CASE STUDY

Scanlon Plan underlies participative management initiative that bundles education, gainsharing and employee suggestions at Boston’s Beth Israel

Alexandra Weber

The patient is "on-call" for a CT-scan at 11:00 am. The nurse arrives at the bedside at 10:56 and begins readying her. The unit coordinator answers a call from a CT technologist asking what will be needed to transport the patient to radiology. A patient escort arrives with a wheelchair and the unit coordinator alerts the patient’s primary care nurse. The nurse points out that the patient will need an IV pole for the trip to radiology. The patient escort goes off to find one.

Once in radiology, it’s discovered that the patient will not be able to step onto the scanner table. She should have been brought on a stretcher. By now, the procedure has been delayed a total of 25 minutes. Meanwhile, the CT scanner has been empty, outpatients with appointments have been drumming their fingers, and workers are into overtime. At $600 per 15 minutes of CT-scan, frequent delays like this were a costly fact of life at Boston’s Beth Israel Hospital.

To tackle the problem, a "functional work team" was assembled, made up of CT techs, RNs, escorts, and unit secretaries—the most diverse group ever to approach these problems at Beth Israel. Focusing on the interaction of systems instead of individual culpability, the team discovered that only 4 percent of patients arrived within five minutes of their appointments. Over half of the 96 percent who were late kept the scanner waiting more than 20 minutes.

The team then isolated the causes of delays and made recommendations for improvements. The procedural changes instituted since the work team began functioning have sliced the incidence of transportation slow-downs to 11 percent. And only 1.5 percent of delays, when they do occur, are longer than 20 minutes.

Jeri Willner, unit coordinator for 6 Feldberg at Beth Israel, was getting tired of having to iron out the miscommunications that plagued attending coverage services on her mostly geriatric unit. Come discharge time, stable patients with various attending physicians were victim to a lack of standard procedures. Physicians’ names were often illegible, for example, and their daytime phone and pager numbers missing from the patient charts. Frequent confusion arose as to how to order diagnostic procedures and consultations.

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So Willner took it upon herself to make a suggestion. Six months and many meetings later, her idea is about to go to the print shop. It’s in the form of a manual for doctors, informing them as to the use of the computer system and the anatomy of the discharge form, among other details.

Joe Fulcher, night-shift pharmacy technician, is part of a quality improvement project that involves representatives from the pharmacy department and two nursing units. The group is tracking down the causes of missing IV medications. Fulcher has also produced some ideas on his own, and sent them through the proper channels. What happened? "Someone else thought of them first," says Fulcher, "but I’m working on some new ones."

**Participative management plan**

The CT-scan, attending coverage, and missing IV meds projects represent a few of the 510 ideas submitted in fiscal year 1990 by employees at Beth Israel. About half have been implemented so far. Fiscal year 1991 hatched 342 more suggestions and saw 167 of them put to good use. Results can be seen throughout the institution: Patient meals and CT-scan appointments are now more timely, a topical anesthetic has been substituted for a steroid-anesthetic compound, and patients are being charged for a dermatological medication that no longer comes free to the hospital, to name a few.

These and other improvements resulted in a 19 percent saving the first year Beth Israel’s comprehensive participative management initiative, PREPARE/21 was put into effect.

An approach that bundles education, an employee-suggestion program, and gainsharing into a customized program for Beth Israel, PREPARE/21 is based on 1950s MIT professor Joseph Scanlon’s eponymous plan. Specifically, the Scanlon principles are:

- Employees must be educated about the business of the organization and their own department before they can contribute their ideas, talent, and energy appropriately;

- The staff must "own the problems" of improving the organization and be equipped to make positive change both through formal forums and in their daily work environment; and

- Employees deserve equity, a fair return for their investment in the organization.

Beth Israel Hospital is already well known for its innovations such as the 1972 Bill of Patients’ Rights and an approach to patient care known as primary nursing. The 504-bed, 4,800-employee teaching hospital of the Harvard Medical School served, in 1990, 30,000 inpatients and more than 200,000 outpatients. Despite its size, the hospital has long considered itself a warm, humane, decentralized place of work.

Executives found a close fit between the Scanlon requirements and Beth Israel’s well-established culture of respect for and communication with all employees. (The PREPARE/21 acronym stands for: Participation, Responsibility, Education, Productivity, Accountability, Recognition, Excellence...for the 21st Century.)

Interestingly, Beth Israel is an unlikely candidate for a Scanlon Plan; one had never been applied to a hospital, let alone a not-for-profit, nor to an organization with as many employees. What motivated this major, complex institution to adopt a Scanlon program?

