VALIDITY OF PHYSICIAN SELF-REPORT IN TRACKING PATIENT EDUCATION OBJECTIVES

Debra L. Roter & Nancy K. Russell

INTRODUCTION

Virtually every health promotion area addressed in Healthy People 2000 (1) includes patient counseling by primary care providers as a strategy to achieve the Objectives for the Nation. These objectives are ambitious, anticipating that one-half to three-fourths of primary care providers will routinely assess and counsel their patients regarding the various health promotion topics by the end of the decade. The logic of the stated objectives, and the likelihood of accomplishing them, depend on the relevance and reasonable accuracy of the data sources and instruments used in estimating the baseline practices. Unfortunately, for most areas of health promotion counseling, the data upon which the Year 2000 Objectives rest are far from ideal.

Data sources and methods are limited. About one-half of the studies in Lewis' (2) thorough review of physicians' counseling practices relied on physicians' reports, usually through mailed questionnaires. The remainder was equally divided between patients' reports, usually based on telephone or personal interviews, and chart audits. None of these sources are free from potential bias. For patients' reports, accurate recall may be problematic due to simple forgetting or selective recall, resulting in a high underreport rate. Studies have suggested that patients forget half of what their doctors tell them during medical visits and even more if they are anxious (3-5). There is also a suggestion that patients may selectively listen to advice, never hearing or immediately forgetting recommendations that are unpleasant or difficult to follow (2-4).

Physician surveys are subject to inflated estimates, presumably to appear more conscientious (2, 6, 7). Indeed, all of the estimates of health promotion practices reported in Lewis' review (2) show higher levels of performance when the physician is the source of data. Finally, chart review is noted for its lack of completeness and poor reflection of the actual process of care. Particularly for low technological aspects of care, such as patient education and counseling, chart notes are an unreliable record of the medical visit (8-10).
Besides these generic sources of bias, additional error may be introduced through ambiguous phrasing. Lewis (2) lists eight different ways in which the key health promotion question was phrased in the studies he reviewed, with the implication that differences in wording led to unintended variation in responses. Some studies asked if physicians counseled patients, whereas others asked if they gathered information about the topic, brought the topic up, or advised patients. Similarly, patients were asked if they talked about a topic, received a recommendation, were counseled, or were given information regarding the topic.

Other sources of error are also possible. Radecki (11, 12) raises the question of whether differences in reported counseling rates of primary care and internal medicine specialists were due to actual differences in care or simply to differences in the tendency of physicians in these groups to recognize and record counseling activities.

The purpose of this article is to estimate the accuracy of physician and patient reports by comparing responses on exit interviews to an audiotape record of the visit. Several questions are posed: (1) To what extent do patients and physicians similarly report healthy promotion discussions to have taken place during the medical visit? (2) How accurately do physicians and patients report health promotion discussions when compared with an audiotape record of the visit? and (3) Are physicians and patients more accurate in their report of some rather than other health promotion topics?

**METHODS**

Data were collected at 11 geographic areas in the United States and Canada. These sites included outpatient clinics at academic and Veterans Administration medical centers, community hospitals, and private practices. Physicians (N = 127) were recruited to participate in the study prior to any patient enroll-

ment; patients (N = 560) of participating physicians were recruited in the waiting room prior to their medical visit. Adult patients who were well known to their physician, having had at least two prior visits, and suffering from some chronic condition, were eligible for participation. Patients meeting these criteria but seeing the doctor for treatment of an acute condition on the study day were included.

Patients and physicians signed informed consent for all aspects of the study, including an audiotape recording of the medical visit and completion of postvisit questionnaires reporting on the events of the visit. Individual patients were included in the study only once, but the same physicians were included with an average of four patients (range: 1 to 17).

**Study Sample**

Many physicians included in the original data set saw too few patients—only one or two—to provide reliable insight into their routine counseling habits. These physicians and their patients were not included in the current analysis. For this analysis, a subsample was drawn of physicians with at least four study patients. This included 38 physicians and their 377 patients. Physicians in this subsample did not differ from the larger group of physicians in age, sex, and board specialty, but the smaller group did have fewer residents (20% vs. 40%). Thirty of the physicians practiced in urban hospital-based clinic settings, whereas 8 were in solo or small group practices.

