Teaching Occupational Medicine in a Family Medicine Residency Program

Barry L. Hainer, MD, Andrew L. Dannenberg, MD, and Stanley H. Schuman, MD, DrPH
Charleston, South Carolina

While recent articles have emphasized the importance of the work environment, occupational medicine has received low priority in family medicine residency training.[1-5] Few guidelines are available to help residents integrate various segments of information about job-related illness and occupational risk into a useful whole. A variety of teaching methods are necessary to introduce this important subject into an already crowded residency curriculum. During the past year at the Medical University of South Carolina, the Department of Family Medicine has integrated planned job site visits, elective rotations in occupational medicine, and regular topic conferences.

The Program

Job Site Visits

During orientation, first-year residents are offered an elective involving planned job site visits accompanied by faculty members. In the first such series, a local chemical plant, a mosquito abatement control program, and the motor pool of a local military base were visited on separate occasions by four first-year residents and two faculty members. One faculty member had extensive experience in epidemiology, and the other had previous experience that included being a part-time industrial physician.

Using an approach similar to planned home visits, the visits to job sites were used to obtain insights and to gather information.[6] The primary objectives included evaluating health risks by job category, becoming familiar with hazardous exposures in the particular industry, and exploring potential interventions at the job site for improving work safety conditions. The agenda during the visits included observing the physical demands, noise, ventilation, mechanical hazards, and acute and chronic chemical exposures associated with specific jobs. Occupational safety programs were discussed with the plant nurse and safety manager. The results included observation of the level of actual compliance with safety rules, a better understanding of the range of risk factors at the job site, and some increased ability to anticipate the specific work-related illnesses and injuries that may be seen in the office.

Most of the job sites visited already had extensive safety programs in operation and were monitoring particularly high-risk exposures among their workers. In an effort to avoid appearing as adversaries attempting to uncover dangerous conditions, faculty and residents presented themselves as physicians who would be involved in caring for workers from that industry and who desired to better understand the situations in which these people worked.

After this brief series of visits to job sites, it was felt that by systematic and careful observation one can learn much about working conditions for any particular employee. Some of the residents who had experienced similar jobs in premedical years made observations the faculty missed; conversely, faculty pointed out places in the plant through which the tour guide hurried the visitors in a purposeful way. From such visits insights can be gained that are similar in depth and detail to those derived from planned home visits.[7]

A planned job site visit should be a time-effective device for even the busiest of practitioners, especially when a number of his or her

Continued on page 1153

From the Department of Family Medicine, Medical University of South Carolina, Charleston, South Carolina. At the time this paper was written, Dr. Dannenberg was a third-year resident in family practice, Department of Family Medicine, Medical University of South Carolina. Requests for reprints should be addressed to Dr. Barry L. Hainer, Department of Family Medicine, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425.

0094-3509/82/061150-02$00.50

Continued from page 1150

patients work in the same environment. Any work history obtained in the office is much more meaningful if the physician has some firsthand acquaintance with the product, the manufacturing or preparation process, and the style of labor-management relationships.

Elective Rotation in Occupational Medicine

A one-month elective rotation in occupational medicine is offered to second- and third-year residents. One third-year resident worked with a physician preceptor who had developed a full-time occupational medicine practice after many years in general practice. In the preceptor's office the resident observed preventive health measures, including screening tests and preemployment physical examinations, as well as the treatment of acute job-related injuries and illnesses. Further time was spent with the preceptor as he provided acute and follow-up medical care in regular visits to several local factories, including a shipyard, a paper mill, and a diesel engine factory. Guided site visits were arranged by the preceptor to enlarge the resident's understanding of the working conditions of the preceptor's patients. In addition, weekly meetings with a family medicine faculty advisor were used to review the experience of the resident during the previous week. These discussions provided an additional perspective on the advantages and disadvantages of various preemployment and periodic health screening measures offered to workers. Diagnosis, therapy, and prevention of specific occupationally related problems the resident encountered were also explored.

Topic Conferences

Since most residents do not make site visits or take occupational medicine electives, an effort was made to share such experiences with the remainder of the residents in training. An ongoing topic conference series was felt to be the most efficient format for teaching those residents who had few firsthand experiences in occupational medicine. Residents who participated in the elective experiences discussed earlier were asked to plan and participate in some of these conferences. Guest speakers were invited to present several topics. Topics during the past year have included ethical dilemmas for the physician caring for workers, reproductive risks in the workplace, job-related dermatoses, epidemiologic methods applied to migrant workers in the field,[8] methods of obtaining a good occupational history, and the use of planned job site visits.

Comment

The diagnosis and management of all occupationally related diseases can not be exhaustively reviewed in family medicine residency training. Specialty certification in occupational medicine and continuing educational course work are available for those who have the interest.[9] An awareness of problems that may be job related and a knowledge of resources for referral and specialized information are important for the family physician. One may hope that a guided experience in the method of making a planned visit to the workplace with emphasis on information gathering is a useful skill and that it will be adapted by any resident physician to the community in which he or she practices. As more experience with these teaching methods accumulates, their impact will be formally evaluated.

The three methods described above represent a working compromise between an excessive amount of curriculum time (which would be more appropriate to the sophisticated needs of a specialist in occupational medicine) and a minimal or nonexistent approach toward occupational medicine (which exists in many crowded family medicine curricula).

References

1. Felton JS: The occupational history: A neglected area in the clinical history. J Fam Pract 11:33, 1980
2. Hainer BL: Family medicine and job related illness. J Fam Pract 12:575, 1981
3. Campbell V, Nicolle FI: Occupational and environmental disease in family practice. J Fam Pract 13:118, 1981
4. Goldman RH, Peters JM: The occupational and environmental health history. JAMA 246:2831, 1981
5. Rosenstock L: Occupational medicine: Too long neglected. Ann Intern Med 95:774, 1981
6. Guy LJ, Haskell EG, Hutson AC Jr, Schuman SH: Why home visits? Analysis of 142 planned home visits. J Fam Pract 4:337, 1977
7. Guy LJ, Schuman SH: Home visits as curriculum, letter. J Fam Pract 14:24, 1982
8. Schuman SH, Dobson RL, Finger JR: Dyrene dermatitis. Lancet 2:1252, 1980
9. American Occupational Medicine Association, Occupational Medicine Practice Committee: Careers in occupational medicine. J Occup Med 23:122, 1981