Financial pressures were an important factor. "In 1984 or '85 we were beginning to face, for the first time, severe cutbacks," says Laura Avakian, Beth Israel’s vice president of human resources. "We knew we were due for a series of onslaughts, and we wanted to put some processes in place to react to the cold cruel world, to unify our employees and increase their investment in the hospital’s success."

In his 1987 "Mandate," BI executive vice president
and director David Dolins explained the link between the need to provide highest quality patient care and at the same time decrease costs:

"In the past, it was enough to be identified with quality and effectiveness by our patients and those who collaborate with us in research and education. This will not suffice for the future...To remain current with important diagnostic and treatment discoveries, Beth Israel must annually generate surplus income for reinvestment in our future. This demand for continuous renewal will require that we become even more competent as individuals and as an institution in delivering the highest quality patient care at an ever-decreasing cost per unit of service."

Dolins went on to emphasize the role of every employee in assuring the hospital’s success in its quality and cost mandates:

"We must all be responsible for finding ways to cope with the new requirements of our environment, and be willing to be held accountable for the implementation and success of our proposals. Rather than compromise our traditional standards, the Beth Israel response will be to pursue new opportunities generated by the ingenuity and involvement of informed and committed employees and medical staff who consider the hospital’s problems their problems."

For its part, hospital management has been working for several years to reduce personnel costs with minimum disruption to employees. (For fiscal year 1992, BI committed to reducing $5.5 million dollars—or 150 fulltime workers—in personnel costs, relying heavily on attrition, shifting skill mix, and lowering overtime and on-call hours.)

Getting started

While such management-initiated savings are important, the hospital needed to tap into the combined resources of its work force to face the tough financial times ahead.

Hospitals hadn’t yet discovered total quality management—TQM—at the time Beth Israel began searching for management inspiration. The hospital contacted the American Productivity and Quality Center in Houston, Texas and also connected up with Carl Frost, a consultant who'd known Scanlon at MIT. After a visit to Herman Miller, Inc., a midwestern furniture manufacturer made famous by its gains in productivity and quality through the Scanlon Plan, BI managers decided the approach would be a tight cultural fit with their existing ambiance.

"There were other plans we looked at," notes Avakian, "such as Impreshare, or the Rucker program. One plan was very technically driven, and had a computer and tracking system that we were afraid was going to take a million years to get up and running. Also, none of the other plans had the same kinds of messages as Scanlon with regard to the overall sociology of the organization."

Following Scanlon’s principles of education and participation, in 1986 senior managers began meeting with small groups of 15 to 30 employees at a time, explaining the challenges the hospital was facing, and outlining the Scanlon approach. After several months of conferences with every department and representatives from all levels in the organization, employees voted to further explore Scanlon concepts, and a 75-person ad hoc committee was elected to take on the task.

Three central themes

This P/21 Planning Committee was a melting pot of the hospital’s staff, blending the collective wisdom of secretaries, doctors, housekeepers, nurses, and technicians, among others. Divided into subcommittees to design Beth Israel’s approach to Scanlon’s central themes of Identity, Participation, and Equity, the group laid the groundwork for P/21 over several months.

Every BI employee is a member of at least one work team.

The Identity faction wrote a document describing BI’s mission of teaching, research, and patient care, as well as its history, philosophy, and the healthcare environment. The Identity group also determined what educational tools and media would be the conduits of information about P/21 and the hospital’s current performance.

The Participation subcommittee developed the structure that would encourage collaboration and suggestions. The cornerstone of the process is the work team. Every BI employee is a member of at least one such group. There are three types of teams: Departmen-
tal work teams are every employee’s immediate work group, composed of the team leader and the staff he or she generally supervises. These meet 13 times a year (once during each fiscal period).

Ad hoc work teams are convened to resolve specific issues or review new ideas for feasibility of implementation. (They disband once their task is completed). Functional work teams include employees from several departments who have some work mission in common.

Meanwhile, the Equity group considered the themes of fair return for customers (patients and payers), employees, and the surrounding community. This subcommittee also defined gainsharing—the formula by which BI would spread its financial gains among its workers.

**P/21 put into effect**

With its three-faceted preparations in place, P/21 was approved by management and the Board of Trustees in the fall of 1988. It was formally put into effect in October 1989, with the opening of fiscal year 1990.

A nine-member Screening Committee was elected (by more than 2,500 employees) to review ideas affecting multiple areas or departments of the hospital in a timely fashion—creating a clearinghouse for suggestions with hospitalwide impact and potential for substantial savings. Over time, this group’s role has evolved into that of an advisory committee that evaluates the program and determines the recipients of annual PREPARE/21 individual and team awards.

