

New-Patient Self-History Questionnaires in Primary Care

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Background: In the current environment of increasing health care efficiency, the benefits of patient self-history questionnaires need to be fully explored. The utility and reliability of new-patient self-history questionnaires have been documented in the medical literature. This study investigates the prevalence of these patient self-history forms in primary care offices.

Methods: A sample of primary care offices listed in the yellow pages by specialty were surveyed by telephone. Survey questions included the use of new-patient self-history questionnaires as well as other characteristics about the offices. Findings from offices using questionnaires were compared with findings from offices not using questionnaires.

Results: Of 129 offices contacted by telephone, 116 (90 percent) responded. Of the 116 offices surveyed, 53 percent were using new-patient self-history questionnaires. Offices using questionnaires had more patients in managed care ($P = 0.028$) and fewer patients insured by Medicare or Medicaid ($P = 0.002$). There were no significant differences in other office characteristics.

Conclusions: This study shows that primary care offices underutilize new-patient self-history questionnaires. (J Am Board Fam Pract 1998;11:23-7.)

The use of patient self-history questionnaires dates back to at least 1949, when the *Journal of the American Medical Association* published "The Cornell Medical Index: An Adjunct to Medical Interview" by Brodman et al.¹ The researchers developed a 195-item questionnaire for new patients in primary care clinics and concluded that their questionnaire was useful because:

...it collects for appraisal a large and comprehensive body of information about the patient's medical history at no expenditure of the physician's time; it facilitates interview by making available to the physician a preliminary survey of the patient's total medical problems; its data, being systematically arranged, are easier to review than those on conventional medical histories, and, by calling attention to the patient's symptoms and significant items of past history, it assures that their investigation will not be overlooked because the physician lacked time to elicit them.

Many patient self-history questionnaires have

since been created and modified to facilitate information gathering. These questionnaires focus on a variety of ailments, specialties, and disease states, including functional status, depression, alcohol use, and initial primary care visits. Several studies have investigated the utility and reliability of patient self-histories for primary care.¹⁻¹⁵ Hall⁷ stated his questionnaire helped him attain more information about patients, and it was well received by the patients. Gumpel and Mason⁶ reported that patients appreciated the questionnaires, additional valuable details were gathered, no administrative problems arose, and on subsequent visits the physicians could quickly discover relevant clinical details. Inui et al,⁹ in a controlled, prospective study, showed that primary care new-patient self-history forms increase completeness of recorded data while consuming no additional physician time. Parkerson et al,¹⁴ Gilkison et al,⁴ and Pecoraro et al¹⁵ have all independently confirmed the reliability of new-patient self-history questionnaires. Brodman et al¹ described several case studies in which the questionnaires led to diagnoses and treatments that were otherwise delayed or not made at all, particularly in patients with psychiatric diseases. Despite these data, review of several medical interviewing textbooks reveals no mention of questionnaires.¹⁶⁻²⁴

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health care efficiency, the benefits of patient self-history questionnaires need to be fully explored. The medical literature, in addition to the availability of these forms, suggests that some self-history questionnaires are in use. Nevertheless, the absence of the questionnaires from medical interviewing textbooks suggest that these forms might be underutilized. Whether patient self-history forms are widely used in practice is undocumented. This study hypothesizes that new-patient self-history questionnaires in primary care are underutilized, and it investigates factors associated with their use, such as practice types (solo or group practice), and payment types (health maintenance organization or preferred physician organization or Medicare or Medicaid).

Methods

A sample of Chicago primary care practices comprising all family practice and general internal medicine offices listed in the 1995 Chicago Ameritech Yellow Pages²⁵ was surveyed by telephone. All interviews were conducted by a 4th-year medical student using a standardized questionnaire form. Questions addressed the percentage of patients in managed care, Medicare, or Medicaid (in Illinois at the time of the survey, neither Medicare nor Medicaid benefits could be used to buy into managed care insurance; however, Medicare recipients could purchase supplemental coverage from managed care organizations), the number of physicians in the practice and their specialties (family practice, internal medicine, both family practice and internal medicine, or internal medicine with subspecialists), the practice type (solo, group—single specialty, or group—multiple specialties), the amount of time allotted for patient visits, and whether the office used new-patient self-history questionnaires.

