The Myth of the Preventive-Only Visit

By Patricia E Boiko, MD, MPH
Alethea Lacas, MD

Abstract

Context: The annual physical examination is a staple of North American medicine. Medicare does not pay for such visits, and the United States Preventive Services Task Force designates these visits as preventive services.

Objective: To understand the expectations of receptionists, patients, and physicians as well as their reasons for scheduling a health maintenance visit and to clarify the expectations of patients and providers regarding delivery of clinical preventive services during these visits.

Design: Cross-sectional survey of patients (20 years and older) in a group practice who called to request an appointment that receptionists interpreted as a health maintenance visit.

Main Outcome Measures: Description and differences between expectations of receptionists, health care practitioners, and patients regarding expectations for the periodic health maintenance visit.

Results: The study included 185 patients between ages 21 to 85 years, for whom a period health visit was scheduled by receptionists when the patient called to ask for a "physical," "annual exam," "general checkup," or "Pap [smear]." Of the 185 patients, 126 (68%) described acute or chronic complaints. Patients and clinicians expected acute and chronic disease care to occur during the health maintenance visit. Patients expected health maintenance visits to last longer than clinicians expected these visits to last ($p < 0.001$). No significant difference was seen between expectations of patients and those of clinicians about providing preventive care, blood tests, other laboratory tests, care for chronic or acute complaints, or prescription refills during the health maintenance visit.

Conclusion: Although the periodic health visit has been given an assortment of names to indicate that the visit is intended for prevention, patients consider the visit to be an opportunity to ensure that all their health care needs are met.

Introduction

The annual physical examination (health maintenance visit) is a staple of North American medicine[1] and continues to be popular among the general public.[2] Results of a 1984 survey showed that most respondents wanted an annual physical examination,[3] also called a "health maintenance visit," "well visit," "routine checkup," "physical examination," or "periodic health visit." Medicare does not pay for health maintenance visits but pays for some preventive services.

The United States Preventive Services Task Force (USPSTF) has named such visits "periodic health visits" intended for delivery of preventive services,[4] and the Task Force believes that visits devoted entirely to health promotion and disease prevention facilitate delivery of many clinical preventive services and even recommends that health maintenance should be considered at every visit. However, the Task Force stops short of recommending any frequency for visits. The proportion of patients receiving a "routine checkup" has been used as an indicator of quality in health care, but reimbursement is often based only on delivery of specified preventive services.[5,6]

Patients schedule appointments with a physician to arrange care for acute or chronic illness, to obtain answers to health-related questions (whether concerning the patients themselves or their families), and to obtain preventive health services.[7-9] Patients do not necessarily regard the annual or periodic visit as an opportunity to obtain preventive care separately from acute and chronic care.[10,11]

On the basis of their perception of a patient's needs or desires, medical office receptionists are responsible for translating that patient's expressed needs into an appropriate appointment. Describing an appointment as a "health maintenance visit" creates for patients, clinicians, and medical assistants an expectation of what will occur during the visit.

To date, no research has both ascertained the expectations of receptionists, patients, and physicians before the health maintenance visit and determined afterward whether and how these expectations were actually met. The nonprofit health maintenance organization (HMO) model

… visits devoted entirely to health promotion and disease prevention facilitate delivery of many clinical preventive services …

Patricia E Boiko, MD, MPH, (right), has practiced Family Medicine for over 20 years. Following the results of this study, she reassures her patients and managers at Group Health Permanente, Factoria Medical Center in Washington, that the physical exam *is* the time to take care of all problems. E-mail: patriciaboiko@yahoo.com. **Alethea Lacas, MD,** (left), is a Family Practice resident at the Swedish Medical Center in Seattle, Washington. She began the study when she was a medical student after traveling around the world.

is an ideal setting for studying the appointments for health maintenance visits, because receptionists and clinicians working in this setting have no monetary incentives either to schedule or not to schedule these visits.[12]

The objective of this study was to identify the expectations of receptionists, patients, and physicians and the reasons for scheduling a health maintenance visit.

