

Innovation Series 2006

A Framework for Spread

From Local Improvements to System-Wide Change

We have developed IHI's Innovation Series white papers to further our mission of improving the quality and value of health care. The ideas and findings in these white papers represent innovative work by organizations affiliated with IHI. Our white papers are designed to share with readers the problems IHI is working to address; the ideas, changes, and methods we are developing and testing to help organizations make breakthrough improvements; and early results where they exist.

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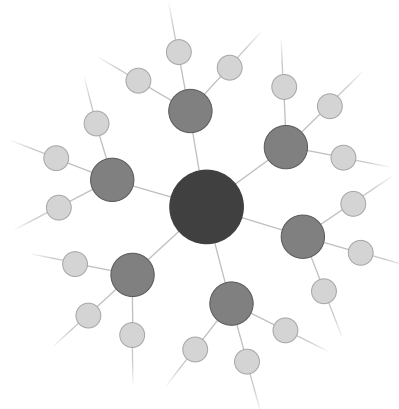
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For reprints requests, please contact:

Institute for Healthcare Improvement, 20 University Road, 7th Floor, Cambridge, MA 02138
Telephone (617) 301-4800, or visit our website at www.ihl.org

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From Local Improvements to System-Wide Change

Authors:

M. Rashad Massoud, MD, MPH: *Senior Vice President, IHI*

Gail A. Nielsen, BSHCA, FAHRA, RTR: *Clinical Performance Improvement Education Administrator,
Iowa Health System*

Kevin Nolan, MA: *Senior Fellow, IHI; Statistician and Consultant, Associates in Process Improvement*

Marie W. Schall, MA: *Director, IHI*

Cory Sevin, RN, MSN, NP: *Director, IHI*

Note: The authors of this paper are listed alphabetically to reflect the collaborative nature of IHI's innovation work. All authors have made substantial contributions to the conception and design of the work presented in the paper. While some authors have taken a more active role in contributing to the writing, other authors have reviewed and revised the paper.

Executive Summary

A key factor in closing the gap between *best* practice and *common* practice is the ability of health care providers and their organizations to rapidly spread innovations and new ideas. Pockets of excellence exist in our health care systems, but knowledge of these better ideas and practices often remains isolated and unknown to others. One clinic may develop a new way to ensure that all diabetics have their HbA1c levels checked on a regular basis, or one medical-surgical unit in a hospital may develop a consistent way to reduce pain for post-operative patients. But too often these improvements remain unknown and unused by others within the organization. Organizations face several challenges in spreading good ideas, including the characteristics of the innovation itself; the willingness or ability of those making the adoption to try the new ideas; and characteristics of the culture and infrastructure of the organization to support change.

In 1999, the Institute for Healthcare Improvement (IHI) chartered a team to develop a “Framework for Spread.” The stated aim of the team was to “...develop, test, and implement a system for accelerating improvement by spreading change ideas within and between organizations.” The team conducted a review of organizational and health care literature on the diffusion of innovations,⁴ and interviewed organizations both within and outside of health care that had been successful in spreading new ideas and processes, including Luther Midelfort Health System, Mayo Health System, Virginia Mason Medical Center, and Dean Health System.

Since then, the Framework for Spread and our deeper understanding of its content have continued to evolve. This white paper provides a snapshot of IHI’s latest thinking and work on spread. It is divided into two parts:

The first part of the white paper describes the major spread projects that IHI has supported through early 2006, and harvests the lessons we have learned about the most effective ways to:

- prepare for spread;
- establish an aim for spread; and
- develop, execute, and refine a spread plan.

The second part of the white paper is a reprint of an article published in the June 2005 issue of the *Joint Commission Journal on Quality and Patient Safety*, describing how the Veterans Health Administration (VHA) used the Framework for Spread to spread improvements in access to care to more than 1,800 outpatient clinics.

IHI Spread Projects: 1999–2006

Since IHI first began working to develop a Framework for Spread in 1999, both the framework and IHI's deeper understanding of its content have continued to evolve, especially regarding the role of leadership in planning and guiding spread, understanding and utilizing the structure and culture of an organization in developing an initial plan for spread, and the importance of developing a clear spread aim.

In addition to the Advanced Clinic Access initiative within the Veterans Health Administration (described in the accompanying article), IHI has supported, guided, or studied a variety of spread projects. (Note: While not all of these projects have explicitly applied the Framework for Spread, our reflections about the factors that have contributed to effective spread in each of these examples have both helped us refine our thinking and increased our confidence that the Framework for Spread can be helpful in guiding organizations as they plan for and support the spread of improvements.)

IHI's 100,000 Lives Campaign

The 100,000 Lives Campaign is an initiative to engage US hospitals in a commitment to implement changes in care that are proven to improve patient care and prevent avoidable deaths. Begun in December 2005, this national campaign has enrolled over 3,000 hospitals in a coordinated effort to prevent unnecessary deaths in hospitals by implementing six interventions that have been shown to reduce hospital mortality.

For more information, see www.ihl.org/IHI/Programs/Campaign/

Bureau of Primary Health Care

The Health Resources and Services Administration (HRSA) Bureau of Primary Health Care (BPHC), in partnership with the Institute for Healthcare Improvement, has embarked on a nationwide initiative to improve care for people with chronic conditions. Since 1998, IHI has worked with the BPHC to design, launch, and support the Health Disparities Collaboratives, which use IHI's Breakthrough Series Model, the Model for Improvement, and the Chronic Care Model to make rapid, significant improvements in care. With the goal of involving every federally qualified health center in the country, the BPHC has sponsored successive waves of Collaboratives to spread the Chronic Care Model so as to improve care for all its patients, especially those with chronic disease.

