

# The Predictive Value of Selected Components of Medical History Taking

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All physicians since the time of William Osler have been taught to take a detailed history and perform a comprehensive physical examination. Modern-day medical history taking includes recording the following components: a chief or primary complaint; a detailed history relative to this complaint (history of present illness); a medical history that includes allergies, immunizations, previous medical problems, previous hospitalizations and surgeries, and current medications; a review of systems that addresses the symptoms experienced by the patient organized by organ system; a social history that includes information about employment, living situation, health habits, etc; and a family history that notes health and other conditions in immediate and other family members. No current studies document the degree to which practicing physicians outside the academic health center perform such comprehensive evaluations and medical charting. In an era in which primary care is highly valued by patients and where gatekeeping is an essential attribute of managed care, most primary care providers around the United States are seeing more patients per day in their practices and consequently have less time to spend with each one. As a result, during the past decade the focused history and selective physical examination has largely replaced the kind of interrogation traditionally taught in medical schools.<sup>1</sup> In fact, such approaches have been advocated for some time.<sup>2</sup>

Until very recently, few had questioned the utility of the components of the history and physical examination and then only in asymptomatic adults.<sup>3,4</sup> For example, there are no such studies documenting the yield of, say, lung auscultation when the primary complaint is ear pain in a child

or of the abdominal examination when a patient complains of a cough and fever. In this issue, Verdon and Siemens<sup>5</sup> focus on the case-finding utility of the review of systems, comparing positive responses on self-administered patient questionnaires with chart documentation that such responses resulted in a new diagnosis or treatment. The utility or predictive value of this information was calculated by evaluating the frequency with which a new diagnosis, treatment, or action was evident in the chart as a result of positive responses to questions on a review-of-systems questionnaire. When any single positive response meant that the questionnaire or test was positive, the positive predictive value was calculated to be 10.5 percent. This value was 3.3 percent for an individual yes response.

As the authors recognize, simply documenting a new diagnosis or action in the medical chart as a result of information provided from the questionnaire does not address the clinical importance of such recognition. One suspects that had a more rigorous definition been applied, the yield would have been far less. Even more, some physicians do not use a short, patient-administered questionnaire for a review of systems; instead, they incorporate some or all of these questions into their history taking. One again suspects a lower yield would occur in those instances where an orally administered review of systems is less thorough than a written one.

I take issue with the authors' conclusion that the yield for the screening review of systems is acceptable when compared with, for example, a Papanicolaou smear, and is cost-effective when administered to asymptomatic patients.<sup>6,7</sup> Rather, the comparison should have been made with the multiphasic laboratory chemistry panel for asymptomatic patients for whom a single value is abnormal, which would take 3 to 5 minutes of a physician's time. By comparison, for recognizing alcoholism, routine administration of the Michi-

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gan Alcoholism Screening Test (MAST) results in item-specific positive predictive values ranging from 50 to 94.3 percent.<sup>8</sup> In clinical practice, the usefulness of administering a review of systems in any form relates not only to the predictive value of a positive response to a single question (eg, noted by Verdon and Siemens to be 3.3 percent) but to the cost of administering and reviewing the screening questions. This cost is not addressed anywhere in this study.

The study by Verdon and Siemens is important, not so much for its conclusions but for the larger issue it raises regarding the cost utility of specific components of the history and physical examination. As the cost, which is measured in provider time, of administration and charting increases, clinicians will have to focus far more on the "bang for the buck." Given recent trends in primary care delivery and provider supply, one speculates that this bang will need to be far more audible to family physicians if the review of systems, as it is taught in medical schools, is to remain an integral part of medical history taking.

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## References

1. Frank SH, Stange KC, Moore P, Smith CK. The focused physical examination: Should checkups be tailor-made? *Postgrad Med* 1992;92:171-86.
2. Sackett DL, Haynes RB, Tergwell P. *Clinical Epidemiology: A Basic Science for Clinical Medicine*. Boston: Little, Brown, 1985:11.
3. Oboler SK, LaForce FM. The periodic physical examination in asymptomatic adults. *Ann Intern Med* 1989;110:214-26.
4. Frame PS. The complete annual physical examination refuses to die. *J Fam Pract* 1995;40:543-5.
5. Verdon ME, Siemens K. The yield of review of systems in a self-administered questionnaire. *J Am Board Fam Pract* 1997;10:20-7.
6. Mitchell TL, Tornelli JL, Fisher TD, Blackwell TA, Moorman JR. Yield of the screening review of systems: a study on a general medical service. *J Gen Intern Med* 1992;7:393-7.
7. Boland BJ, Wollan PC, Silverstein MD. Review of systems, physical examination, and routine tests for case-finding in ambulatory patients. *Am J Med Sci* 1995;309:194-200.
8. Cyr MG, Wartman SA. The effectiveness of routine screening questions in the detection of alcoholism. *JAMA* 1988;259:51-4.

## Homelessness and Health

Homelessness has reached crisis proportions in the United States. An estimated 600,000<sup>1</sup> to 3 million<sup>2</sup> persons are currently without a home. The crisis is much worse, however; nationally 14 percent of the US population (26 million persons) have been homeless at some time in their lives, and 5 percent (8.5 million) have been homeless within the past 5 years.<sup>3</sup> Not since the Great Depression have such large numbers of homeless persons and such a broad cross section of society been represented.<sup>4,5</sup>

Casual observations of homeless persons reveal that they are burdened with mental health, substance abuse, and physical health problems. Because of high rates of infectious diseases in this population, they have the potential to spread diseases such as tuberculosis to other homeless persons and the general population. Planning for appropriate and effective health services for homeless persons requires attention to the unique characteristics of the homeless population in terms of health status, barriers to obtaining and adhering to prescribed medical care, and integration of housing and health services.

The increased risk for illness among homeless persons compared with the general population is due to a variety of factors. Persons can become homeless because of a physical or mental illness, and homelessness itself can lead to physical and mental disability. Homeless persons are subject to the same risk factors for physical illness as the general population, but they are exposed to higher levels of such risks as well as additional risk factors unique to homelessness: the excessive use of alcohol, illegal drugs, and tobacco; sleeping in an upright position (resulting in venous stasis and its consequences); extensive walking in poorly fitting shoes; and inadequate nutrition.<sup>6</sup> Furthermore, homelessness itself is physically dangerous; being without a home places a person

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