Methods

Setting

The study setting was a suburban group practice of a 300,000-member nonprofit staff-model HMO in Washington State. One team, which had a high rate of health maintenance visits, consisted of four female physicians (2.4 full-time equivalents) and one nurse practitioner plus two male physicians from another team who were chosen from a clinic with four teams and approximately 35,000 members. Members of the HMO pay no fee for preventive-only health maintenance visits and thus have an incentive to schedule such visits.

The HMO's human subjects Institutional Review Board and scientific review committees approved the study.

To date, no research has both ascertained the expectations of receptionists, patients, and physicians …

Table 1. Contents of surveys administered to study participants

Type of survey	Question asked on survey	Possible answers
Patient Expectation Survey (administered before health maintenance visit)	"What do you expect to occur during a physical exam?" (circle all that apply)	I expect the physician to: • Order tests and blood work • Counsel me about my health and ways to prevent illness • Discuss my chronic health condition(s) • Address my acute (recent) problem(s) • Examine whichever body parts are appropriate to keep me healthy • Examine my (circle all that apply): (a) head, eyes, ears, nose, and throat; (b) thyroid; (c) heart; (d) breasts; (e) pelvic organs and genitals; (f) chest and lungs; (g) abdomen; (h) skin • Refill my prescribed medication(s) • Other _____
Patient Expectation Survey (administered before health maintenance visit)	"How long do you expect a physical exam to last?" (circle one)	• 5 minutes • 10 minutes • 15 minutes • 20 minutes • 30 minutes • 40+ minutes
Health Questionnaire	"What are your main reasons for today's visit?"	Checkup • Feeling ill • Other
Health Questionnaire	"What are your most important prevention concerns for today's visit?"	[Fill in the blank]
Health Questionnaire	"Please list other health concerns so that we can plan how to address them."	[Fill in the blank]
Adult Health Questionnaire	Clinician checkmarks boxes indicating anatomic structures examined: head, eyes, ears, nose, throat; thyroid; heart and lungs; breasts; genitalia and pelvic organs; abdomen; skin.	Examined, not examined, not applicable
Provider Survey (administered after health maintenance visit)	"What were your expectations for this physical exam?" (circle all that apply)	• Refill prescribed medications • Discuss chronic conditions • Discuss preventive care • Order diagnostic tests, including blood tests • Attend to acute problems • Examine head; (including eyes, ears, nose, throat) heart, chest, and lungs; abdomen; pelvic organs and genitals; extremities and back; skin

Patient Population and Selection

The study population included registered patients aged 20 years and older who called to request an appointment for what receptionists interpreted as a health maintenance visit.

Using a standard script that described the study, four receptionists asked participants if they would be willing to participate in the study. Only two types of data describing nonparticipants—ie, age and sex—were retained in the database. Patients who agreed to participate in the study received a consent form; a pretested, semistructured survey of initial expectations; a senior health questionnaire (SHQ); and an evidence-based, validated health assessment questionnaire, the Adult Health Questionnaire (AHQ).[13] The sample consisted of all patients who completed these surveys and signed the consent form. The four receptionists scheduled health maintenance visit appointments with clinicians in the study.

Qualitative Data on Expectations

A trained research assistant directly observed the four receptionists to determine their expectations. Before the start of the study, the research assistant conducted open-ended, semistructured interviews with receptionists on a one-on-one basis to evaluate their appointment-making behavior as well as patients' requests for appointments.

HMO expectations were determined from the cover letter and from instructions for the AHQ that were routinely sent to nonparticipants before their scheduled health maintenance visit. Governmental and medical insurance expectations were derived from the US Department of Health and Human Services' publication "Your Medicare Benefits"[14] and the Premera Blue Cross Web site,[15] customer service representatives, and the USPSTF Guide.[4]

Survey Instruments

The AHQ, SHQ, and pretested semistructured survey identified two elements: the patient's reason for scheduling a periodic health visit and the patient's expectations of that visit (Table 1).[16] A survey identified by only the research subject number and accompanied by a stamped return envelope was mailed to participants after the visit to measure patient satisfaction with the visit.[17] Clinicians' preappointment expectations and postappointment satisfaction with the visit were measured by the clinician survey, which was attached to the patient's chart before the visit and was identical to the patient expectations survey.