Physician demographic information was supplied through questionnaires for 33 of the 38 physicians included in this analysis. On the whole, the group of physicians was young (mean age = 35.5 years, range 28 to 62 years) and mostly male (76%). Twenty-two of the physicians were board certified in internal medicine, and two were certified in family practice (nine were not certified). Six of these
physicians were second- and third-year residents.

The patients in the study were more likely to be female (55%) than male and were generally poor (65% earned less than US$ 10,000 per year; 16% earned US$ 10,000-20,000; and 19% more than US$ 20,000). They ranged in age from 23 to 95 years (mean age = 60.5 years). More patients in the study were white (64%) than black. The most common medical problems of these patients were hypertension, coronary disease, diabetes mellitus, and chronic obstructive pulmonary disease. These categories are not mutually exclusive, as one patient could have multiple diagnoses.

**Procedures**

Three sources of data were used to identify audiotapes for in-depth analysis of health promotion discussion. Patient and physician postvisit questionnaires were reviewed for reports of health promotion discussion. In addition, coders’ notes from a general review of the audiotapes identified cases in which discussion regarding lifestyle topics took place. If any one of these three sources indicated that lifestyle discussion occurred, the audiotape was selected for more extensive analysis. A total of 281 audiotapes were reviewed on this basis.

As described in detail elsewhere (13), the audiotapes were reviewed in their entirety to identify all segments in which health promotion topics were mentioned. The discussions were coded for actual time and the number and breadth of counseling strategies used (including elicitation, information giving and counseling, and message delivery skills). This information was used to construct a score on a 6-point scale—brief mention, brief information or referral, reward for progress, brief counseling, moderate counseling, and extensive counseling. For the purposes of this article, the first three categories are considered superficial exchanges and the latter three counseling exchanges.

Definitions of the health promotion categories addressed include:

1. Cigarette smoking: any mention of the patient’s smoking habit. This was not coded if the physician merely inquired whether the patient smokes and the patient replied that he/she never smoked or hasn’t in more than a few years (not a recent quitter).

2. Diet/weight: any mention of the patient’s diet, or need for change in the patient’s diet, whether it relates to weight control (loss or gain) or another concern, such as sodium, cholesterol, or calcium.

3. Physical activity: any mention of the patient’s exercise habits or activity level, except discussions of physical therapy and/or stretching exercises for injuries.

4. Alcohol consumption: any mention of the patient’s consumption habits. Not coded if the physician merely inquired whether the patient drinks and the patient replied that he/she never drinks or hasn’t in many years (not a recent quitter).

5. Stress: broadly defined as any discussion of the patient’s mental well-being including discussions of psychosocial stressors, emotional distress, or depression.

**RESULTS**

The average number of patients seen by each physician was 9.9 with a range from 4 to 17. According to audiotape analysis, doctors discussed health promotion topics with 232 (61.5%) of the 377 patients in this study. When health promotion topics were addressed at all in a visit, multiple topics were often discussed. There was an average of 1.8 discussions per visit and a total of 412 observed health promotion exchanges. Fifty-six percent of the discussions (n = 232) went beyond the perfunctory and attempted to counsel or persuade the patient in some way. The remaining 44% (n = 180) exchanges were extremely
short, merely mentioning the topic in passing, noting patient progress, or providing very brief information or referral.

**Doctor/Patient Consensus on Report of Health Promotion Discussion in the Medical Visit**

We first asked how similar were doctor and patient reports of health promotion discussion during the medical visit? To answer this question we compared patients' and physicians' responses in an exit questionnaire asking if a recommendation was made in any of the five health promotion areas. This analysis is based on the 356 questionnaires returned by study physicians and 377 questionnaires returned by patients. The frequency of reported recommendations made across topics by physicians and patients is displayed in Table 1. Physicians' reports tend to be higher than patients' reports by a few percentage points in all categories, except stress. The most frequent topic of discussion reported is diet, for about one-third of the visits, followed closely by physical activity, and then stress. Least commonly reported are smoking and alcohol counseling.

The kappa statistic calculated to reflect a measure of agreement between patient and physician reports is presented in the last row of Table 1. Physicians' reports tend to be higher than patients' reports by a few percentage points in all categories, except stress. The most frequent topic of discussion reported is diet, for about one-third of the visits, followed closely by physical activity, and then stress. Least commonly reported are smoking and alcohol counseling.