For more information, see www.ihl.org/IHI/Topics/Improvement/SpreadingChanges/Literature/HealthDisparitiesCollaboratives.htm

IHI's IMPACT Network

Through its Leadership Community and front-line Learning and Innovation Communities, IMPACT helps organizations develop improvements in specific clinical and operational areas and then spread these improvements throughout their organizations.

For more information, see www.ihl.org/IHI/Programs/IMPACTNetwork/

US Department of Health and Human Services, Division of Transplantation

In partnership with IHI, three successive Collaboratives to increase the conversion rate of organ donors (the number of actual donors divided by the total number of eligible donors) and to increase the number of organs procured from each donor have saved the lives of thousands of people since 2003. Hundreds of hospitals and Organ Procurement Organizations have worked together to design and implement the best methods of partnering with each other and with donor families to ensure successful organ transplants.

For more information, see www.ihl.org/IHI/Topics/Improvement/SpreadingChanges/Literature/SpreadingtheGiftofLifeOrganDonationBreakthroughCollaborative.htm

Tula and Tver Oblasts (administrative districts) within the Russian Federation

From three demonstration projects begun in 1998, new systems of care for patients with pregnancy-induced hypertension (PIH) have spread from 3 to 40 hospitals; for patients with neonatal respiratory distress syndrome (NRDS), from 5 to 43 hospitals; and for patients with arterial hypertension (AH), from 5 to 442 clinics.

For more information, see www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/Literature/ToRussiawithHealthCareImprovement.htm

Tuberculosis Treatment in Peru and HIV/AIDS Treatment in South Africa

IHI has expanded its mission to help in the world's most resource-poor countries. Following three years of exploratory activity to expand treatment for tuberculosis in Peru and HIV/AIDS in South Africa, IHI is now specifically devoting its energies to the work in South Africa. The IHI team is currently supporting local partners in five projects to expand antiretroviral treatment for AIDS in South Africa, applying an approach that utilizes collaborative improvement methods, diffusion of innovation theory, and the chronic disease management model. This work in South Africa also aims to create high-functioning, interdependent "wedges" of the health care system comprising tertiary, secondary, and primary facilities that act as nodal points for subsequent waves of expansion.

For more information, see www.ihl.org/IHI/Topics/DevelopingCountries/

California Improvement Network

The California HealthCare Foundation, in partnership with IHI, is building the California Improvement Network (CIN) to spread improved chronic illness care among the state's physician office practices and clinics.

For more information, see www.chcf.org/topics/chronicdisease/index.cfm?itemID=112543&subtopic=CL351&subsection=reports

End Stage Renal Disease Networks

From winter 2002 to summer 2005, the Centers for Medicare & Medicaid Services (CMS) engaged IHI to support the End Stage Renal Disease (ESRD) Networks in an initiative to increase rates of arteriovenous (AV) fistula placement and use for dialysis patients in the US. The use of fistulas has been shown to decrease mortality and morbidity for patients and reduce the cost of care. The use of fistulas in the ESRD Networks increased from 33 percent in September 2003 to over 40 percent at the end of 2005.²

For more information, see www.ihl.org/IHI/Topics/ESRD/

Kaiser Permanente

IHI is currently partnering with Kaiser Permanente to spread innovations across their system, drawing on the concepts and ideas presented in this white paper. Improvements being spread include the Nurse Knowledge Exchange (NKE) at change of shift, and innovations in primary care redesign leveraged by information technology.

For more information, see www.ihl.org/IHI/Topics/MedicalSurgicalCare/MedicalSurgicalCareGeneral/ImprovementStories/ShiftingtoaHigherStandard.htm

Key Issues in Developing a Spread Plan

Each of the above examples has enriched IHI's understanding of how health care organizations can use components of the Framework for Spread most effectively to help plan and guide their spread activities. Most recently, IHI has observed that organizations often benefit from specific guidance in applying the components of the Framework for Spread. We encourage organizations to consider the issues below when developing and carrying out their initial plans for spread.

Preparing for Spread

Health care leaders and improvement teams often ask, "How do I know if I'm ready for spread?" The answer is that it's never too early to plan for spread, but that certain things should be in place before

actually carrying out the plan. These factors include the widespread acknowledgement by leadership that the improvement project is a key strategic initiative of the organization; the designation of both executive sponsorship and day-to-day leadership; and the existence of successful sites that are the source of the specific ideas to be spread, as well as evidence that the ideas result in the desired outcomes.

The role of leadership cannot be emphasized enough in both initiating a plan for spread and being actively supportive once the plan is underway.³ The assessment of the organization's readiness for spread is also an excellent time to consider some initial communication so that others in the organization can understand the reasons for the initiative, become aware of the improvements being made at the successful site, and learn how they might contribute to the effort. (*Activities that should be considered as part of an organizational assessment of readiness for spread are discussed in more detail in the accompanying article on page 341 under the "Leadership" and "Better Ideas" subsections.*)

Establishing an Aim for Spread

The development of an aim for spread is an important outcome of the initial spread planning process. A spread aim addresses the "who, what, and where" of spread and should include the following components:

- The population (e.g., clinics, units, facilities) that is the target of the spread activities (*identifying the target population is discussed in more detail on pages 341 and 342 under "Set-up for Spread" in the accompanying article*);
- The specific goals that are expected to be achieved (e.g., access to primary care within 24 hours of the request, eliminating ventilator-associated pneumonia in an ICU, etc.);
- The specific improvements that will be made in the target population (e.g., the principles and methods of advanced access in primary care, the use of the Ventilator Bundle in an ICU, etc.); and
- The time frame for the effort (e.g., 6 months, 12 months, 2 years).