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**The result was wasted inventory and difficulties in tracking usage and handling billing.**

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The review of ideas for improving processes and services is facilitated by twenty P/21 councils, made up of both elected and management-appointed members. "Division councils" represent functional areas like human resources, and "service councils" represent clinical areas such as surgery. The councils meet at least once every fiscal period to discuss: new ideas submitted, status of ideas under review, and savings achieved through implemented ideas.

The program’s costs have been measured against savings and revenue enhancement resulting from the initiative. Program startup costs were almost $300,000, though $200,000 was recouped through a grant from the Pew Charitable Trust. Against a projected $1.5 million deficit, fiscal year 1990 closed out with an $828,000 operating surplus—partly attributable to an estimated $1 million in savings arising from PREPARE/21 activity, according to executives. The 1991 fiscal year closed with a bottom-line plus of $2,174,000.

**Workplace literacy**

P/21’s most extensive investment is in employee education and communication. Several vehicles have been used to dispense wisdom and explain business realities to all staff. Concepts such as occupancy, case mix, and the value of discharges and outpatient visits are taught through monthly work-group meetings to discuss hospital performance.

The mentorly writings of hospital CEO Mitchell T. Rabkin, MD in his weekly Employee Newsletter and Dear Doctor letter, and occasional PrepareReport, also explain financial issues and environmental pressures. In addition, each issue of the BI Examiner, the staff newspaper, has a center spread illustrating the accomplishments of individuals and work teams.

Every four weeks, the Period Performance Report accompanies the Employee Newsletter. One of the principal tools of P/21, it has been relentlessly renovated over the life of the project, and now serves as an enticing, user-friendly vehicle for conveying financial facts for the period, current gainshare percentages, ideas that have been implemented, and progress toward goals. Non-financial aspects of the hospital’s work, particularly quality of patient care and BI’s research and educational functions, are emphasized along with finances.

The Period Performance Report also includes a success story that gives recognition and serves as a model for the kind of employee effort BI is looking for. One such story, from period two, FY 1992, describes the creation of a new operating room/post-anesthesia care unit pharmacy satellite. The satellite, which "provides an efficient and accurate drug distribution system for the surgical areas," is the brainchild of BI’s departments of pharmacy, anesthesia and critical care, and operating room nursing.

Previously, the article recounts, separate drug in-
On this page, a series of success targets is presented to illustrate some of the goals set throughout the hospital. Some goals affect the hospital as a whole. Others are specific to some division or department. Some have to do with construction or the budget. To give a broad sense of what is happening, a variety of departments and divisions will be invited to illustrate some of their goals on this page. Each period, you will learn more about where we are headed as an organization and how various departments contribute to our overall success.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Actual</th>
<th>Progress</th>
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<tr>
<td>1. Work team leaders complete leadership course</td>
<td>120</td>
<td>Pilot program completed 12/11/91</td>
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<tr>
<td>2. New chiefs recruited</td>
<td></td>
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<tr>
<td>- Neurology</td>
<td>Jul. '92</td>
<td>Neurology is just about wrapped up while orthopedics has a way to go</td>
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<tr>
<td>- Orthopedics</td>
<td>Jul. '92</td>
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<tr>
<td>3. New construction completed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Operating rooms</td>
<td>Jan. '92</td>
<td>Operating rooms will be up and running on Jan. 6.</td>
</tr>
<tr>
<td>- Neonatal ICU</td>
<td>Apr. '92</td>
<td>The NICU is back on schedule</td>
</tr>
<tr>
<td>4. Permanent budget reduction</td>
<td>$5.5 mil</td>
<td>$5.5 mil</td>
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*Excerpts from the Period Performance Report for period 2, FY92*

Ventilators were maintained in the surgical suites, post-anesthesia care unit, and ambulatory surgery area with no pharmacy involvement. The result was wasted inventory and difficulties in tracking usage and handling billing. The on-site satellite provided solutions to these problems and also gave surgical staff direct access to drugs and drug information. Further, the article concludes, inventory decreased, patient care improved, productivity increased, and cost-savings are expected.

In addition to written materials, P21 education involves training as well. All managers and supervisors attend a 45-hour training session called "The Leadership Track," in which they learn about customer expectations, measuring and improving quality, and facilitating problem-solving.