Data Analysis

Statistical analysis was performed using SPSS 10.1 for Windows (SPSS Inc, Chicago, IL). Receptionists' observations, interviews, and patients and clinicians' written responses were analyzed by thematic analysis and by basic content analysis.[18,19] Receptionists' themes were validated by feedback received from the receptionists in response to an anonymous semistructured questionnaire with summary of themes.

Differences between clinicians' expectations and patients' expectations were calculated for continuous data (time of visit duration) using a paired t test. For categorical data, the Wilcoxon signed rank test for paired samples was done to determine agreement between pairs of clinicians and patients. Multivariate logistic regression was used to determine whether patients' expectations were associated with age, sex, ethnicity, or education. Results were considered significant at a level ($p = 0.05$).

Results

A pilot study was conducted from July to September 1999; the main study was conducted from February 2000 to May 2001. Receptionists recorded 308 potential subjects during the main study. Without receiving any formal guidance defining a health maintenance examination, receptionists used three types of requests to schedule a health maintenance examination: requests for particular types of visits (eg, physical, checkup, annual examination), requests for particular types of preventive services (eg, Papanicolaou smear, mammography), and requests for appointments regarding particular types of problems (eg, existence of multiple coexisting problems, need for diabetes-related blood tests). All four receptionists scheduled a health maintenance visit for patients whose requests mentioned any of the following phrases: "physical," "annual exam," "general checkup," or "Pap." Other expressions interpreted by some receptionists as cues for scheduling a health maintenance visit included "blood work," statements listing a number of health concerns, and "mammogram." One receptionist used a computerized appointment system to determine when the patient last had a health maintenance visit and recommended such a visit for patients who stated that "it has been a while" since their most recent health maintenance visit.

In whatever terms patients expressed their needs, all patients in the study accepted a health maintenance visit appointment, and 185 (60%) of these patients completed the study. No significant difference was seen between age of participants and age of nonparticipants (ie, patients who declined to participate in the study). Proportionally more men than women declined to participate in the study. A higher proportion of women than men called

Our findings indicate that the routine medical checkup solely for preventive care is uncommon.

for health maintenance visit appointments. Data on patient expectations were collected and analyzed for 185 subjects.

Patients and clinicians expected that acute and chronic medical conditions would receive care during the health maintenance visit, but the HMO did not have such an expectation. Instead, the HMO classified the visit as being scheduled for prevention-only activities. No significant difference was seen between expectations expressed by patients and clinicians that preventive care, blood testing, lab testing, care for acute or chronic medical conditions, or medication refills would be provided during the health maintenance visit. No relation was seen between patients' education, age, sex, or ethnicity and their expectations for preventive care, acute care, or examination of the head, eyes, ears, nose, throat, thyroid, or abdomen.

Subjects older than 65 years and their clinicians expected the health maintenance visit to include chronic care ($p < 0.01$) and blood tests ($p < 0.001$). This conclusion was reached by analysis which controlled for sex, ethnicity, and education. These subjects more frequently expected examination of their chest and lungs ($p = 0.03$) or skin ($p < 0.002$); refills of medications ($p < 0.02$); and more time for the visit ($p < 0.002$).

Analysis which controlled for sex, education, and ethnicity showed that subjects older than 65 years expected pelvic and genital examination less often than did subjects younger than 65 years. Women of all ages expected breast examination significantly ($p < .001$) more often than did men. Subjects expected examination of their head, eyes, ears, nose, throat (HEENT), and genitals significantly ($p < .001$, $p < .02$) more often than clinicians either expected or provided. However, patients and their clinicians had the same expectations for examination of the heart, chest, lungs, abdomen, and skin. Significantly ($p < .01$) more patients than clinicians expected pelvic examination to be done. Patients expected a mean 27-minute duration for health maintenance visits, whereas clinicians expected the duration to be a mean 24 minutes ($p < 0.001$).