Developing an Initial Spread Plan

The spread aim is the foundation for an organization's spread plan. A spread plan addresses the "how" of spread and includes communication methods and channels to reach and engage the target population; a measurement system to assess progress in meeting the spread aims; and anticipation of the actions needed to embed the changes into the organization's operational systems. (*The communication and measurement activities associated with spread are discussed on pages 342 and 343 of the accompanying article.*)

We have found in our recent work that addressing the following questions is helpful for determining how best to reach and engage the target population in the spread activities:

1. Can the organization or community structure be used to facilitate spread?

The specific characteristics of an organization will determine the most effective way to assign responsibility and utilize existing or new communication methods to attract and engage those in the target population to try the new ideas. Some organizations may be characterized by a nested structure (i.e., where one unit is directly related to other units within a centralized organizational structure), while other organizations may be more decentralized. In a nested structure, planning for the involvement of successive waves of organizational units is often a way to rapidly reach the maximum number of units. For example, starting with 1 unit, moving to 5 units (that are connected to the first), then to 25 units (that are connected to the previous 5 units), etc.

2. How are decisions about the adoption of improvements made?

In some organizations, decisions are made in a centralized, directed manner, while others may rely on a consensus-building process. These elements of an organization's culture contribute to the timetable and expectations that are set by leadership for spread.

3. What infrastructure enhancements will assist in achieving the spread aim?

Each organization should consider the extent to which infrastructure changes can be utilized to speed the adoption of the improvements. Some changes by definition are more dependent upon individual adoption decisions (e.g., prescribing a new medication or use of a new treatment regimen), while others are more tied to infrastructure or system-level changes (e.g., roll-out of a new computer system). Most improvements lie somewhere between these two poles of the adoption decision continuum, but the more infrastructure changes can be used to support adoption (e.g., establishing an electronic decision-support system for chronic disease management), the more quickly improvements can be spread throughout the target population.

4. What transition issues need to be addressed?

Lack of knowledge of using an electronic health record (EHR), for example, might delay adoption of a new approach to panel management in a clinical office practice. The absence of a reliable communication system for a nurse on a medical-surgical floor to use in requesting assistance from the ICU might slow the adoption of Rapid Response Teams in a hospital. Such issues need to be addressed early in the spread plan to facilitate the transition to a new system.

5. How will the spread efforts be transitioned to operational responsibilities?

A spread effort is successful only when the new ideas or practices become the way an organization "does its business." Transferring the responsibility for facilitating the adoption decision from a

project leader to a line manager can help make this transition. Some issues that need to be addressed in planning for spread include training and new skill development, supporting people in new behaviors that reinforce the new practices, problem solving, and assignment of responsibility.

Executing and Refining the Spread Plan

Establishing methods for obtaining feedback on the progress of the spread process is central to a successful effort. (*The role of knowledge management is discussed on page 343 in the accompanying article.*) Some methods for obtaining information from those involved in spread and making adjustments in the process may include formal and informal reports from those in the target units; regular communication between those individuals with experience in the organization and those trying to implement the improvements for the first time; and using data to assess progress and making changes in organizational responsibility to ensure that the gains are maintained.

The Framework for Spread and the aforementioned components of developing a successful spread plan have been shown to be effective in helping to guide spread across different types of organizations and for different types of improvements. Going forward, IHI is interested in finding ways to identify the most effective spread strategies and methods for organizations with specific structures and cultures. We encourage organizations to apply the elements of the Framework for Spread, and to share their insights with IHI as to which activities contribute to the successful spread of innovative ideas in health care. This continues to be a pressing need for the continued improvement of health care, nationally as well as internationally.

Refer to IHI's website for more information on spreading improvements in health care (www.IHI.org/IHI/Topics/Improvement/SpreadingChanges).

References

- ¹ See references on page 347 of the accompanying article. [Nolan K, Schall M, Erb F, Nolan T. Using a framework for spread: The case of patient access in the Veterans Health Administration. *Joint Commission Journal on Quality and Patient Safety*. 2005 Jun;31(6):339-347.]
- ² Fistula First Outcomes Dashboard. Version 1.3. Generated 3/15/2006. Online information retrieved 10 April 2006. www.esource.net/downloads/cds/fistulafirst/fistulafirstdashboard.pdf
- ³ Nolan K, Nielsen, GA, Schall MW. Developing strategies to spread improvements (Chapter 6). *From Front Office to Front Line: Essential Issues for Health Care Leaders*. Chicago, Illinois: Joint Commission Resources; 2005.

Organizational Change and Learning

Using a Framework for Spread: The Case of Patient Access in the Veterans Health Administration

Kevin Nolan, M.A.
Marie W. Schall, M.A.
Fabiane Erb, R.H.I.A.
Thomas Nolan, Ph.D.

The experiences of four Veterans Health Administration (VHA) clinics in spreading operational changes and achieving improved access for veterans are discussed in detail elsewhere.¹ Much has been written about the problem of and reasons for the lack of widespread implementation of evidence-based innovations in health care.²⁻⁴ Such innovations would include not only new drugs or equipment but an operational system, such as one that orders, dispenses, and administers medications. The lack of implementation makes it clear that strong evidence for an innovation is necessary but not sufficient to result in its adoption.

Experience indicates that an effective operational system, such as those suggested above, will spread much more slowly than, for example, a new antinausea drug. No press releases will announce the approval of the medication system by the Food and Drug Administration. Patients will not demand its installation. No army of persons knowledgeable of the system will be dispatched to explain it. The spread of operational systems presents significant challenges—not faced by a drug company spreading an antinausea drug—for the following reasons:

- Operational systems are often large or complex and thus difficult to describe and communicate.
- The systems are usually not services for sale. Thus, well-developed marketing and sales processes are not available to create demand for them.
- Even if the new system was desired, the transition from the current system to the new system may be difficult.