The kappa statistic calculated to reflect a measure of agreement between patient and physician reports is presented in the last row of Table 1, and is based on the 356 questionnaires relating to the same visit. For all presentations of kappa, the benchmark for interpreting the strength of agreement is used as suggested by Landis and Koch (14), in which the relative strength of agreement associated with the kappa statistics corresponds as follows: .81 to 1.00 (almost perfect), .61 to .80 (substantial), .41 to .60 (moderate), .21 to .40 (fair), and .00 to .20 (slight) (14). Despite the seeming consistent rate of report of health promotion discussion, the kappa values were quite low. There was only slight agreement for stress (.18) and fair agreement for physical activity reports (.28). Agreement on reports of alcohol and diet counseling was moderate in strength (.44) and only smoking reports reached substantial levels of agreement (.62).

**Physician Accuracy of Health Promotion Discussion Report Compared with Audiotape Analysis of the Medical Visit**

The second question addressed was the accuracy of physician report when compared with audiotape analysis. Simple comparison of physician report to audiotape analysis is open to two sources of error. First, there may be an indication of overreporting when that is not the case. Health promotion talk may be missed from the audiotape if the exchange occurred outside the examining room (i.e., in the hall or on the way back to the waiting room) or after the formal close of the visit (and after the audiotape was turned off). It is also possible that a discussion was captured on tape but was not correctly interpreted by the coder. Doctors and patients sometimes develop a shorthand for exchanges that is not obvious to an outside listener, for example, referring to a drinking or

<table>
<thead>
<tr>
<th>TABLE 1. Physician and Patient Report of Lifestyle Recommendations Made During the Medical Visit</th>
</tr>
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<tbody>
<tr>
<td>Questionnaire Reports of Recommendations</td>
</tr>
<tr>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Diet</td>
</tr>
<tr>
<td>Smoking</td>
</tr>
<tr>
<td>Alcohol</td>
</tr>
<tr>
<td>Physical</td>
</tr>
<tr>
<td>Stress reduction</td>
</tr>
</tbody>
</table>
smoking habit as "your problem" or "that thing." Therefore, a correction factor capturing a second source (the corresponding patient exit questionnaire) was included in the calculations of the overreport rate. For example, if a physician reported to have counseled the patient on smoking, but the audiotape review failed to reveal any evidence of smoking discussion, the patient's exit questionnaire would be examined. If the patient reported a discussion of smoking occurred, then the physician would be given credit for an accurate report.

Second, it is possible that underreporting could be inflated by confusion regarding what is a reportable exchange. Forty-four percent of the analyzed discussions were very brief, reflecting a mere mention of the topic, a reward for progress, or a referral. To investigate whether the intensity of the exchange was associated with underreport, chi-square analysis was conducted. Indeed, the chi-square results reflected significantly more underreporting for superficial exchanges as opposed to any form of counseling for all topics, except stress (p < .001 for diet and exercise, .005 for smoking, .025 for alcohol, and ns for stress). Because physicians may have been confused as to whether the superficial discussions were "reportable" exchanges, a second correction factor was introduced. Brief exchanges were excluded from underreport calculations so that only failure to report counseling discussions was considered an underreport.

In sum, both possible sources of bias were taken into account in the calculation of misreporting rates. Overreport for each topic was calculated as the number of physicians' reports of discussion for which no evidence of discussion was found (in either the audiotape or patient questionnaire), divided by the total number of negative audiotape reviews. Underreport was calculated as the number of physicians' reports of no discussion, when evidence of discussion was found (and judged to be more than superficial), divided by the total number of health promotion discussions found in the audiotapes on the topic.

For illustration, Figure 1 presents the case regarding smoking. There were 352 encounters examined regarding misreport for which both audiotapes and physician exit questionnaires were available. There was no evidence of smoking-related discussion in 288 audiotapes and 43 for which some evidence of discussion was available. In 38 instances the physician correctly reported a smoking discussion had occurred. In addition, there were four cases in which both the physician and the patient reported a smoking discussion had taken place but for which there was no evidence on the audiotape. The physician was given credit for these discussions with a resulting sum of correct positive reports of 42.

There were eight cases for which the physician failed to report discussions that were reflected in the audiotape analysis. Seven of these discussions were very brief and therefore excluded (and counted for these purposes as no discussion), with a consequent underreporting rate of 1/43 (2%).

