any weight loss. In contrast, almost no clinician (1%) defined success in accordance with more clinically standard weight loss goals, such as a body mass index (BMI) of less than 30.

In the qualitative interviews, we found a relationship between type of clinician training, years of experience, and approach to counseling. For example, we observed that pediatricians newly out of training reported more consistent obesity counseling aimed at achieving BMI goals than did family physicians, internists, or more experienced pediatricians, all of whom generally adopted a more situational approach to inclusion of obesity counseling and used broader wellness goals for counseling. Multivariable analysis of survey responses, however, did not confirm these findings (Mallow's $C_p = 0.774$), which may have been due to an insufficient number of survey responses from pediatricians with fewer than 5 years of experience.

The clinicians' perceptions of the effectiveness of tools they had to offer patients were an important influence on reported practices. Whereas most national guidelines for obesity prevention urge aggressive approaches to this problem, the clinicians clearly stated that the absence of effective counseling approaches influenced their willingness to spend their limited encounter time on this topic.

"There are some things in anticipatory guidance that we know are fairly effective; counseling for diet and exercise are not among them, unfortunately."

Patient. The clinician's perception of the patient's motivation for change was an important determinant of the clinician's decision to spend time on preventive counseling. When asked on the questionnaire, clinicians indicated a high level of interest (mean score 70 on a 1 to 100 scale with 100 indicating very interested and 1 indicating no interest) in counseling techniques to address patient motivations. Family views about foods, activities, and health and cultural traditions involving food preparation and aesthetic perceptions of bodily norms were key patient factors that influenced the decision to counsel when faced with competing demands within the encounter. Many clinicians talked about counseling their patients to integrate healthier choices within these cultural norms rather than abandoning the norm. Personal resources available to patients influenced clinicians in their decision whether to pursue preventive counseling. As one clinician noted,

"... well, I have one patient who would really benefit from walking, but she lives in a really bad neighborhood, and she doesn't have a car, and she'd have to rely on her daughter to take her somewhere that's safe to walk. So I mean, there's just too many barriers—she can't do it."

Table 3. Factors Influencing the Delivery of Obesity Preventive Counseling

Category	Factors	
	Setting the Stage	As the Door Opens
Clinician	Life values	Perceived patient receptivity
	Definitions of success	
	Training type	Presence/absence of a teachable moment
	Experience	
	Counseling style	
	Professional skills	
Social/professional networks	Patient agenda	
Guidelines		
Patient	Motivation: barriers and facilitators to change	Patient agenda
	Individual/family Resources	
	Cultural norms	
External	Institutional issues	Current practice conditions
	Practice structure	
	Community resources	

External. Finally, clinicians discussed the importance of factors external to the patient. Clinicians frequently talked about how profound social, economic, and environmental obstacles affect their patients' health. These circumstances were important in how the clinicians viewed the likelihood of behavior change as a result of their counseling efforts and, consequently, how they approached the inclusion of preventive counseling in the encounter. Other external factors identified were practice-based—how the organizational structure of the practice affects patient care—as well as community-based—how awareness of the presence/absence of resources in the community to support the preventive action affect clinical decision making. For example, even if the patient is motivated to take preventive action, identifying a suitable referral resource or program may prove to be difficult. As one clinician lamented,

"... that's where it really honestly gets very hard. And I try to the best of my ability to find them stuff, but it's not like 'Here's a program, go there.' It's more like, 'What can we do together that's in the community that's accessible to you and fits your interest, your needs?'"

'As the Door Opens' Factors

Once the clinician enters the examination room, a more dynamic set of factors resulting from the patient-clinician interaction influenced the final decision to provide obesity counseling. For purposes of analytic clarity, we grouped these factors into the same categories used above—clinician, patient, and external—although we recognize that the situational nature of these counseling decisions blurs these boundaries.

Clinician. Within the clinician group of factors, the clinician's perception of the patient's receptivity to the counseling message was an important influence on the decision to spend time on the counseling. Clinicians base patient receptivity on a range of nonverbal and verbal cues that inform their strategic approach.

"You know, there's definitely some body language that we see. I mean, people that are having kind of closed body language and then also the responses are such that you really get the sense that, 'You know, I've heard this before, Doc. Don't keep pushing this.'"

Although we found that assessing patient receptivity is mostly based on these situational factors, the shared patient-clinician history of interactions also plays a role, which suggests an interrelationship between "setting the stage" and "as the door opens" factors. For example, a clinician who perceives a patient lacks weight-loss motivation based on past encounters may be inclined to read current cues in accordance with this experience.

Simultaneous to gauging patient receptivity, clinicians are also searching for a teachable moment (94% of

survey respondents report they use this strategy for introducing preventive counseling). For example:

"Often you can segue into it [obesity counseling] if the patient has diabetes, if they have heart disease, if they have arthritis, and they're looking at a knee replacement or some other arthritic problem that's being aggravated by the fact that they're overweight. That gives you an opportunity to say, 'You know, you'd do a lot better if you didn't carry around another 50 pounds as far as your arthritis goes. Let's figure out a way to help you lose some weight.'"

Patient. The patient's visit agenda was cited as another important influence on the use of time for preventive counseling. Indeed, the patient's agenda was rated overall as the most important consideration by survey respondents in their decision whether to spend time on obesity preventive counseling.

"What I tend to do is, first, ask people what their questions are and deal with their concerns.... I mean, they're going to feel stupid if I lecture them for a half an hour and they never get their question answered; they're never going to come back and see me."

