

Real-world Stepped Wedge Cluster Randomized Trial of Practice Facilitation to Improve Care

Take Away Points

- Prior research documents the effectiveness of practice facilitation (active on-site consulting advice by an external healthcare professional) in yielding meaningful improvements in disease prevention and quality of patient care.
- However, the time commitment required on behalf of the providers, as well as the complexity of adherence to best practice guidelines for patients with multiple chronic diseases, proved to be a significant challenge in this study of busy primary care practice settings. Real-world sustainable practice facilitation programs must account for these issues.

The Issue

Implementing evidence-based best practices in a real-world primary care setting is challenging. Practice facilitation is one method that has demonstrated success in increasing adoption of evidence-based guidelines in primary care practice. With this method, an external healthcare professional, often a trained nurse with management experience, is brought into a practice as a *practice facilitator* in order to help primary care providers address challenges in initiating the change associated with implementing new guidelines. Cost consequence analysis of this method in a facilitation study of improving preventive care in primary care practice demonstrated a 40% return on investment. However, the adoption, optimal intensity, duration, and effectiveness of facilitation programs beyond a single-disease-focus remain unclear. This study focused on initiation of the Improved Delivery of Cardiovascular Care (IDOCC) guidelines in a regional primary care setting beginning in 2007 to improve guideline adherence in the secondary prevention of heart disease, stroke, peripheral vascular disease, renal disease, and diabetes. The researchers hypothesized that facilitation would enable practices to improve overall adherence to cardiovascular care guidelines.

Source

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<http://www.implementationscience.com/content/pdf/s13012-015-0341-y.pdf>

Study Methods and Design

The study was conducted in a large health region of Eastern Ontario, Canada using the IDOCC intervention protocol. Eligible primary care practices must have been in operation at least 2 years prior to initiation of the study intervention. At least one physician from the practice must have consented to participate and *no monetary compensation was given for participation*. Practices were recruited via mail, including reminders and repeat mailings.

A *stepped wedge cluster randomized trial design* was used to minimize the practical, logistical, and financial constraints associated with large-scale implementation, control for the effect of time, and to ensure that all practices in the project were eventually offered the intervention.

The health region was divided into 9 geographic regions and the regions were randomized via computer to one of three study steps.

The IDOCC intervention included regular meetings with a practice facilitator during the study period. The practice facilitators intended to visit with practices at least 13 times: 1 visit every 4 weeks in year 1

(intensive phase), and 4 to 6 times in year 2 (sustainability phase). Practice facilitators utilized evidence based care guidelines, decision support tools, enhanced community linkages, self-management support, and delivery system redesign (such as recall systems, disease-specific registries) to support practices in changing their behavior through small but continuous changes in a plan-do-study-act cycle.

Step	Total Number of Participants	Time Periods				
		1 Apr 2007-Mar 2008	2 Apr 2008- Mar 2009	3 Apr 2009- Mar 2010	4 Apr 2010-Mar 2011	5 Apr 2011-Mar 2012
I	27 practices (59 physicians)	Control	Intensive Phase	Sustainability Phase		
II	30 practices (79 physicians)	Control	Control	Intensive Phase		
III	27 practices (53 physicians)	Control	Control	Control	Intensive Phase	Sustainability Phase

Although the unit of intervention was the practice, the unit of analysis for the study was the patient. The study measured mean adherence to best-practice guidelines at baseline, during the intensive phase, and sustainability phase. Patient data was collected through chart abstraction by six trained nurses blinded to whether the practice they were auditing was part of the control or intervention phase. Practice-level data was collected through practice surveys and physician demographic database linkages. After data collection, investigators developed 3 analytic models: A – unadjusted, B – adjusted for patient characteristics (age, sex, number of cardiovascular-related risk factors), and C – adjusted for practice-level characteristics (payment model, percent of physicians that were female, and years since graduation). The least square mean adherence scores were calculated for each phase to represent the estimated effect of the intervention on the quality of care for an “average” patient in an “average” practice.

Key Findings and Limitations

- 533 practices in the health region were approached for participation in the IDOCC intervention. Of those, 434 were eligible to participate, and 84 practices (19%) with 182 physicians went on to participate in the study.
- None of the practices received the intended intensity of facilitator visits. On average, facilitators had 6.6 visits (versus the planned 12) with practices in year 1 and 2.5 (vs. planned 4 to 6) in year 2. Providers did not have available time needed to meet with the facilitators.
- Practice facilitation was not found to be effective. In the unadjusted model A and in the adjusted model B, the least square mean differences showed a decrease in adherence to guidelines compared to baseline of 2.1% and 1.9% in the intensive phase and a decrease of 4.7% and 4.2% in the sustainability phase, respectively. Model C’s adjustment for provider characteristics had little impact on the estimates.
- Limitations: The use of an index of adherence provides an overall picture of change in adherence patterns but may hide other changes that occurred during the intervention. In addition, randomizing at a regional level created some imbalances in the characteristics of participants across the three steps.

Final Thoughts

- In contrast to previously reported facilitation trials, the study intervention did not improve adherence to evidence-based guidelines for cardiovascular disease in primary care practices. However, prior studies focused on single diseases/conditions rather than multiple chronic conditions.
- This investigation highlights the complexities of effective interventions and related metrics in the setting of sustainable programs for multiple chronic conditions.