For 14 visits the physician indicated that he did counsel patients about their smoking, but neither patient report nor the audiotape provided any evidence of the discussion. Consequently, the overreporting rate was calculated as 14/309 (4.5%).

Table 2 presents physicians' misreporting rates across the five health promotion topics. The overall misreporting level was 10%:

<table>
<thead>
<tr>
<th>Physician report</th>
<th>No Smoking Discussion</th>
<th>Smoking Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Counseling</td>
<td>295</td>
<td>1</td>
</tr>
<tr>
<td>Counseling</td>
<td>14</td>
<td>42</td>
</tr>
<tr>
<td>Total</td>
<td>309</td>
<td>43</td>
</tr>
</tbody>
</table>

FIGURE 1. Audiotape Analysis
TABLE 2. Misreporting of Counseling Discussions by Physicians

<table>
<thead>
<tr>
<th>Topic</th>
<th>Overreporting</th>
<th>Underreporting</th>
<th>Total Misreporting</th>
<th>Kappa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>14/309 (4.5%)</td>
<td>1/43 (2.0%)</td>
<td>15/352 (4.3%)</td>
<td>.83</td>
</tr>
<tr>
<td>Diet/weight</td>
<td>18/229 (7.9%)</td>
<td>19/131 (14.5%)</td>
<td>37/360 (10.3%)</td>
<td>.77</td>
</tr>
<tr>
<td>Physical</td>
<td>43/277 (15.5%)</td>
<td>9/80 (11.2%)</td>
<td>51/357 (14.3%)</td>
<td>.72</td>
</tr>
<tr>
<td>Alcohol</td>
<td>16/337 (4.8%)</td>
<td>3/19 (15.8%)</td>
<td>19/356 (5.3%)</td>
<td>.55</td>
</tr>
<tr>
<td>Stress</td>
<td>28/287 (9.8%)</td>
<td>30/70 (42.9%)</td>
<td>58/357 (16.2%)</td>
<td>.48</td>
</tr>
<tr>
<td>All topics</td>
<td>119/1439 (8.9%)</td>
<td>62/343 (18.1%)</td>
<td>181/1782 (10.2%)</td>
<td></td>
</tr>
</tbody>
</table>

*Overreporting for each topic is calculated as the number of physician reports of discussion for which no evidence of discussion was found in the audiotapes (or patient questionnaire) divided by the total number of discussions reported by physicians for which there was evidence of discussion in the audiotapes.

*Underreporting for each topic is calculated as the number of physician reports of no discussion for which evidence of discussion was found in the audiotapes (and were judged to be more than brief exchanges) divided by the total number of nondiscussion reports by physicians for which no evidence of discussion was found in the tapes.

Overreporting was 8% and underreporting was 18%. The last column of Table 2 presents the kappa statistics to reflect the agreement between physician report and audiotape analysis by topic. The kappa statistics reflect near-perfect agreement for smoking (.83), substantial agreement for the categories of diet and physical activity (.77 and .72, respectively), and moderate agreement for alcohol and stress (.55 and .48, respectively).

Patient Accuracy of Health Promotion Discussion Report Compared with Audiotape Analysis of the Medical Visit

A similar process was followed to determine the accuracy of patient report. These results are presented in Table 3. The overall misreporting rate for patients is 9%; the overreporting rate was 7% and the underreporting rate was 20%. The kappa statistics presented in the last column reflect near-perfect agreement for the categories of smoking and diet (.85), substantial agreement for alcohol (.62), and moderate agreement for physical activity and stress reports (.59 and .52).

DISCUSSION

Neither doctors nor patients provide a consistently accurate reflection of health promotion discussions during medical visits, nor do they appear to agree with one another very much as to what was discussed. Although concern for physician misreport in the literature has generally focused on overreporting (1, 5, 6), the findings here suggest that underreporting may pose an equal threat to accurate estimates of physician practice. Both physicians and patients underreported rather than overreported lifestyle discussions—by a factor of two.

Some areas of discussion were more reliably reported than others. Smoking and diet were reported quite accurately by both doctors and patients, whereas discussions regarding physical activity, alcohol, and stress were less so. Moreover, the nature of the discussion was related to the tendency to underreport for all topics except stress. The less time and intense the health promotion discussion was, the less likely it was that it would be reported. This indicates, as suggested by Radecki (11, 12), that there is a threshold of time and effort that is necessary before physicians note that an activity has taken place. However, the definition of threshold is far from universal and wide variation in reporting exists.

