LETTER TO THE EDITORS

Teaching asthma self-assessment through
computer-assisted patient education: a pilot study*James Wofford^aSheila Stevens,^b Karla Brown^b^a Internal Medicine, Wake Forest
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Dear Sirs,

National guidelines encourage improving the self-assessment skills of patients with asthma and recommend that asthma education be a routine part of primary care.^{1,2} Because neither of these goals is often accomplished, more practical primary care-based education strategies are needed. Computer-assisted patient education is a means of ensuring consistency and quality of the educational message and, at the same time, overcoming literacy and language barriers.³ We sought to demonstrate whether a computer-assisted patient education module using hand-held computers could improve asthma self-assessment skills in a busy urban community health centre.

With the goal of standardising and improving asthma education for patients, we developed an educational module for teaching the asthma self-assessment tool, the 'Rules of Two'TM,⁴ using a hand-held multimedia computer. In the course of routine intake of consecutive adult patients with asthma at an urban US community health centre, the nurse administered a three-item survey before and after a three-minute iPodTM module on asthma self-assessment.

Evaluable survey records were available for 50/52 adult patients in this pilot project. The proportion of patients who knew the correct number of 'Rules of Two' for asthma self-assessment and of those who were able to name one rule increased from 10% to 70% (35/50; McNemar's $\chi^2=25.7$, $p<0.05$) and from 4% to 78% (39/50; $p<0.05$), respectively. Those who knew the meaning of a positive response to the 'Rules of Two' increased from 34% to 86% (43/50; $p<0.05$). Two patients knew the answers to all three questions before the intervention. Nineteen of the 50 patients were considered 'best learners' (learnt the answers to all three questions with the intervention) and 16 additional patients benefited by learning the answers to two of the three questions.

Despite certain caveats – such as the outcome of improving short-term knowledge retention, the lack of a comparison group, the practice nurse being both intervention manager and evaluator, the use of separate paper-based data collection, and the choice of the 'Rules of Two' as the self-assessment tool – this iPod-mediated strategy improved immediate knowledge of asthma self-assessment with a brief, standardised, low literacy educational message. Now a sustained part of the clinic routine, this strategy serves as a model for other projects in computer-assisted patient education. Moving the educational process to the hand-held computer seems a practical means of helping surgeries to accomplish routine patient education tasks such as asthma self-assessment. The hand-held computer overcomes barriers identified by previous attempts at computer-assisted patient education.

Conflict of interest and funding

None.

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