Because these challenges seem difficult to overcome without purposeful leadership, we focus our attention on

Article-at-a-Glance

Background: Experience indicates that an effective operational system will spread much more slowly than, for example, a new antinausea drug. The Veterans Health Administration (VHA) used a Framework for Spread to spread improvements in access to more than 1,800 outpatient clinics between April 2001 and December 2003. The framework identifies strategies and methods for planning and guiding the spread of new ideas or new operational systems, including the responsibilities of leadership, packaging the new ideas, communication, strengthening the social system, measurement and feedback, and knowledge management.

Applying the Framework for Spread: Following a collaborative for reducing waiting times for patients without the large-scale addition of resources, each of the participating 22 Veterans Integrated Service Networks (VISNs) used the framework to expand improvements in access to care to six additional targeted clinics (for example, primary care, eye care, cardiology).

Results: During the VHA's spread initiative, waiting time for a primary care appointment decreased from 60.4 days at the end of fiscal year (FY) 2000 to 28.4 at the end of FY 2002. Results were sustained. Waiting time was < 25 days at the end of FY 2004.

Discussion: The Framework for Spread suggests areas that organizations should consider when developing and executing a strategy for a spread initiative. Further study is needed to determine the specific activities that should be emphasized to accelerate spread.

A Framework for Spread

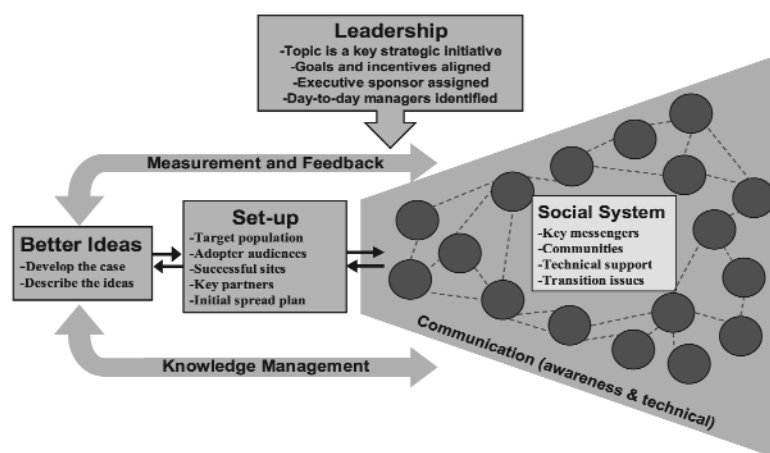


Figure 1. This diagram illustrates the strategies and methods that have been shown to contribute to the effective spread of new ideas or operational systems both within and across organizations.

spread within organizations. This does not preclude the spread of such systems between organizations if an appropriate umbrella organization such as a professional association exists.

In 1996, the Institute for Healthcare Improvement (IHI; Cambridge, MA) initiated the Breakthrough Series Collaborative in an attempt to reduce the gap between available knowledge and its use in practice in areas such as waits and delays, end-of-life care, and chronic disease care. A collaborative is an improvement method that brings together multiple similar sites with a common aim to adapt and spread existing knowledge.^{5,6} Collaboratives are particularly useful to hone an operational system, to document its advantages, and to begin the spread process.

Although collaboratives proved successful,⁷⁻¹¹ a more general approach to the spread of operational systems was needed to reach a wider audience. In 1999, the authors began a literature review and conducted interviews with organizations successful in spread. In 2000, testing of an approach to spread began in projects in health care and in industries such as chemical, landscape maintenance, and building products. Figure 1 (above) presents the Framework for Spread that evolved. The framework is founded on Everett Rogers's¹² definition of diffusion and draws both from the literature and from the experience of organizations actively

involved in spreading improvements from a local site to their entire system.

The Framework for Spread identifies the following components for planning the spread of new ideas:

- The responsibilities of leadership (including set-up)
- Identification of better ideas
- Communication
- Strengthening the social system
- Measurement and feedback
- Knowledge management

The framework is not meant to be prescriptive nor considered as a specific intervention but rather it is meant to suggest some general areas to consider as a large spread project is undertaken. Factors such as an organization's infrastructure, culture,

size, strength of its underlying social system, and the operational system being spread will influence how the components of the framework are applied. Check lists for spread appear in sidebars throughout the article to help in planning a strategy.

The section that follows describes the components of the Framework for Spread and the application of the framework in the VHA, which has attempted other spread projects with varying degrees of success,¹³ as an example.

Applying the Framework for Spread to the VHA

The VHA partnered with the IHI to conduct a collaborative from July 1999 through March 2000 on reducing waiting times for patients without the large-scale addition of resources. The collaborative included teams from 134 facilities from the then 22 Veterans Integrated Service Networks (VISNs). Following the collaborative, each VISN was asked to expand the improvements in access to care to additional clinic sites within six performance clinics (primary care, eye care, audiology, cardiology, orthopedics, and urology) with large patient volumes and long waiting times for appointments. The clinics care for approximately 3.8 million patients per year in more than 1,800 sites (Figure 2, page 341). This strategic effort was referred to as the Advanced Clinic Access (ACA) initiative.

