

Effect of Patient Reminder/Recall Interventions on Immunization Rates - A Review

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Context: Immunization rates for children and adults remain below national goals. While experts recommend that health care professionals remind patients of needed immunizations, few practitioners actually use reminders. Little is known about the effectiveness of reminders in different settings or patient populations.

Objectives: To assess the effectiveness of patient reminder systems in improving immunization rates, and to compare the effectiveness of different types of reminders for a variety of patient populations.

Data Sources: A search was performed using MEDLINE, EMBASE, PsychINFO, Sociological Abstracts, and CAB Health Abstracts. Relevant articles, as well as published abstracts, conference proceedings, and files of study collaborators, were searched for relevant references.

Study Selection and Data Extraction: English-language studies involving patient reminder/recall interventions (using criteria established by the Cochrane Collaboration) were eligible for review if they involved randomized controlled trials, controlled before-after studies, or interrupted time series, and measured immunization rates. Of 109 studies identified, 41 met eligibility criteria. Studies were reviewed independently by 2 reviewers using a standardized checklist. Results of studies are expressed as absolute percentage-point changes in immunization rates and as odds ratios (ORs). Studies with similar characteristics of patients or interventions were pooled (random effects model).

Data Synthesis: Patient reminder systems were effective in improving immunization rates in 33 (80%) of the 41 studies, irrespective of baseline immunization rates, patient age, setting, or vaccination type. Increases in immunization rates due to reminders ranged from 5 to 20 percentage points. Reminders were effective for childhood vaccinations (OR, 2.02; 95% confidence interval [CI], 1.49-2.72), childhood influenza vaccinations (OR, 4.25; 95% CI, 2.10-8.60), adult pneumococcus or tetanus vaccinations (OR, 5.14; 95% CI, 1.21-21.78), and adult influenza vaccinations (OR, 2.29; 95% CI, 1.69-3.10). While reminders were most effective in academic settings (OR, 3.33; 95% CI, 1.98-5.58), they were also highly effective in private practice settings (OR, 1.79; 95% CI, 1.45-2.22) and public health clinics (OR, 2.09; 95% CI, 1.42-3.07). All types of reminders were effective (postcards, letters, and telephone or autodialer calls), with telephone reminders being most effective but costliest.

Conclusions: Patient reminder systems in primary care settings are effective in improving immunization rates. Primary care physicians should use patient reminders to improve immunization delivery.