Of the 195 patients who completed the study, 126 (68%) were symptomatic with various acute and chronic problems. Patients' expectations for the health maintenance visit were met: 92% of study subjects expressed satisfaction or strong satisfaction with the visit.

Discussion

Our findings indicate that the routine medical checkup solely for preventive care is uncommon. As in other studies,[20,21] patients clearly expected preventive care at these visits but also expected management of chronic and acute problems. Patients usually do not schedule appointments unless they have medical problems; and they want these problems addressed at the scheduled visit. In the current setting, prevention must be fitted into (or around) visits for other types of care.

The cost of prevention-only "health maintenance" visits is not reimbursed by Medicare or by other health insurance, but the most effective types of prevention intervention (such as colon cancer screening, smoking cessation counseling, and hearing evaluation) do not require a health maintenance visit. Only a few physical maneuvers (eg, blood pressure testing and Papanicolaou smears) are recommended for prevention. The USPSTF recommends that intervention be conducted on the basis of "periodic examination of asymptomatic individuals." However, most patients in other studies,[3] as well as in the current study, had symptoms and expected all their health care needs to be met at periodic health maintenance examinations. In our study, patients and clinicians expected that health maintenance visits would include preventive care, blood tests, other laboratory tests, care for chronic or acute medical conditions, and medication refills. No relation was seen between the education, age, sex, or ethnicity of subjects and their expectations for preventive or acute care.

Our study was limited to 185 subjects aged 21-85 years, most of whom were white, educated, female members of a nonprofit HMO in an urban setting. Our results thus might not be generalizable to other populations.

The study did have internal and external validity, however. More women than men expected breast examinations, and expectations varied with age, as would be expected (internal validity). Our study results agreed with results of other studies[22,23] inasmuch as women in our study made appointments for preventive health care more often than did men (Table 2). Moreover, the expectations expressed by patients in our study were similar to those stated in another study, conducted in Sweden,[24] and in a study conducted in Boston, San Diego, and Denver.[2]

In the Swedish study,[24] patient expectations for a health maintenance visit ranged from undergoing tests to conversing with the physician. The opportunity to ask about complaints and diseases was believed to be an essential part of the visit.[24] In a survey conducted in Boston, San Diego, and Denver,[2] activities that patients and physicians expected at the health maintenance visit—preventive services, blood tests, and examination of various body parts—were similar to those expected by patients and physicians in our study.

In our study, patients expected examination of their head, eyes, ears, nose, throat, and genitals significantly more often than clinicians either expected to provide or actually provided; and significantly more patients than clinicians expected pelvic examination to be done. These differences in expectations was similar to differences shown in another study, where examination of head, eyes, ears, nose, throat, and genitals was expected by 80% of patients but was provided at only 10% of visits; and where pelvic examination was expected by 95% of patients but was provided at only 47% of visits.[3]

Table 2. Demographic characteristics of 185 patients who requested a health maintenance appointment and were invited to participate in study

	Participants	Nonparticipants
Age	Range 21-85 years (mean 52 years)	Range 20-81 years (mean 50 years)
Sex	20% men (n = 36) 80% women (n = 149)	25% (n = 32) 75% (n = 95)
Ethnicity	White (85%), Asian (6%), Black (2%), Hispanic (1%), Multiracial (1%)	
Education	High school (11%), some college (19%), college (19%), graduate school (19%)	

The USPSTF preventive health guidelines[4] do not include examination of the head, eyes, ears, nose, throat, and genitals. Medical history is the only basis on which the task force recommends screening older adults for hearing impairment. At the HMO where our study was conducted, clinicians follow a guideline recommending that women at low risk for cervical cancer receive Papanicolaou testing every two years. Thus, female patients seen in this particular practice may expect pelvic examination (Papanicolaou smear) more often than do their physicians. However, our data did not allow us to determine whether the women who expected but did not receive pelvic examinations were the ones who failed to meet the guidelines for receiving the examination.