Physicians were especially likely to underreport stress discussions—they failed to mention nearly half (43%) of the intense discussions found on the audiotapes. We reported elsewhere (15) that stress-related discussions were unusual in that 81% were patient dominated and directed. This is the highest level of patient domination relative
to any other topic. The patient often took the
initiative in these discussions and the physi-
cian took a less active, but supportive role.
Nonetheless, these discussions were rated as
intense and time-consuming, averaging
three times the visit time devoted to any
other health promotion topic. Considering
the energy and time commitment physicians
made to stress-related counseling, their lack
of report is especially puzzling—in fact, in-
tensity of counseling was unrelated to un-
derreport in this area. Perhaps physicians'
frequent failure to note these exchanges was
related to their passive role in these discus-
sions, or perhaps to a lack of confidence that
the discussion would result in any stress
reduction for the patient. In a similar vein,
alcohol discussions were also patient domi-
nated, and again physician underreporting
was relatively high.

In contrast to the high underreporting rate
for stress discussions, smoking exchanges
were almost never underreported, and very
accurately reported overall. Perhaps the
widely disseminated literature on smoking
cessation has helped physicians to more eas-
ily “script” their smoking messages into rou-
tine counseling. Physicians sounded confident
in their counseling and direct in their recom-
mandations (15). They were also much more
likely to dominate these discussions.

Across all topics, except physical activity,
patients tended to report somewhat more ac-
curately than physicians. Two categories,
diet and smoking, were reported with great
accuracy. The other topics were more trou-
blesome. The misreporting rates for physi-
ical activity and stress discussions were high
relative to other categories—both in terms of
overreport and underreport. This would in-
dicate confusion regarding the definition of
health promotion counseling in these areas,
as well as possible bias in reporting. In con-
trast, for alcohol discussions overreporting
was low relative to underreporting, perhaps
reflecting less confusion, but more bias.
Patients and physicians may be less com-
fortable discussing alcohol than other top-
ics, and indeed, the intensity of alcohol
counseling was lower than that of any other
topic (15).

Why would patients fail to note counseling
on some topics but not others? It is possible
that patients either ignore or forget messages
that are unpleasant or recommendations that
are difficult to follow. However, all the
lifestyle recommendations addressed here
are troublesome, and this is nonetheless true
for smoking and diet where accuracy of recall
was near perfect. As mentioned above, physi-
cians appeared much more confident in their
discussions of smoking and diet than for other
topics. The messages given to patients were
clear-cut and very often linked to physiolog-
ical changes. Messages were less directive for
the other topics.

**TABLE 3. Misreporting of Counseling Discussions by Patients**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Overreporting</th>
<th>Underreporting</th>
<th>Total Misreporting</th>
<th>Kappa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>9/332 (2.7%)</td>
<td>3/44 (6.8%)</td>
<td>12/376 (3.2%)</td>
<td>.85</td>
</tr>
<tr>
<td>Diet/weight</td>
<td>10/251 (4.0%)</td>
<td>20/126 (15.8%)</td>
<td>30/377 (8.0%)</td>
<td>.85</td>
</tr>
<tr>
<td>Physical</td>
<td>35/291 (12.0%)</td>
<td>20/85 (23.5%)</td>
<td>55/376 (14.6%)</td>
<td>.59</td>
</tr>
<tr>
<td>Alcohol</td>
<td>10/361 (2.8%)</td>
<td>3/16 (16.7%)</td>
<td>13/377 (3.4%)</td>
<td>.62</td>
</tr>
<tr>
<td>Stress</td>
<td>40/298 (13.4%)</td>
<td>23/77 (29.9%)</td>
<td>63/375 (16.8%)</td>
<td>.52</td>
</tr>
<tr>
<td>All topics</td>
<td>104/1333 (7.0%)</td>
<td>69/348 (19.8%)</td>
<td>173/1881 (9.2%)</td>
<td></td>
</tr>
</tbody>
</table>

*Overreporting for each topic is calculated as the number of patient reports of discussion for which no evi-
dence of discussion was found in the audiotapes (or physician questionnaire) divided by the total number of
discussions reported by patients for which there was evidence of discussion in the audiotapes.

