# Application of Continuous Quality Improvement Benefits and Barriers

Jay B. Wish, M.D.

*Division of Nephrology, University Hospital of Cleveland, U.S.A.*

The principles of quality improvement are so intuitive that it is difficult to understand why physicians have been so resistant to embracing them. The benefits of quality improvement are summarized in Table 1. Quality improvement is not unlike the differential diagnosis of a medical problem: First, one builds a list of possible etiologies (rule outs). One then initiates testing or therapy to rule out each possibility until the diagnosis is confirmed. Finally, one rechecks the patients for evidence of improvement to validate that the diagnosis and choice of therapy were correct. In quality improvement, a multidisciplinary team at the provider level examiners a process issue in which there is an opportunity for improvement. Such an issue could include a high percentage of patients with a low Kt/V, a high percentage of patients with low hematocrit, or a high percentage of patients with dialysis catheters, for example. The team then brainstorms to list the differential diagnosis of the poor outcomes cause, classified by categories such as procedures, equipment, policies, staff factors, and patient factors. The team then votes which one or more of these processes might be responsible for suboptimal outcomes and develops and implements a change in process to test whether or not this change will improve outcomes. Data

**Table 1. Benefits of Quality Improvement**

Improved Patient Outcomes
- Decreased morbidity and mortality
- Improved quality of life
- Improved satisfaction

Improved Facility Outcomes
- Increased patient census
  - fewer absences for hospitalization
  - decreased mortality
  - increased market share
- Decreased costs
  - increased efficiency
  - improved employee retention and productivity
  - improved risk management
  - fewer regulatory hassles

Improved System-wide Outcomes
- Decreased hospitalization expenses
- More cost-effective care
- Improved rehabilitation
- Contribution to evidence-based literaturev

collected before and after the process change are compared and if significant improvements in outcomes have occured folliwing the change, process change is incorporated in a wider scope. Thus, the fundamental principles underlying quality improvement are as follows: 1) all work can be described as a process; 2) variation exists in every process; 3) the performance of processes can be measured; 4) measurement requires comparison; and 5) the goal is to reduce variation within acceptable limits by testing and validating the processes that produce the best outcomes. Although the advancement of evidence based medicine and proliferation of clinical practice guidelines has begun to recongnize which

Physicians have traditionally resisted activities as second-guessing by non-experts and have almost invariably delegated quality activities to a head nurse or a quality assurance coordinator. Quality improvement cannot be delegated; all individuals, especially those in leadership positions, must embrace it for it to succeed. The commitment of the nephrologist is particulary vital for quality improvement to succeed in the dialysis facility, not only because the physician is a respected leader who sets an example by his or her own actions, but also because the physician is such a central figure for many of the processes of care which ultimately impact on patient outcomes. The failure of physician buy-in is one of the most common barriers to the successful deployment of quality improvement at the provider level. Some of the other barriers are summarized in Table 2. It is easy to get discouraged about quality improvement because it does not always work on the first try. In the differential diagnosis of a medical problems, sometimes many negative tests are performed before a positive test ultimately identifies the nature of the problem. The same is true for quality improvement. The physicians and particulary the medical director, of a dialysis facility must have the patience to champion the quality improvement approach through several unsuccessful cycles until its inevitable success converts the skeptics and is integrated into the facilitys culture.

Improvement of the buy-in to quality improvement by physicians on the medical staff of a dialysis provider can be achieved by giving the physicians on the medical staff of a dialysis provider can be achived by giving the physicians their own individual data (they are scientists and they love data): by giving physicians comparative data (they are competitive and love to win); and by inducing physicians to attend quality improvement meetings by providing some refreshments (physicians are busy and are most likely to attend these meetings if they are concurrent with a meal). The medical director of a dialysis facility should provide leadership to the physicians on the medical staff by identifying their individual interests and recruiting them as champions for specific quality improvement projects. The medical director is also in the best

**Table 2. Barriers to Quality Improvement**

- Management dose not allocate sufficient resources for data infrastructure, employee training and protected staff time
- Management behavior is not consistent and sends mixed message to employees
- Management fear of employee empowerment
- Lack of physicians buy-in
- Failure to identify and train effective team leaders
- Failure to identify a champion for a specific project
- Discouragement or impatience regarding an unsuccessful project
- Assignment of blame

position to provide a liaison between the dialysis facilitys management, its staff, and the medical staff, providing advocacy leadership for the quality agenda and access to the evidence based literature that may provide a template for process improvement.

In summary, successful quality improvement does not just happen. It requires a change in the culture of the organization, which begins with a top-down awareness of the need to change and the allocation of appropriate resources and the bottom-up empowerment of those individuals at the process level who are in the best position to identify opportunities for improvement and implement process change. The culture of quality improvement requires a new focus on the customer (patients and payers) to determine their expectations and satisfaction. Education is essenstial in a quality improvement culture, both in terms of the new language and skills that are required to perform process and data analysis, and the evidence based medicine that provides a template for process improvement. Finally, the culture of quality improvement requires patience, with the expectation that not all quality improvement projects will be successful and that several cycles taking one to two years may be required before a successful quality improvement project validates the investment of financial and human capital in this culture. Ultimately, quality is an excellent investment. It decreases patient morbidity and mortality, improves the census, improves employee morale, increases employee retention, and decreases training costs. Improved outcomes in a setting of public accountability increase market share and decrease regulatory hassles. Improved process efficiency decreases waste. Providers that fail to embrace quality improvement principles are unlikely to survive in the increasingly competitive healthcare market palce.