A patient self-history questionnaire was defined as a form given to the patient to answer specific personal medical questions about such issues as medications, allergies, medical history, family and social history, and review of systems. Forms designed to collect demographic information were explicitly excluded. If the office used new-patient self-history questionnaires, then the respondents were also asked the percentage of patients completing the questionnaire, how many years the questionnaire had been used, the primary purpose of the questionnaire, and any com-

ments they had concerning their use. Finally, they were asked to submit a copy of the questionnaire.

Data were analyzed using Excel.²⁶ Survey response rate and prevalence of questionnaire use were calculated. The offices were divided into two groups—those that used new-patient self-history questionnaires and those that did not—and the characteristics of the two groups were compared. Two-tailed pooled t-tests were used to compare the percentage of patients in managed care, the percentage of patients in Medicare or Medicaid, the number of physicians working in the practices, and the number of minutes allotted for new and follow-up patient visits. Chi-squares were used to analyze the two groups by specialty and practice type. For specialty type, a two-by-two chi-square was used because of the small sample of offices in which physicians practiced both family medicine and internal medicine and internal medicine and subspecialty medicine. Significance was defined as $P < 0.05$.

Results

Of the 129 offices listed in the yellow pages, 116 offices, representing 400 physicians, responded to the telephone survey for a response rate of 90 percent. Not all 116 responding offices answered every survey question, however. Eighty-seven offices reported the percentage of patients in managed care, for a mean of 35.7 percent (SD 25.9 percent). Eighty-six offices reported the percentage of patients covered by Medicare or Medicaid, for a mean of 42.4 percent (SD 25.9 percent). All 116 offices reported the number of physicians working in their office, with a mean of 4.1 (SD 11.2) physicians, and all 116 offices reported the specialty type: 37 offices (32 percent) were exclusively family practice, 67 (58 percent) were exclusively internal medicine, 6 (5 percent) were a combination of family practice and internal medicine, and 6 (5 percent) were internal medicine combined with subspecialties. One hundred thirteen offices reported practice type: 52 (46 percent) were solo practices, 29 (26 percent) were group practices of a single specialty, and 32 (28 percent) were group practices of multiple specialties. For the 94 offices reporting the time allotted for new-patient visits, the mean time was 39.6 minutes (SD 15.8 minutes); for the 90 offices reporting the time allotted for follow-up visits, the mean time was 19.4 minutes (SD 6.7 minutes).

Table 1. Characteristics of the 116 Primary Care Offices.

Characteristics	Using Questionnaires (n = 61)	Not Using Questionnaires (n = 55)	P value
Patients in managed care, mean %	43.6	27.4	0.028
Patients with Medicare or Medicaid, mean %	33.8	51.0	0.002
Physicians in each office, mean no.	3.9	4.4	0.781
Specialty type			0.136
Family practice	24	13	
Internal medicine (general)	34	33	
Family practice-internal medicine combination	3	3	
Internal medicine and some subspecialists	0	6	
Practice type			0.483
Solo	24	28	
Group, single specialty	17	12	
Group, multiple specialties	18	14	
Time allotted for new patients, mean min	40.2	39.1	0.738
Time allotted for follow-up patients, mean min	19.0	19.8	0.609

Of the 116 total respondents, 61 (53 percent) reported using new-patient self-history questionnaires to gather information. A comparison between the offices using questionnaires and the offices not using questionnaires is displayed in Table 1. Only insurance type was significantly different. Offices using questionnaires had a higher percentage of their patient population enrolled in managed care programs ($P = 0.028$) and a lower percentage of their patient population insured through Medicare or Medicaid ($P = 0.002$).

Other characteristics of the two groups were not significantly different, including the number of physicians in each office, physician specialty, the practice type (solo versus group and single versus multiple specialties), and the amount of time given for patient visits.

