Computer-Based Patient Education Revisited

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Good patient education teaches ideas and skills that help patients cope with immediate medical problems, maintain health and avoid disease. Patient education is increasingly important as hospital stays are shortened, patients become more active health consumers, and there is more need to document informed consent for treatment. It is difficult to provide consistent high quality patient education and reimbursement is problematic. Computers have unique attributes for individualized, effective instruction, including variable lesson pacing controlled by the patient and the ability to accurately track the level of patient understanding to document informed consent and for third party reimbursement purposes. The ability of the computer to persuade as well as inform helps motivate behavior change. The unrealized potential of computer-based patient education makes clear the need for further research on how to effectively use this unique tool for patient education.

CURRENT ISSUES IN PATIENT EDUCATION

The purpose of patient education is to teach ideas and skills that will help patients cope with their immediate medical problem, maintain health and avoid disease. Education can enable patients to assume control over their own health. This means education can help patients become more knowledgeable. It can also influence their attitudes and behaviors to positively affect their health. For example, college students are well informed about what causes AIDS and how to prevent it. However, the fact that one of every 500 in the U.S. now tests positive for HIV is evidence that this knowledge has not altered their risk-taking behavior.

Studies have demonstrated that the most effective way to influence behavior is to present consistent, repetitive messages from multiple sources over long periods of time. A single method of presentation (posters, pamphlets, videos, classes, computers, nurse or doctor counseling) is unlikely to be effective by itself in helping patients to become informed participants in their own medical care. There needs to be consistent reinforcement and feedback to and from patients about the issues important to their health for meaningful patient education to occur.

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Patient education is becoming an increasingly important issue for a number of reasons. Patients are leaving the hospital sooner and sicker. They and their families often need to do much of the follow-up care at home that used to be provided by health professionals. Predischarge education may help determine whether prospective reimbursement strategies such as DRGs produce not only shorter hospital stays but also better health outcome. Also, patients are no longer passive health care recipients. Well-informed patients who are involved in decisions affecting their care are much more likely to be compliant with the physician’s recommendations. If it is assumed that health, the outcome of effective medical care, is mediated through compliance, then patient education efforts to improve compliance have great health outcome and health care cost implications. Recent, complex medical interventions such as transplantation or genetic screening require more explanation. Finally, providing complete and understandable information to patients for informed consent is an increasingly important liability issue.

Most physicians agree that patient education is important, but in the real world of day-to-day practice it is often difficult to do the consistently effective job they would like. Physicians with excellent clinical skills may not necessarily be good teachers. There is a tendency to equate telling a patient something with teaching. This is not true unless there is feedback from the patient about what has been discussed, so that the physician can verify it was correctly understood.

When the public is barraged with medical and health information from the mass media, physicians may feel that patients do not want or need any more information. This is wrong. Communications researchers have long known that the source of information has a great effect on how it is perceived and whether it is remembered. Patients view their physicians as highly credible sources. For example, it has been demonstrated that U.S. patients are 2 to 10 times more likely to quit smoking if their physician suggests it than if left to the normal “cultural influences.”

A longstanding problem of doing any kind of formalized patient education is reimbursement. Diabetes education programs have been particularly successful in being reimbursed in part because one can clearly document content and consistency of instruction. The major rationale for the American Diabetes Association recommendation for third-party payment for patient education was that education and nutritional counseling will lead to reductions in health care costs. In general, third party payment for patient education is sporadic and inconsistent. Education can most often be reimbursed if physicians document how instruction was delivered, what was taught, and that patients understand the material. Physicians need assistance with this time consuming and specialized task.

**CAN COMPUTERS HELP?**

The use of computers in physicians’ offices has become increasingly common. They are primarily used for patient record keeping, accounting, other administrative needs, laboratory and pharmacy data and word processing. The potential role of computers to help educate patients has remained largely unexplored. A 1985 review presented guidelines for the development and use of computer-based patient education and discussed several deterrents to its use. As we approach the 21st century, it is valuable to reexamine