At the HMO in our study, patients are not charged a visit fee for preventive health visits. Removing the barrier of cost has been shown to improve compliance with prevention.[25] Another study[2] found that the desire for an annual physical examination decreased substantially when respondents were asked if they would pay $150 for the visit. In that study, no difference in desire for a health maintenance visit was seen between respondents enrolled in HMOs and patients who had another way to pay for health care.[2] However, patients at the HMO in our study may be encouraged to use the health maintenance visit for all types of care, because preventive visits are the only type of visit for which the HMO does not charge a copay.

The difference between patients and their clinicians in expected visit duration (27 minutes versus 24 minutes) was significant ($p < .001$) as determined from matched provider-patient pairs. Patients and physicians in a focus group study wanted an "annual checkup" because they believed that it permitted more thorough evaluation than did a regular office visit and also built trust. The physicians considered the checkup an organizational strategy to address preventive care as well as to get everything done.[10] In our study, 92% of subjects reported being satisfied or strongly satisfied that their expectations for the visit were met.

Receptionists are the key factor in whether a patient gets a health maintenance visit or another type of visit. For patients who expect more time to address multiple complaints, receptionists can translate the patient's desire for more time into an appointment for a health maintenance visit. To address differences in expectations, an alternative scheduling system was tested, wherein receptionists were trained in "problem-based scheduling."[26] In that study, receptionists matched patients' medical complaints to a simple time scheme for appointments. This scheduling system produced less wait time in the waiting room as well as a more efficient flow of patients and could also address expectations more accurately. In addition, multiple patient concerns could be addressed during longer visits. Exploring a patient's agenda at the beginning of a visit did not decrease the efficiency of a visit when measured by visit length and amount of work done. With an increased number of concerns addressed, the time was longer overall, but the amount of time per problem did not increase.[26]

In addition, exploring a patient's agenda at the beginning of a visit enables clinicians both to avoid the need to address late-arising concerns and to avoid missing opportunities to gather important information.[27,28] Nonetheless, interactive online health risk appraisal, telephone interventions for smoking cessation, and mailed screening tests (eg, fecal occult blood tests) may be more efficient and effective ways of delivering preventive services than a health maintenance visit.

Removing the barrier of cost has been shown to improve compliance with prevention.

No patient in our study called the HMO to request a "health maintenance visit," "well visit," or "periodic health visit" as depicted by the national organizations or by the study HMO. Instead, receptionists translated patient requests for a

"physical," "annual exam," "general checkup," or "Pap" into health maintenance visits. Whatever its name, however—and the health maintenance visit has been called many names to indicating its preventive intent—patients consider this type of visit an opportunity to meet all their health care needs. ❖

Receptionists are the key factor in whether a patient gets a health maintenance visit or another type of visit.

Acknowledgments

The study was funded by a Group Health Foundation grant.

Robert J Reid, MD, PhD, and Karl Weyrauch, MD, MPH, evaluated the study results and reviewed the manuscript. Linda Madsen, MS, and Michael Von Korff, ScD, contributed to study design.

We thank the Group Health Permanente Center for Preventive Services and medical center employees where the study was done for their assistance.