Clinicians also identified the acuteness of the patient's reason for the visit as a primary consideration in deciding on preventive counseling. For example:

"If it's busy, and somebody comes in and their hacking up green phlegm and they're feeling miserable, that's not going to be a time to address obesity."

External. The principal external factor for "as the door opens" involves the practice conditions at the time of the visit. Clinicians reported that the number of patients waiting to be seen, the office staff present, and the time of day influenced the delivery of preventive counseling.

Given our initial assumptions about how competing demands—particularly time constraints—affect preventive counseling decisions, we were surprised to find that in the more in-depth qualitative portions of the study, availability of time in the brief encounter rarely came up as a determinant of whether to address this counseling topic. Furthermore, on the quantitative survey, time limitation was not strongly endorsed as a reason not to engage in obesity counseling. Perhaps citing time as a barrier to preventive counseling may actually represent a proxy for other considerations. If the clinician is unconvinced of the effectiveness or reception of counseling efforts, other competing demands are likely to receive higher priority, leaving little time for the counseling.

Factor analysis of the responses to survey questions (Supplemental Appendix 4) about barriers to and reasons favoring preventive counseling for obesity showed a 3-factor solution: (1) a factor combining items relating to the importance of societal influences on obesity and patient motivation, (2) a factor identifying the clini-

cians' sense of duty in providing obesity counseling and (3) a factor indicating conditions conducive to obesity counseling. Although time limitation was included in the third factor solution as one variable considered by clinicians, it appeared in the context of other counseling factors (ie, societal influences and patient motivation). This further supports our contention that time constraints represent a more complex set of considerations related to managing competing demands in the clinical encounter.

DISCUSSION

This study provides evidence that clinicians' decision to deliver preventive counseling for obesity in the brief primary care encounter is the result of a complex and dynamic process and is influenced both by relatively stable, foundational factors and by more fluid, situational factors. We found that the clinician's values, experience, skills, and cultural competency in a given community and practice setting serve as the basis for engaging patients in a particular counseling topic. This foundational knowledge sets the stage for the patient encounter, and a set of situational factors that come into play as the examination room door opens influences the final decision to spend time on this type of preventive counseling.

These findings may explain some of the disappointing lack of success observed with interventions to improve the frequency of a range of preventive counseling services in primary care.¹⁴⁻¹⁸ Typically, such intervention efforts isolate and manipulate one or a few components of the delivery process and attempt to modify behavior based on this process. Our data suggest that such efforts, based as they are on linear, cause-and-effect models, do not adequately incorporate the complexity of the brief primary care encounter. Further, these efforts do not acknowledge the full range of competing demands that affect clinicians and their patients. Clinicians are actively managing the encounter to enhance anticipated benefits to the patient from how encounter time is used—one component of the art of medicine in primary care.

Our findings of the complexity of clinician decision making in the primary care encounter fit well with emerging views about the complexity of primary care at the practice level.³⁰⁻³² Recent work on primary care practice emphasizes the need to consider the complexity of primary care in any efforts to increase delivery of preventive services.³³⁻³⁶ Our results, while consistent with these views of the practice environment, suggest the need to expand the complexity perspective to the level of the clinician-patient encounter dynamic. Future approaches to increase delivery of preventive counseling in the brief encounter must assess the complex interrelationship among patient, clinician, practice, and community factors and their collective impact on

preventive counseling decisions. Recent work aimed at behavior change has emphasized the importance of looking beyond the examination room and the practice to the broader context of the community, just as the clinicians in this study have stressed.³⁷

Application

At the same time, our findings do provide some potential guidance for future intervention efforts by suggesting areas for focus. For instance, we found that clinicians' definitions of success were related to their persistence in preventive counseling. Clinician training that includes alternate standards of success may lead to increased frequency of counseling. Likewise, our results suggest that increasing clinicians' sense of efficacy in enhancing patient motivation for change may increase counseling. Effective models using readiness-to-change and motivational interviewing techniques may provide such empowerment.^{38,39} Reorienting practice structures to support the delivery of counseling in all visits may also facilitate increased counseling.³²

Limitations

Although we focused on obesity counseling as a case study, we believe that our findings add insight into how clinicians manage competing demands to deliver preventive counseling on a wide range of topics. Many of the factors identified are not unique to obesity counseling. Confirmation by studies examining other preventive counseling services will be important, however. We relied on clinician recall of their experiences and actions in the encounter, which may be an incomplete picture of the encounter dynamic and of factors that might influence delivery of counseling. We believe, however, that our data provide a unique perspective into clinician decision making in the encounter. Other perspectives, such as might be gained from patient interviews and direct observation of encounters, do not adequately describe the nature of the decision-making process. Finally, because our sample of clinicians was drawn from 1 state and from distinct practice types, it is possible that these clinicians' approaches to decision making may differ from those of clinicians in other areas of the country. We believe that the factors noted to be influential in clinician decision making in our data are not unique to the practice environment, but further research in other settings will be needed to confirm our findings.

Clinicians' decisions to include preventive counseling in the brief primary care encounter is the result of a complex set of foundational and situational factors, suggesting that efforts to increase the delivery of preventive counseling in primary care should move beyond previous research focusing on linear models of change. Future research and interventions aimed at

changing clinician preventive counseling practices will need to consider the complex and dynamic nature of the clinician decision-making process in the encounter.

To read or post commentaries in response to this article, see it online at <http://www.annfam.org/cgi/content/full/41/4/327>.

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