A comprehensive annotated reminder tool increased appropriate screening in primary care


QUESTION: Does a comprehensive annotated reminder tool (CART) prompt appropriate application of preventive service recommendations by resident physicians?

Design
1 year randomised (allocation concealed)* †, blinded (outcome assessor),* controlled trial.

Setting
Community hospital clinic in suburban Chicago, USA.

Participants
31 resident physicians who cared for patients ≥ 19 years of age at the clinic.

Intervention
Residents were allocated to the CART (n=15) or to a control group that used blank history and physical examination forms (n=16). The CART consisted of forms that documented the history and physical examination by integrating age appropriate screening questions, age specific reminders, and test frequency recommendations. The forms were provided for 3 age cohorts, each with guidelines for preventive interventions.

Main outcome measures
Appropriateness of preventive service recommendations: complete history and physical examination of new patients within the first 3 visits and appropriate screening. Assessments were done by blinded chart reviews of randomly selected new patients (608 charts were reviewed). Physician knowledge of the US Preventive Services Task Force recommendations was also assessed.

Main results
Recommendations were organised into 4 categories: history, physical examination and laboratory investigations, counselling, and prophylaxis. 20 (of 49) recommendations were analysed. During the intervention phase, the proportion of appropriately screened patients in the CART group increased by a mean of 45%, 21%, and 15% for the recommendations in the history, examination and laboratory investigations, and counselling categories, respectively. In the control group, the proportion of appropriately screened patients did not change appreciably (table). During the post-intervention phase, the proportion of appropriately screened patients returned to baseline levels in the CART group. Both groups had higher post-test knowledge scores, showing no effect of the CART.

Conclusion
A comprehensive annotated reminder tool made available to resident physicians increased the proportion of patients receiving appropriate screening and preventive services, but screening behaviour returned to baseline levels after removal of the comprehensive annotated reminder tool.

*See glossary.
†Information provided by author.

COMMENTARY
Despite substantial evidence documenting the benefits of preventive health care, physicians frequently underutilise preventive healthcare services.1 Computerised reminder systems have been shown to improve physician performance,2 but the cost to implement and maintain an electronic medical record or other computer based technology is a barrier for many practising physicians.

The trial by Shannon et al showed that a CART, embedded in a paper based comprehensive history and physical form, increased the delivery of preventive health care by family practice residents.

Despite increased knowledge about preventive healthcare interventions among the study group and control group participants, only the residents using the reminder tool showed improved performance. Performance reverted to baseline in the intervention group when the reminder tool was no longer provided. This finding emphasises that physician knowledge simply is not enough to sustain behavioural change. Techniques to improve processes in the effective delivery of health care are required if physicians are to consistently provide needed care to patients.

The study showed improved performance by resident physicians. Whether the CART could improve physician performance in a typical time-pressured clinical practice environment is unclear. Reproducing this study among practising physicians would be useful.

Robert Gluckman, MD
Providence-St. Vincent Medical Center, Portland, Oregon, USA

Source of funding: Advocate Christ Hospital Medical Fund.
For correspondence: Dr K C Shannon, Dartmouth College, Hanover, New Hampshire, USA. Kevin.C.Shannon@Dartmouth.edu.

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