References

1. Grantham P. Perspective. The annual physical: what should we be doing? Can Med Assoc J 1983 Feb 1;128(3):271-2.
2. Oboler SK, Prochazka AV, Gonzales R, Xu S, Anderson RJ. Public expectations and attitudes for annual physical examinations and testing. Ann Intern Med 2002 May 7;136(9):652-9.
3. Romm FJ. Patients' expectations of periodic health examinations. J Fam Pract 1984 Aug;19(2):191-5.
4. US Preventive Services Task Force. Guide to clinical preventive services. 2nd ed. Washington (DC): US Department of Health and Human Services; 1996. Available from: http://odphp.osophs.dhhs.gov/pubs/guidecps (accessed February 18, 2004).
5. Health insurance coverage and receipt of preventive health services—United States, 1993. MMWR Morb Mortal Wkly Rep 1995 Mar 24;44(11):219-25.
6. Davis K, Bialek R, Parkinson M, Smith J, Vellozzi C. Reimbursement for preventive services: can we construct an equitable system? J Gen Intern Med 1990 Sep-Oct;5(5 Suppl):S93-8.
7. Williams S, Weinman J, Dale J, Newman S. Patient expectations: what do primary care patients want from the GP and how far does meeting expectations affect patient satisfaction? Fam Pract 1995 Jun;12(2):193-201.
8. Stange KC, Zyzanski SJ, Jaén CR, et al. Illuminating the 'black box.' A description of 4454 patient visits to 138 family physicians. J Fam Pract 1998 May;46(5):377-89.
9. Weyrauch KF. The decision to see the physician: differential diagnosis of the 1 AM dilemma. J Fam Pract 1982 Aug;15(2):237-8, 240, 242, passim.
10. Beaulieu MD, Hudon E, Roberge D, Pineault R, Forte D, Legare J. Practice guidelines for clinical prevention: do patients, physicians and experts share common ground? CMAJ 1999 Sep 7;161(5):519-23.
11. Thorsen H, Witt K, Hollnagel H, Malterud K. The purpose of the general practice consultation from the patient's perspective—theoretical aspects. Fam Pract 2001 Dec;18(6):638-43.
12. Kuttner R. Must good HMOs go bad? First of two parts: the commercialization of prepaid group health care. N Engl J Med 1998 May 21;338(21):1558-63.
13. Group Health Cooperative of Puget Sound, Committee for Prevention. Adult health questionnaire. [Seattle (WA)]: Group Health Cooperative of Puget Sound, Administrative Center; 1997.
14. US Department of Health and Human Services, Centers for Medicare & Medicaid Services. Your Medicare benefits: your health care coverage in the original Medicare Plan: a guide to what Medicare covers and what you pay for your covered health care services and supplies. Baltimore (MD): US Department of Health, US Department of Health and Human Services, Centers for Medicare & Medicaid; 2003. Available from: www.medicare.gov/Publications/Pubs/pdf/10116.pdf (accessed February 5, 2004).
15. Premera Blue Cross [Web site]. Available from: www.premera.com (accessed February 5, 2004).
16. Probst JC, Greenhouse DL, Selassie AW. Patient and physician satisfaction with an outpatient care visit. J Fam Pract 1997 Nov;45(5):418-25.
17. Group Health Cooperative of Puget Sound. Group health satisfaction survey. [Seattle (WA): Group Health Cooperative of Puget Sound, Administrative Center; nd]
18. Crabtree BF, Miller WL. The analysis of the narratives from a long interview. In: Stewart M, Tudiver F, Bass MJ, Dunn EV, Norton PG, editors. Tools for primary care research. Newbury Park (CA): Sage Publications; 1992. p 211-19.
19. Strauss A, Corbin J. Basics of qualitative research. Newbury Park (CA): Sage Publications; 1990.
20. Price JH, Desmond SM, Losh DP. Patients' expectations of the family physician in health promotion. Am J Prev Med 1991 Jan-Feb;7(1):33-9.
21. Laine C. The annual physical examination: needless ritual or necessary routine? Ann Intern Med 2002 May 7;136(9):701-3.
22. Stoverinck MJ, Lagro-Janssen AL, Weel CV. Sex differences in health problems, diagnostic testing, and referral in primary care. J Fam Pract 1996 Dec;43(6):567-76.
23. Culica D, Rohrer J, Ward M, Hilsenrath P, Pomrehn P. Medical checkups: who does not get them? Am J Public Health 2002 Jan;92(1):88-91.
24. Rose G, Segesten K. Someone who cares—patients' experiences concerning health examinations Scand J Caring Sci 1995;9(2):105-12.
25. Solanki G, Schauffler HH. Cost-sharing and the utilization of clinical preventive services Am J Prev Med 1999 Aug;17(2):127-33.
26. Callahan NM, Redmon WK. Effects of problem-based scheduling on patient waiting and staff utilization of time in a pediatric clinic. J Appl Behav Anal 1987 Summer;20(2):193-9.
27. Bergh KD. Time use and physicians' exploration of the reason for the office visit. Fam Med 1996 Apr;28(4):264-70.
28. Marvel MK, Epstein RM, Flowers K, Beckman HB. Soliciting the patient's agenda: have we improved? JAMA 1999 Jan 20;281(3):283-7.