Of the offices using questionnaires, 41 of 61 (67 percent) reported that 100 percent of their patients filled out the questionnaires, 19 offices reported that 50 to 98 percent of their patients filled out the questionnaires, and 1 office was unable to estimate. The number of years a questionnaire had been used ranged from 0.5 to 30 years, with an average of 8.5 years. The primary purpose of the questionnaires was documentation in 5 offices, facilitating the physician interview in 17 offices, and both documentation and facilitation in 36 offices; 3 offices were unable to state the primary purpose. Thirty-three of the 61 offices submitted a copy of their questionnaire. The questionnaires varied in length and by type of

questions, but all attempted to collect patients' medical histories and were, for the most part, made up of yes-or-no questions.

Few barriers to questionnaire use were reported. Eight offices reported a language barrier or that their patients were too uneducated to use questionnaires. Six physicians commented that the questionnaires were a time-consuming duplication of work because they still needed to ask all the questions. One physician believed the forms were impersonal. Finally, six of the offices using questionnaires commented that the health maintenance organizations (HMOs) had mandated their routine use.

Conclusions

All evidence in the medical literature concerning new-patient self-history questionnaires suggests that they are useful and reliable. Studies have shown that they improve chart documentation, reveal important medical history, contribute to diagnosis, are reliable, are well received by patients, and expend no additional physician time.^{1-15,27,28} These attributes make patient self-history questionnaires a valuable tool. In primary care, many new patients complain of a specific problem, and a detailed family and social history, as well as a thorough review of systems, is not done. A patient self-history quickly establishes this information and often provides insight and perspective into the patient's health model and biases. Such information can facilitate a treatment plan and

help determine the need for future visits.

Of particular note, self-histories are helpful for patients who have underlying psychiatric diseases, because these patients will often have positive findings on the review of systems, and this information is immediately apparent from a well-structured form. Additionally, self-histories contribute to the medicolegal aspect of charting, as the questionnaire provides a more complete medical record than is otherwise documented.⁹ The many benefits of new-patient self-history questionnaires, combined with the evidence showing that they require no additional physician time, should result in their use by 100 percent of practices. This investigation of new-patient self-history questionnaires, however, shows a prevalence of only 53 percent in a sample of primary care offices in Chicago, suggesting that these questionnaires are underutilized.

The characteristics of the offices using questionnaires indicates that managed care is associated with a higher likelihood of questionnaire use, and insurance through Medicare or Medicaid is associated with lower use. This study does not address the cause of these associations, but the managed care insurers could be driving this increased use of questionnaires. Six offices commented that HMOs had mandated questionnaire use. In addition, the standardized record that the questionnaires provide might facilitate managing health care. Alternatively, the older, disabled, or lower income groups making up the Medicare and Medicaid populations might be discouraging questionnaire use.

New-patient self-history questionnaires are widely available and familiar to all practitioners, so why are not all primary care physicians using patient self-history questionnaires? Several offices reported education level of their patients or a language barrier. Nevertheless, these explanations still leave 47 of 116 (41 percent) offices unaccounted for. Primary care physicians might believe either that these questionnaires are not helpful or that they are, in fact, detrimental. In the first chapter of the 1994 edition of *Harrison's Principles of Internal Medicine*,²⁹ the editors state:

The very act of taking the history provides the physician with the opportunity to establish or enhance the unique bond that is the basis for the critically important patient-physician relationship.

New-patient questionnaires might be perceived by physicians to compromise history taking—the cornerstone of primary care. Such a position, however, reflects a misunderstanding and lack of physician education about questionnaires (which would be supported by their absence from interviewing textbooks). Again, quoting Brodman et al, “The Cornell Medical Index is intended only as an adjunct to, and not a substitute for, the oral interview.”

The findings from this study show that use of new-patient self-history questionnaires by primary care physicians can be improved. Further research to improve the format of the questionnaire and the physicians' skills in using them or to determine the barriers to their use could lead to their increased acceptance in primary care offices.