Veterans Health Administration (VHA) Organizational and Clinic Structure for Spread of Improved Access

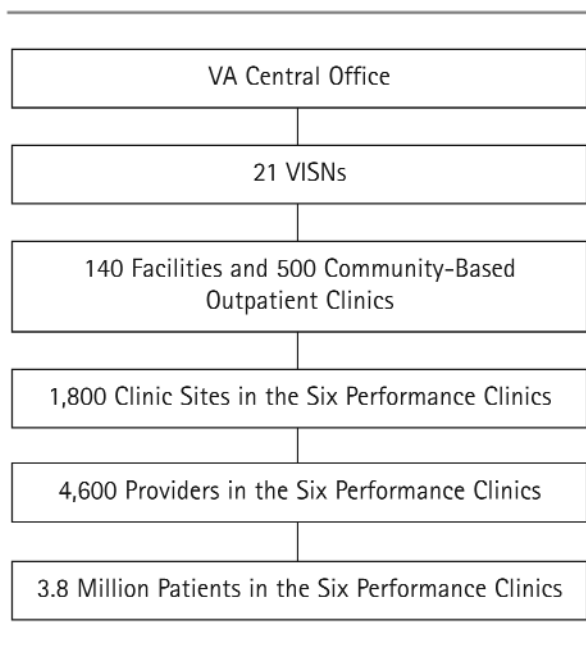


Figure 2. This chart shows the multiple levels of the organization that were utilized by the VHA in building a plan to spread improved access across its system. VA, Department of Veterans Affairs; VISN, Veterans Integrated Service Network.

Each of the then 22 networks (VISNs) within the VHA used the Framework for Spread to guide its efforts. VISN 2, the VA Healthcare Network of Upstate New York (VISN 2), consists of 5 medical centers and 27 community-based outpatient clinics (CBOCs) or access points for care. VISN 2's work in attempting to achieve the VHA standard of < 30 days average wait time for an appointment is presented in terms of the Framework for Spread components.

Leadership

Leaders at many levels in VISN 2—including the network director, chief medical officer, facility directors, and network and local care line managers—"set the agenda"¹² for change through the following actions:

- Embraced improved access as a key strategic initiative and set waiting time goals. This was communicated through facility leadership meetings, the VISN 2 Web

site, and publications. Leaders also committed funding and staff time.

- Aligned goals for improved access with two existing incentive programs, the Provider Compact and Goal Sharing. The Provider Compact funded provider educational activities depending on the level of attainment of a set of measures. The Goal Sharing Program allotted dollar awards of graduated amounts to teams achieving certain levels of performance.

- Established a multifunctional steering committee to lead the spread effort

- Supported a VISN 2 point of contact (POC) and facility POCs to manage the day-to-day activities of the VISN spread strategy. One of the barriers faced was the time commitments required from the POCs and others to facilitate spread. VISN 2 staff members do this work in addition to their regular duties, which caused several to drop out over time. This required the VISN core group, which does remain intact, to develop a system to recruit and train staff members to support the work.

Better Ideas

A key attribute of ideas that influences their rate of spread is their benefit to all adopters relative to other ideas.^{12,14} The concepts and ideas to improve access adopted in the VHA are consistent with the advanced or open access approach currently used with success in a number of health care settings.^{15,16} The VHA assembled these ideas into an easy-to-use booklet and developed them into a Web format for the national VHA Web site (available at the IHI Web site¹⁷). Two primary care and three specialty care areas in VISN 2 demonstrated during the national collaborative that adopting these ideas to improve access can provide benefits not only for patients but also for providers.¹⁸ It was determined that the ideas could be replicated in other primary and specialty care units.

Set-up for Spread

Once the better ideas are documented and successful sites identified, leaders should initiate the set-up for spread by identifying the target population. Consideration should be given to the different audiences (for example, physicians, nurses, technicians) within the target population. Leaders should also

oversee the development of an initial plan for spread, which could include ways to attract those in the target population willing to adopt the improvements.^{19,20} Ways to attract these early adopters might include the planning of broad-based communication about the new system's advantages, developing a process to identify persons influential with their peers, or developing a plan to share comparative data with adopters. The initial plan might also include the infrastructure changes, such as in information technology and distribution systems, and the realignment of functions within the organization needed to achieve the goals of the initiative.

VISN 2 used a general communication campaign to attract adopters, which was followed by a series of meetings to showcase the work of the successful clinics. VISN 2 focused on a group of clinics at a time. Clinics willing to be part of the initiative would constitute the initial waves. Improvement in the national scheduling system aided VISN 2 in its work.

General Communication and Knowledge Transfer in the Target Population

Because communication is at the heart of spread, the day-to-day manager of a spread initiative needs to organize a communication campaign.^{21,22} Many different channels of communication can and should be used to raise awareness and share technical knowledge.^{23,24} However, technical knowledge that focuses on the “how to” is best communicated through interaction with colleagues.^{25–28} Persons who are influencers or opinion leaders in the social system serve as the best messengers.^{29–32}

VISN 2 used a number of communication strategies to spread the ideas to improve access to the targeted clinics and strengthen the social system. Three successive “waves” of learning initiatives were launched in March 2000, March 2001, and January 2002. By making the successes of colleagues visible, the vast majority of clinics joined voluntarily. However, some staff members (physicians especially) refused to listen or to consider adopting the principles. Engaging them and spreading the access improvements to their clinics became a significant challenge for the access coaches and the leaders in VISN 2. It took extra effort to educate them and then have them put the concepts into practice and then see the benefits for themselves.

Sidebar 1. Checklist for Spread—Leadership, Better Ideas, and Set-up

- Is improvement in this area a strategic initiative within the organization?
- Is there an executive(s) who is responsible for the spread?
- How will this executive be involved on an ongoing basis?
- Is there a person or team who will manage the day-to-day spread activities?
- What are the positions of the key people who will make the adoption decision?
- Has the relative advantage of the changes been documented for all adopter audiences?
- Are the changes packaged so that they can be easily understood and tested by the adopters?
- Is there a successful site that has implemented the new system?
 - Are the changes implemented scaleable to the entire target population?
 - If there is no successful site, what is the strategy to create a good example?
- Has an initial plan for spread been developed? Consider:
 - Ways to attract early adopters
 - Planning broad-based communication
 - Developing a process to identify people in the target population who are influential with their peers
 - Developing a plan to share comparative data with adopters
 - Potential infrastructure changes needed

In 2002, VISN 2 also incorporated the use of “road shows”—events held at each of the five medical centers and at several large CBOCs. Physicians, nurses, and schedulers from successful sites met with staff. Part of the discussions were held in peer groups, for example, physicians meeting with physicians, schedulers with schedulers. In addition, articles about improving access and success stories appeared in VISN 2 newsletters.

