

DISTANCE-BASED QI FOR IMMUNIZATION DELIVERY: FEASIBLE? EFFECTIVE?

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Background: US immunization rates (IR) have failed to achieve the Healthy People 2000 objectives. Quality improvement (QI) approaches based on systems theory have been effective in improving preventive care when delivered locally, but it is unclear whether they are feasible and effective when delivered at a distance.

Objective: To assess the feasibility and effectiveness of a distance-based QI intervention as compared with traditional education in improving immunization delivery in practice.

Design/Methods: From an original group of 82 Pediatric Research in Office Settings (PROS) practices, 29 with baseline IR at or below the median (88%) were block randomized into one of two year-long interventions: distance-based QI (including monthly conference calls, QI Listserv, and a QI website) or paper-based traditional education. Key outcomes were 1) usage and helpfulness of the QI modalities; 2) pre-post changes in practice IR; and 3) behavioral changes assessed on a practitioner survey.

Results: In terms of feasibility, QI practices attended 8.8 of 11 conference calls on average, as compared with usage of the QI Listserv (mean of 1.09 uses) and website (mean of .92 uses). Helpfulness ratings of the QI modalities mirrored usage. Conference calls averaged 1.38 on a three-point scale (1 = very helpful; 2 = somewhat helpful; 3 = not helpful at all), as compared with 1.86 for the website and 2.00 for the Listserv. In terms of comparative effectiveness, within-group analyses revealed a 4.9 percentage point (PP) pre-post increase in IR for the QI group ($p=.061$), as opposed to a 0.8 PP increase for the traditional group ($p=.752$). The 4.1 PP between-group differences in favor of the QI group was not significant; however the study's power to detect a difference was only .24. Survey analyses indicated that a significantly higher proportion of QI practices introduced a system identifying children behind in immunizations.

Conclusions: A distance-based QI model appears to be a feasible, and possibly effective means for improving immunization delivery in practice.