References

1. Brodman R, Erdmann AJ, Lorge I, Wolff HG. The Cornell Medical Index: an adjunct to medical interview. *JAMA* 1949;140:530.
2. Cartwright A. Health surveys in practice and in potential: a critical review of their scope and methods. New York: Oxford University Press, 1987.
3. Collen MF, Cutler JL, Siegelab AB, Cella RL. Reliability of a self-administered medical questionnaire. *Arch Intern Med* 1969;123:664-81.
4. Gilkison CR, Fenton MV, Lester JW. Getting the story straight: evaluating the test-retest reliability of a university health history questionnaire. *J Am Coll Health* 1992;40:247-52.
5. Goldberg DP, Hillier VF. A scaled version of the general health questionnaire. *Psychol Med* 1979;9:139-45.
6. Gumpel JM, Mason AM. Self-administered clinical questionnaire for outpatients. *Br Med J* 1974;2:209-12.
7. Hall GH. Experiences with outpatient medical questionnaires. *Br Med J* 1972;1:42-5.
8. Harlow SD, Linet MS. Agreement between questionnaire data and medical records. The evidence for accuracy of recall. *Am J Epidemiol* 1989;129:233-48.
9. Inui TS, Jared RA, Carter WB, Plorde DS, Pecararo RE, Chen M, et al. Effects of a self-administered health history on new-patient visits in a general medical clinic. *Med Care* 1979;17:1221-8.
10. Jette AM, Davies AR, Cleary PD, Calkins DR, Rubenstein LV, Fink A, et al. The Functional Status Questionnaire: reliability and validity when used in primary care. *J Gen Intern Med* 1986;1:143-9.
11. Kehoe R, Wu SY, Leske MC, Chylack LT Jr. Comparing self-reported and physician-reported medical history. *Am J Epidemiol* 1994;139:813-8.
12. Nelson EC, Berwick DM. The measurement of health status in clinical practice. *Med Care* 1989;

- 7(Suppl):S77-90.
13. Oei TI, Zwart FM. The assessment of life events: self-administered questionnaire versus interview. *J Affect Disord* 1986;10:185-90.
 14. Parkerson GR Jr, Gehlbach SH, Wagner EH, James SA, Clapp NE, Muhlbaier LH. The Duke-UNC Health Profile: an adult health status instrument for primary care. *Med Care* 1981;19:806-28.
 15. Pecoraro RE, Inui TS, Chen MS, Plorde DK, Heller JL. Validity and reliability of a self-administered health history questionnaire. *Public Health Rep* 1979;94:231-8.
 16. Bates B, Hoekelman RA, Thompson JE. Guide to physical examination and history taking. 5th ed. Philadelphia: Lippincott-Raven, 1991.
 17. Cassell EJ. Talking with patients, vol 1: the theory of doctor-patient communication. Cambridge, Mass: MIT Press, 1985.
 18. Cassell EJ. Talking with patients, vol 2: clinical technique. Cambridge, Mass: MIT Press, 1985.
 19. Cohen-Cole SA. The medical interview: the three-function approach. St. Louis: Mosby-Year Book, 1991.
 20. Coulehan JL, Block MR. The medical interview: a primer for students of the art. Philadelphia: FA Davis, 1987.
 21. Engel GL, Morgan WL. Interviewing the patient. Philadelphia: W.B. Saunders, 1973.
 22. Lipkin M Jr. The medical interview and related skills. In: Branch WT, editor. Office practice of medicine. 2nd ed. Philadelphia: WB Saunders; 1987:1287-1306.
 23. Muldary TW. Interpersonal relations for health professionals: a social skills approach. Indianapolis, Ind: Macmillan Publishing, 1983.
 24. Purtilo RB, Haddad A, Biblis M (editors). Health professional and patient interaction. 5th ed. Philadelphia: WB Saunders, 1996.
 25. Chicago consumer yellow pages. Chicago: Ameritech, 1995:1222-5.
 26. Microsoft Excel, version 4.1. Redmond, Wash: Microsoft, 1984.
 27. Minden NJ, Fast TB. Evaluation of health history forms used in U.S. dental schools. *Oral Surg Oral Med Oral Pathol* 1994;77:105-9.
 28. Thibodeau EA, Rossomando KJ. Survey of the medical history questionnaire. *Oral Surg Oral Med Oral Pathol* 1992;74:400-3.
 29. Isselbacher KJ, Braunwald E, Wilson JD, Martin JB, Fauci AS, Kasper DL, editors. The practice of medicine. In: Harrison's principles of internal medicine, 13th ed. New York: McGraw-Hill, 1994.

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