Monthly video conferences, conference calls, team reports, and frequent e-mail exchanges were used to transfer knowledge. Personal coaching was available to sites that attended the VISN 2 meetings. In 2001, information was included on the VISN 2 intranet Web site. VISN 2 also communicated with patients. “No show” posters were designed to enlist patients’ help in reducing the number of scheduled appointments cancelled.

VISN 2 took advantage of resources developed at the national level such as a theme (“Providing quality care when veterans want and need it”), a logo, a poster, messages for each adopter group, and information posted on the VHA national Web site. Other important resources for communicating both broad awareness and technical information about improving access included two nationally produced videos. One video, “The Time Has Come,” showed patients, leaders, and providers from the VHA talking about the benefits of improving access. A second video featured Mark Murray, M.D., explaining the key ideas for improving access. Many providers also took part in national conference calls hosted by Dr. Murray and national e-mail groups.

Measurement and Feedback

Measurement is an integral part of improvement.³³ It provides information about whether the changes made in a system are having the desired effect. Two different types of measures are useful³⁴: measures that demonstrate the extent of the spread of the recommended changes,³⁵ and a set of measures that demonstrate the outcome of the changes implemented.

A strong measurement system was in place in VISN 2 before the spread initiative began. Wait times data are now, however, included in the monthly VISN 2 report, reviewed at steering committee meetings, and used to give feedback to sites and to refine the VISN 2 spread strategy. The rate of spread (the percentage of clinics that have implemented the ideas to improve access) is also measured. A clinic using $\geq 75\%$ of the 33 ideas to improve access for a period of \geq three months is considered to have implemented the ideas. Clinics self-report these data quarterly on a standard data collection form. VISN 2 ACA coaches validate the data through observation within the clinics. The data are summarized and plotted twice a year with help from contacts at the facilities.

Sidebar 2. Checklist for Spread— General Communication and Knowledge Transfer

- How will awareness of the initiative be communicated?
 - Have the benefits for different audiences been documented?
 - Have comparative data been shared?
 - What channels will be used to raise awareness in the target population?
- How will technical knowledge be communicated to facilitate the adoption of the changes?
 - Are peer-to-peer interactions planned?
 - Are potential adopters influential in the social system willing to be involved?
 - How will successful units be involved to supply technical support?

Knowledge Management

As ideas are adapted to a local system during a spread initiative, adopters generate knowledge about the ideas and how best to improve outcomes.³⁶ Day-to-day managers need to develop systems to capture this knowledge and make it available to others on an ongoing basis. In VISN 2, knowledge was formally captured during face-to-face meetings and road shows. The day-to-day manager would make decisions on what information would be posted on the VISN 2 intranet Web site. The VHA national Web site also served as a mechanism to share tips, tools, success stories, and other information to assist others in making changes to improve access.

Results

During the spread initiative’s time frame, the waiting time for a primary care appointment in the VHA decreased from 60.4 days at the end of fiscal year (FY) 2000 to 28.4 at the end of FY 2002. Waiting times at the end of FY 2004 were < 25 days (Figure 3, page 344). These results were based on waiting time data from all patients and are available from the VHA scheduling system. VISN 2 achieved similar results. The waiting time for all primary care patients decreased from > 50 days in April 2000 to < 20 days in April

Sidebar 3. Checklist for Spread— Developing Measurement, Feedback, and Knowledge Management Systems

- How will outcomes be measured?
- How will the rate of spread be monitored?
- Who will be responsible for collecting, summarizing, and reviewing the data?
- What information/reports will be used as feedback to the sites and to monitor and refine the spread strategy?
- What systems will be used or developed to capture and share the new knowledge generated during the spread initiative?

2003 (Figure 4, page 345). Through the continued efforts in VISN 2, the waiting times in FY 2004 averaged approximately 16 days. In addition, all specialty care performance clinics were averaging < 30 days for their next available appointment. Figure 5 (page 345) shows the rate of spread in VISN 2. As of September 30, 2002, the ideas had spread to > 90% of the performance clinics and 78% of all clinics. The largest reduction in waiting times coincided with the successive waves. In VISN 2 during FY 2001 and FY 2002, there was a slight increase (5%) in the number of unique patients cared for and no increase in the overall and clinical FTEs. In addition, VISN 2 had no patients on waiting lists for entry into the system. The percentage of patients seeking primary care who were seen within 30 days increased from 74% in May 2002 to 92% in September 2004 (Figure 6, page 346).

Discussion

The work to spread improved access in each VISN within the VHA was guided by the Framework for Spread and supported by the infrastructure developed at the national level. Because this work was a strategic objective, many other areas, such as the scheduling system and referral guidelines, were focused on for improvement at the national level to support the spread initiative. Addressing issues—at the individual, unit, or organizational level³⁷—that could inhibit adoption is essential to any spread effort.³⁸ One of the challenges faced by the national leadership in leading the spread of ACA was building leadership commitment and involvement at the VISN and facility levels. Tying ACA goals to annual performance reviews, using national meetings of VHA administrative and clinical leadership groups to build awareness as well as share effective leadership methods to support access improvement, and providing direction through the national steering committee all helped to guide, encourage, and acknowledge the role of regional and facility leaders.