"Workplace literacy is a never-ending process," says Avakian. "We want all the employees to understand what BI is about, and to know things like how many patients go through our hospital, why we're building a new (neo-natal ICU) facility, what kind of research we do, our history, our current activities and future plans. There's an enormous amount of information that should be disseminated as thoroughly as possible throughout the organization."

Effectively transmitting both new management philosophy and reams of facts is tougher when the recipients are a constantly shifting population base of hundreds of new employees, students, interns, and volunteers, Avakian acknowledges. From the first interview, to completing the new employee orientation, to monthly (or more frequent) meetings with the work team, information is constantly percolating through BI's ranks.

"This education also adds a new vulnerability, a loss of innocence, because people are asking questions they
Suggestion program

Yet, as hoped, more education and communication have led to the emergence of a steady stream of ideas that both improve BI services and save costs. The idea screening process first envisioned for P/21—like many aspects of the original plan—has undergone revision. The simplified plan is shown on page 7.

A monthly list of all submitted ideas describes each suggestion, notes who sent it in and to whom it went, and indicates what action was taken. An idea system assistant handles referrals, and helps the individual follow his or her idea throughout the organization. If it’s rejected, a reason must be supplied by the work team, council, or screening committee. Even then, if the employee remains convinced that his or her idea is worthwhile, he or she can take it right on up to Rabkin.

"We’ve seen more than 500 ideas in the first year," comments Rabkin, "and not very many of them appreciated the interconnected, systemic nature of the hospital. Now that we’re into our third year, there’s a growing sophistication: One may perceive a problem in one’s own department, and ask, ‘Where does this fit in?’"

Gainsharing

Rather than a mere dollar incentive, the gainshare element of PREPARE/21 is meant to focus attention on hospital performance in meeting key goals, and emphasize every employee’s contribution toward the organization’s accomplishments. The calculation is based on: (1) a volume factor including both inpatient admissions and outpatient visits; and (2) a savings factor composed of expenditures for personnel, supplies and equipment, and the savings from any new ideas developed and implemented by employees.

When overall employee exertion produces dollar savings, a gain is calculated using these factors, each weighted to account for the extent to which it is influenced by staff efforts and by forces outside of employee control. One quarter of the gain is held in reserve to be shared at the end of the fiscal year, while the remaining portion is split 50/50 between staff and hospital. All full- and parttime personnel who have been with BI for three months by the end of the quarter are welcome to their piece of the profit.
"While the gainsharing dollars are not huge, nonetheless they do signify that we, the employees of Beth Israel, confronting an increasingly difficult external environment, are managing in the face of challenging times rather than being pushed around," explains Rabkin in his Prepareport of June 1990.

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Like the P/21 publications and idea review process, the gainshare program has undergone refinements along the way. The newly evolved gainshare calculation prevents payment of gains when the bottom line is in the red, and it halves the volume factor instead of applying it at 100 percent (in the shortterm, volume is more affected by contracting and physician activity, than by employee efforts).

Future improvements may include: factoring in research revenues; and adding measures for meeting customer expectations and other indicators of quality.

### Advice from outside

Characteristically, Beth Israel looked for constructive criticism even of its program for self-improvement. An external task force of management luminaries has provided an objective view of PREPARE/21, visiting during the program's first and second years. Included are Warren Bennis, Max De Pree, Robert McKersie, and Dr. Leighton Cluff, among others. The group's recommendations have been valuable in refining many elements of the program.

At the same time, BI management is aware of other improvements yet to be made. For example, notes Avakian, there are no systems in place to track P/21 participation by any one group. Noting which areas are solving the most problems would give a more general sense of where hotbeds of action and doldrums of indifference lie throughout the hospital, she says.

Physicians are probably the trickiest population to pin down when it comes to participation. Rabkin explains: "Our academic physicians who work here have dual lives. They have another set of goals: researching, publishing, and teaching. These issues divert their attention and dilute the amount of time they can spend here. Professors are brought on board primarily to follow their noses rather than the corporate mission."

Rabkin expects that five to seven years will elapse before PREPARE/21 fully perfuses the hospital's culture, systems, and practices. At that point, all the members of the "BI family" will have stopped looking at PREPARE/21 as a separate entity, and embraced it as a way of work.

In the meantime, the interlocking parts of the P/21 initiative continue to unfold, change, and improve. This, too, was part of the philosophy that made the Scanlon Plan such a good fit at Beth Israel. As the P/21 handbook—which calls itself a "living document"—put it in 1988:

"Constructive change must come from within ourselves both individually and as an organization. We believe that our individual capacity and desire for change is a powerful resource that must become part of the fabric of our work lives."