

# Improving Prevention Is Difficult

In this issue of **ecp**, we report the final results of IMPROVE (IMproving PRevention through Organization, Vision and Empowerment)—a randomized trial involving 44 primary care clinics in the Minneapolis–St. Paul area.<sup>1</sup> The study was designed to test a continuous quality improvement (CQI) and systems intervention intended to improve various preventive services (e.g., blood pressure check, mammography, influenza vaccine). We found that the intervention failed to significantly increase these services. While we describe some of the technical causes for this occurrence in the primary paper, here we expand the discussion to include the problems related to organizational change.

Recently, Shortell, Bennett, and Byck<sup>2</sup> published a systematic review of the recent literature on the impact of CQI in clinical practice. They concluded that there are few scientific studies of CQI and that “no evidence has yet emerged of an organization-wide impact on quality.” They point out that “the clinical application of CQI is complex and demanding” and needs to meet the following qualifications to be effective: the application must be clearly formulated and focused on areas of real importance to the organization, the organization must have capable leadership and be truly prepared to make a change, and the external environment must be conducive to the change.

Although the immediate reason that preventive services did not increase in IMPROVE was because the systems changes were incomplete, our speculation about the broader implementation problems echo those of Shortell and colleagues. Unfortunately, we had problems achieving the five following conditions, which are critical to the success of improvement efforts.

## Motivation or Tension for Change

Clinic leaders and clinicians need sufficient motivation to improve their preventive services rates. This probably requires powerful external incentives or requirements as well as insightful internal vision that engenders real organizational commitment. Ultimately, the change must be seen as important for organizational survival, or better yet, as an escape from a burning platform that galvanizes people to action.

Unfortunately, despite espousing a strong belief in the importance of these services, the clinicians and nurses who responded to the IMPROVE surveys did not report a strong need to improve service delivery.<sup>3</sup> Support from clinic leadership during the trial appeared similarly ambivalent. In addition, there was limited external incentive or pressure for change from health plans, patients, or purchasers.<sup>4</sup>

## Organizational Ability To Manage Change

Many factors affect an organization’s ability to achieve a desired change, including its culture, the capabilities of leaders at all levels, morale, and the level of external and internal turmoil. However, an identified effective model for change or process improvement and experience in use of that model is fundamental to organizational change.

Only half of these clinics had experience with CQI teams, and most reported joining the project partly to acquire CQI knowledge and skills. Although most clinic teams worked hard on improvement, it was clear that this was a new experience

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for them and that both data management and organizational change were new and challenging skills.<sup>5</sup> In fact, our measurement of their culture for quality showed them to be average for other types of organizations in terms of meeting the Baldrige Award criteria for quality. Thus, they lacked the supporting culture as well as an effective model for quality improvement. The model we supplied has subsequently been rejected as being too slow and ineffective by most quality improvement leaders. In addition, the teams were working in a turmoil-filled environment. During the first year, 64% of the 44 clinics experienced a change in ownership or affiliation, 77% underwent at least one major internal system change, and 45% changed leadership.<sup>6</sup> Six of the 22 IMPROVE teams changed leaders, 7 changed facilitators, and 8 sponsors changed during this same period.

### **Substantive Change Content**

Clearly the best change management in the world will accomplish little if the changes made are not capable of resulting in significant improvement. Skeptics of CQI have correctly noted that there is often too much emphasis on the process of identifying problems and on original thinking by team members, who are often unaware of existing knowledge, that they develop only superficial changes that are unlikely to create new behaviors (like educational programs or new chart forms).<sup>7-9</sup>

Although we emphasized development of the office systems that have a fairly good evidence base, these systems still require that the clinician complete the actions necessary to deliver the preventive services.<sup>10</sup> In retrospect, it would probably have been better to emphasize that those system changes focus on standing orders for nursing staff (with an opportunity for clinicians to veto delivery for specific patients) rather than clinician-based systems that require overcoming all the problems of traditional practice patterns and attitudes.

### **Development and Implementation of Change**

The organization must then make use of the change process to implement changes of proven effectiveness in a way that addresses both human and system needs. This is particularly difficult if the changes involve the care paradigm and traditional roles. Furthermore, the changes are unlikely to be sustained if implementation does not include repeated measurements to assess progress and stimulate modifications.

Most of the IMPROVE clinic teams encountered the problems commonly identified in other studies of CQI teams.<sup>8, 11, 12</sup> Only nine teams reported collecting

data to evaluate the effectiveness of their changes, and few cycled through the process a second time. It is also questionable whether the system changes that were implemented were complete enough to be capable of producing change in preventive services delivery rates. At follow-up, an average of 26 preventive service-process combinations were in place and functioning in intervention clinics—an increase over 11 at baseline—while the control clinics did not change. However, with 8 preventive services and 10 improvement processes, there is a theoretical goal of 80 service-process combinations. Thus, even the statistically significant increase in processes in the intervention clinics at follow-up represented only one third of the desired overall system. This suggests that most clinics lacked sufficiently complete systems. For example, a clinic might have an efficient system for collecting and displaying information about which patients needed services, but unless the clinicians saw the information *and* ordered the services, no change would occur. The number of clinics that developed a functioning reminder system for the clinician only ranged from one to five for any particular service, except for Pap smear, where nine clinics had reminders. Moreover, very few clinics chose to create standing orders that empowered the nurses to provide needed services.

### **Appropriate Amount of Time for the Change**

There must be sufficient time to make the required changes. On the other hand, the time line cannot be so long that resources are wasted and momentum is lost.

Some observers believe that at least 3 years and perhaps as many as 5 years is necessary to develop the organizational and human role transformations required by this systems approach to preventive service delivery.<sup>13</sup> Traditionally, patients, staff, and clinicians expect that preventive services will be provided only during routine check-ups and by a clinician's order. Achieving our preventive services goals probably requires that all visits by all patients have an additional agenda that encompasses these goals; that this agenda is supported by previsit planning, standing orders, and other effective systems; and that staff and patients expect this agenda to be implemented. These organizational and human changes take time. On the other hand, our training may have overemphasized the time needs to the detriment of encouraging a more time-limited focus on the steps along the way.

### **Conclusion**

In the face of inadequate tension for change, limited organizational change experience, mixed leadership support, a suboptimal CQI improvement model, inadequate

content, enormous environmental turmoil, inexperienced team leaders and facilitators, and insufficient time pressures and calendar time, it is not surprising that the IMPROVE trial did not produce the desired outcomes. However, we have learned a great deal about the problems and prospects for improving the quality of health care. Despite the failure of this trial to demonstrate a change in preventive services rates, application of these and other lessons<sup>14</sup> will help make future efforts more likely to be successful, even if the task is still difficult.

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