The leaders in VISN 2 supported the day-to-day manager of the spread initiative in organizing a multifaceted communication campaign, allowing awareness

Improvement in Average Next-Available Appointment Wait Times for Primary Care in the Veterans Health Administration (VHA)

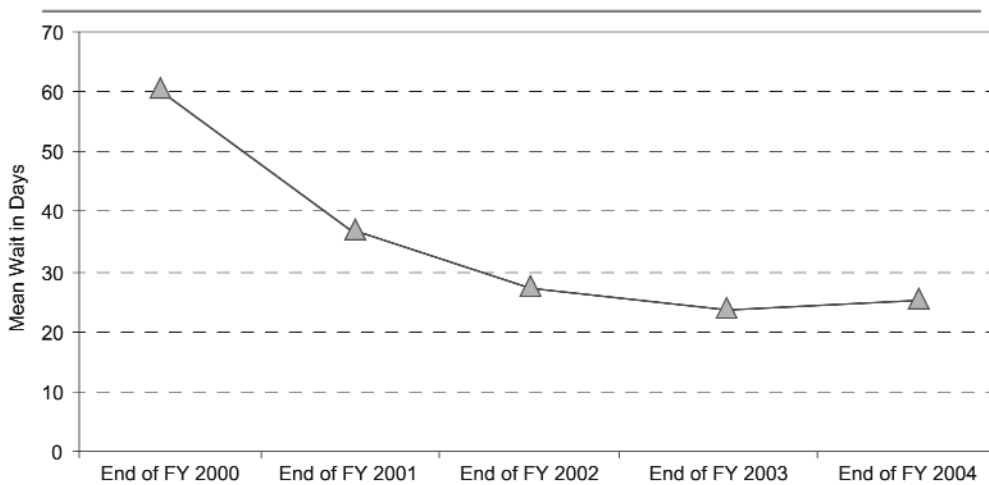


Figure 3. This chart shows the national reduction in waiting time for a clinic appointment. FY, fiscal year.

Improvement in Average Next-Available Appointment Waiting Times for Primary Care in Veterans Integrated Service Network (VISN) 2

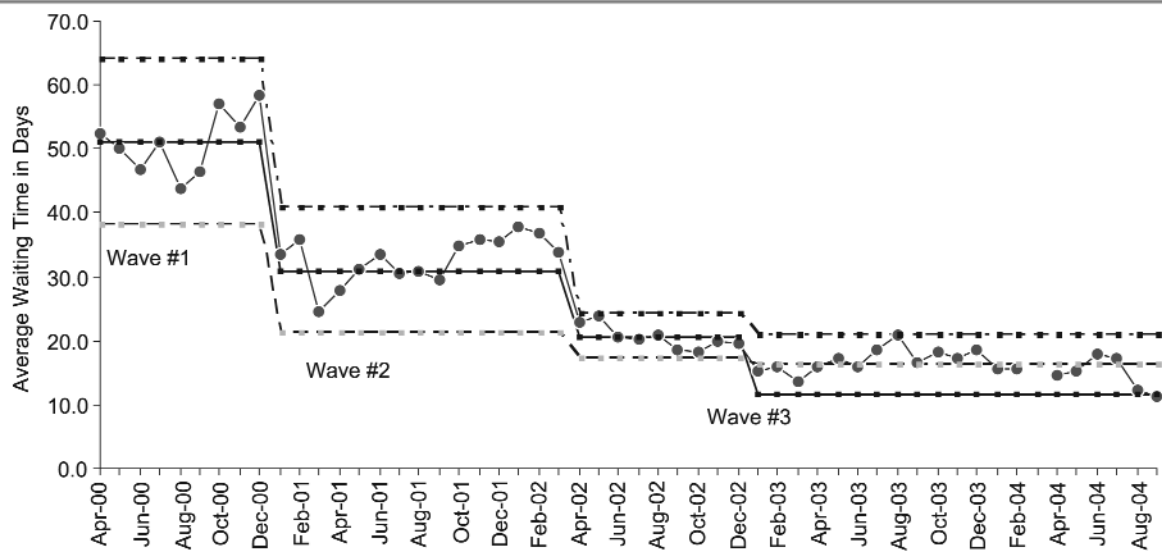


Figure 4. This graph shows the reduction in waiting time for a clinic appointment in VISN 2 that coincided with the implementation of its spread plan.

Rate of Spread of Advanced Clinic Access in Veterans Integrated Service Network (VISN) 2