*Underreporting for each topic is calculated as the number of patient reports of no discussion for which evi-
dence of discussion was found in the audiotapes (and were judged to be more than brief exchanges) divided by
the total number of nondiscussion reports by patients for which no evidence of discussion was found in the au-
diotapes.
Other disturbing findings of this study relate to the very low rates of agreement between patients and physicians on what happened during the medical visit. Particularly in physical activity and stress reduction, it hardly seems as if the doctor and patient were in the same room. It is also noteworthy that patients and physicians had quite similar, and generally respectable accuracy rates when their report was compared with the audiotape record. Obviously patients and physicians were not identifying the same exchanges as counseling.

There are several possible explanations. First, there may be a simple recall problem—some of what was said is just plain forgotten. Although some forgetting is inevitable, it is not likely to explain very much of the discrepancy found here, considering the quite high rates of agreement for smoking and diet report to audiotape. Besides, stress exchanges should be memorable because they take so much time relative to other counseling topics. More likely than simple forgetting, there is the possibility of error due to confusion over the definition of stress. The doctor and patient may have engaged in a long discussion of daily living problems including family relations, emotional health, and work tensions. However, the patient may not have recognized this discussion as stress related nor interpreted the upshot of the exchange as a recommendation to work toward stress reduction. Indeed, patients and physicians may not share a common definition of what the term “recommendation” means, let alone “stress.”

Some discussion may be disregarded by physicians because they did not believe that the patient would make any of the recommended changes. Some discussion may be disregarded by patients because they had no intention of following the recommendation. These are probably different encounters, however. There is relatively little direct talk about likelihood of compliance in medical visits, and doctors were quite inaccurate in estimating patients’ intended compliance (13). In addition, there may be instances where a discussion was not noted by one party because it was very brief or informational in nature. The other participant, however, regarded the conversation as important. All these circumstances may have contributed to the very low agreement rates reported here, and signify that doctors and patients do not share a common metric for assessing the significance of an exchange, particularly regarding stress and physical activity.

Limitations of the study are several, particularly in the method of sample selection. Both patients and physicians were accrued as a convenience sample and there is a possibility of self-selection bias. The physicians participating in the study were affiliated more or less closely with the Task Force on the Doctor and Patient of the Society for General Internal Medicine, either directly as members, as personal acquaintances of members, or through participation in a residency program associated with members. It is possible that these physicians differ from the broader population of primary care physicians in unknown ways. Further, physicians participating in the study are quite young, with an average age of 35 years. The youth of the physician cohort, however, may increase our confidence in the results because the training experience of older physicians is much less likely to have included an emphasis on prevention and would present confounding period effects.

The selection criteria for patients into the study (adult chronic disease patients who were known to their physicians, having made at least two prior visits) created a study population with a slightly higher mean age (60 years) than usually found in adult primary care practices. However, by using these criteria, the experience of those patients who have an established physician-patient relationship and receive follow-up and ongoing care is better represented. It has been estimated that 80% to 90% of all medical encounters are return visits between a doctor and patient who have seen each other previously (16). We could not distinguish patients with an acute
problem from those seeing their doctor for routine follow-up of their chronic condition, and it is possible that the nature of the visit may influence recall of preventive recommendations in ways not assessed in this study.

IMPLICATION FOR PRACTICE

The implications of these findings for measurement and interpretation of the Healthy People 2000 patient education objectives are several-fold. First, both patients’ and physicians’ misreporting rates are quite low for smoking and diet. These health promotion areas have been more widely investigated than others and have received more attention in the professional as well as lay media. Patients and physicians are more familiar with the recommendations in these areas and are less likely to confuse or misinterpret their discussions. Therefore, survey results should provide adequate information on these practices.

Physical activity, alcohol, and stress discussions are reported with less accuracy than diet and smoking. Stress especially is being talked about in primary care encounters, but exactly how it is defined and what patient and provider expectations are regarding these discussions remain unclear. Measurement of patient education objectives in these areas, consequently, needs more methodological sophistication and study. Survey results may not be adequate in providing an accurate picture of services and there is a need to develop additional ways of monitoring progress in these important areas.

Finally, recognition that health promotion discussions are a frequent and important feature of primary care encounters suggests that more attention to physician training for more effective exchanges, particularly in the area of stress management, is needed.

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REFERENCES