

Review: Organizational change and patient involvement may increase the use of prevention cancer screening services

Stone EG, Morton SC, Hulscher ME, et al. **Interventions that increase use of adult immunization and cancer screening services: a meta-analysis.** *Ann Intern Med.* 2002 May 7;136:641-51.

QUESTION

What approaches are most effective in increasing use of adult immunization and cancer screening services?

DATA SOURCES

Studies were identified by searching (through February 1999) the Cochrane Effective Practice and Organization of Care Special Register (which includes searches of MEDLINE [from 1966], EMBASE/Excerpta Medica [from 1980], HealthSTAR [from 1975], and the Cochrane Controlled Trials Register [from 1996]), previous systematic reviews, and the Health Care Quality Improvement Projects database.

STUDY SELECTION

Controlled clinical trials that assessed interventions to increase the use of immunizations for influenza and pneumococcal pneumonia, and use of screening for colon, breast, and cervical cancer in adults were selected for review.

DATA EXTRACTION

Data were extracted on specific intervention components, study characteristics, and outcomes. Intervention components were classified as reminders to patients or providers, feedback to providers on performance of prevention activities, education of patients or providers, financial incentives to patients or providers, regulatory and legislative actions, organizational change, or mass media campaigns.

MAIN RESULTS

108 studies on immunizations (29 studies), mammography (33 studies), cervical cytology (27 studies), and colon cancer screening (19 studies) met the inclusion criteria. Of these, 95 were randomized controlled trials (RCTs) and 13 were controlled clinical trials. 81 studies included a control group and were eligible for meta-regression analysis. 25 of these targeted providers, organizations, or communities (22 of the 25 were RCTs). The effectiveness of intervention components on increasing the use of immunization and screening services are displayed in the Table. Organizational change interventions, such as use of separate clinics aimed at screening and prevention services, use of a planned care visit for prevention, use of continuous quality improvement techniques, or designation of nonphysician staff to do specific prevention

activities, appeared most effective. Involving patients through patient financial incentives, reminders, education, and feedback also appeared to be effective.

CONCLUSION

Health care organizational change interventions and interventions involving patients through financial incentives, reminders, education, and feedback may be effective for increasing the use of adult immunization and cancer screening services.

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Intervention components for increasing the use of immunizations, mammography, cervical cytology, or colon cancer screening*

Intervention components	Ranges in adjusted odds ratios (95% CI)†
Organizational change	2.47 (1.97 to 3.10) to 17.6 (12.3 to 25.2)
Patient financial incentives	1.82 (1.35 to 2.46) to 3.42 (2.89 to 4.06)
Patient reminders	1.74 (1.58 to 1.92) to 2.75 (1.90 to 3.97)
Patient education	1.29 (1.14 to 1.45) to 1.53 (1.30 to 1.81)
Provider feedback	1.10 (0.93 to 1.31) to 1.76 (1.44 to 2.15)

*CI defined in Glossary.

†Adjusted odds ratios from meta-regression analysis.

COMMENTARY

The value of preventive health care is well-known. Delivering preventive health care, however, can be challenging, and physicians frequently underuse these services. This methodologically sound meta-analysis by Stone and colleagues makes a compelling case for physicians to lead the way in changing how health care services are delivered. Stone and colleagues found that patient-oriented and organizational approaches are most likely to be effective. Evidence exists that physicians, when provided with reminders, can be encouraged to provide preventive services more often (1).

New models of care delivery, such as the Idealized Design of Clinical Office Practices (IDCOP) initiative (2), have shown increased effectiveness in the management of chronic illness. The IDCOP model emphasizes the use of information technology to enhance patient access, develop patient registries to manage populations as well as individual

patients, and incorporate new knowledge into practice. Practicing physicians in small groups could have difficulty implementing some aspects of the model because of financial constraints and expertise in information technology. However, 2 relatively simple changes that physicians in practice can make include designating a nonphysician to implement preventive health care protocols and scheduling preventive health care visits.

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References

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