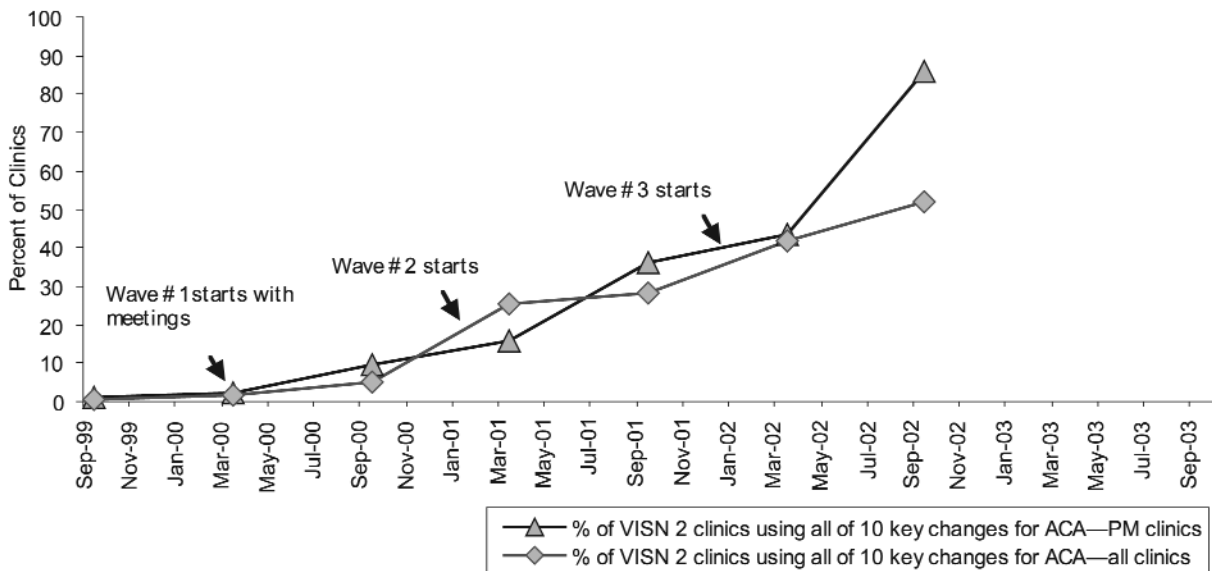


Figure 5. This graph shows the increase in the number of clinics over time that implemented specific recommended changes to improve access as part of the Advanced Clinic Access project in VISN 2. ACA, Advanced Clinic Access; PM, performance.

Percentage of Primary Care Patients in Vertically Integrated Service Network (VISN) 2 Seen Within 30 Days

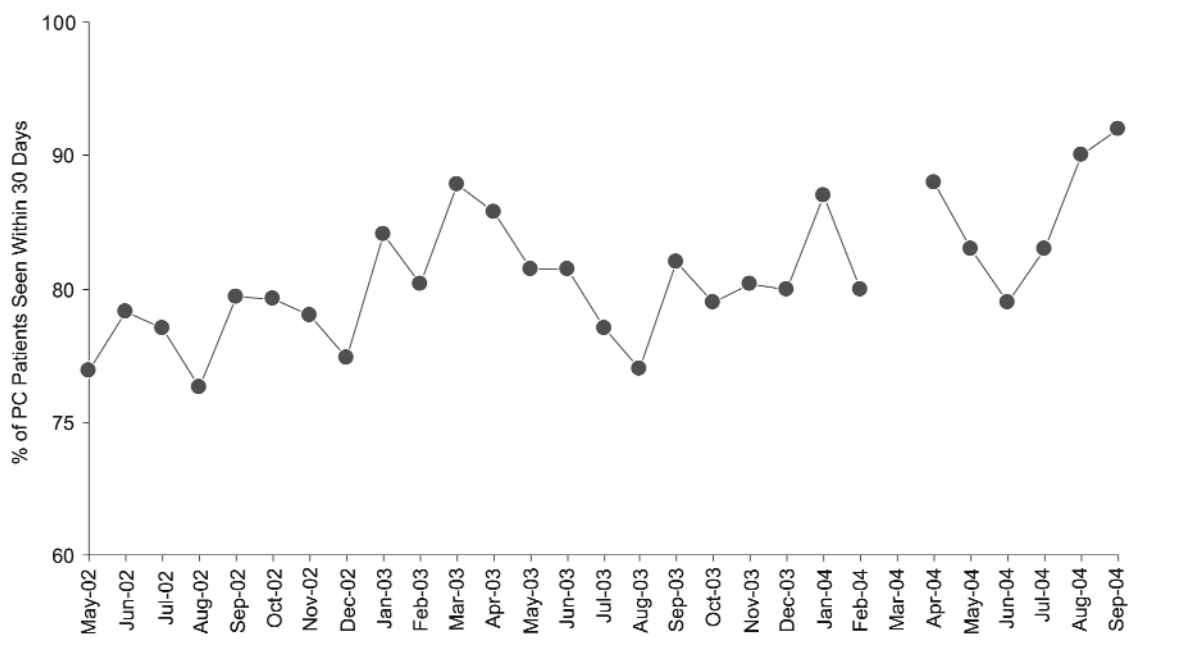


Figure 6. This graph shows the increase in the percentage of primary care (PC) patients in VISN 2 who were seen within a 30-day time period from the request for an appointment to the clinic visit, as specified in the Veterans Health Administration access standards.

and technical knowledge to improve access to be communicated throughout the VISN. Because of the succinct packaging of ideas and the coaching of their peers, clinics could readily test changes to their systems. The rate of spread accelerated as a new wave of clinics was reached in face-to-face meetings and follow-up. The social system strengthened as physicians, nurses, and schedulers interacted at meetings, road shows, and other scheduled VISN events. Celebrating successes and shining a spotlight on the top performers had a positive effect on participation levels and led to greater physician involvement. The VISN 2 and national Web sites continue to serve as key resources for information. Data on wait times, which are available from the scheduling system, continue to provide a key source of feedback.

The Framework for Spread suggests areas that organizations should consider to develop and execute a strategy for a spread initiative. VISN 2 undertook a certain set of activities within the framework. Other VISNs undertook some different activities to provide

leadership for the project, communicate ideas, strengthen the social system, or provide feedback. Further study is needed to determine the specific activities that should be emphasized to accelerate spread. This might depend on the characteristics of an organization and the ideas being spread.

The VHA and VISN 2 are actively pursuing the initiative to improve access. The existence of a VHA systemwide database enables demonstration of sustained reduction of waiting time for an appointment. The veterans—and other patients—deserve no less. **I**

Kevin Nolan, M.A., is Statistician, Associates in Process Improvement, Silver Spring, Maryland. Marie W. Schall, M.A., is a Director, Institute for Healthcare Improvement, Cambridge, Massachusetts. Fabiane Erb, R.H.I.A, is Health Systems Specialist, VA Western New York Healthcare System, Buffalo, New York. Thomas Nolan, Ph.D., is Statistician, Associates in Process Improvement. Please address reprint request to Marie Schall, M.A., mschall@ihi.org.

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