



HRSA CARE ACTION

PROVIDING HIV/AIDS CARE IN A CHANGING ENVIRONMENT

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Demystifying Quality: Guiding Principles for CARE Act Programs

Continuous quality improvement (CQI) can improve the quality of care and services—and, ultimately, the quality of life—for people living with HIV/AIDS. CQI is not an esoteric, theoretical exercise but a practical solution to real-world problems. CQI can help providers address critical problems, such as client no-show rates, and it offers a mechanism for dealing with clinical care challenges, such as treatment adherence. Moreover, it provides significant opportunities for addressing systems management concerns, such as those faced by eligible metropolitan areas (EMAs) funded through the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act. And by helping providers become more efficient, CQI extends the reach of limited resources.

WHAT IS CQI?

CQI uses data-driven interventions to test and improve processes by which health care is delivered. CQI is grounded in data, not hunches. It addresses the root causes of a problem, not the symptoms. And its goal is to achieve permanent solutions, not quick fixes.

CQI is, of course, about improving quality. And quality is, according to HAB's working definition, "the degree to which a health or social service meets or exceeds established professional standards and user expectations." In health care, quality has traditionally meant the provision of competent, effective, and safe care that contributes to a patient's well-being. However it is defined, quality—at its core—means doing the right thing, at the right time, in the right way, for the right person.¹

WHY IMPLEMENT A CQI PROGRAM?

The reauthorization of the Ryan White CARE Act in 2000 brought with it the requirement that all CARE Act grantees implement quality management programs. Grantees are required to

- assess the extent to which HIV health services are consistent with the most recent Public Health Service guidelines for the treatment of HIV disease and related opportunistic infections; and
- develop strategies for ensuring that such services are consistent with the guidelines for improving the accessibility and quality of HIV services.

CQI gives organizations the power to do what they exist to do: provide high-quality services for people living with HIV disease. The method outlined in this article apply at the provider, system, regional, state and EMA levels.

CQI is about more than simply meeting statutory requirements, however. CQI gives HIV/AIDS services organizations the power to do what they exist to do: provide high-quality services for people living with HIV disease. Grantees that have integrated CQI concepts and methodology into their day-to-day culture and operations have discovered a potent management tool. Through CQI, organizations are able to demonstrate—using objective data—that they are providing quality care to every client, every day. CQI tools allow programs to identify and

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target areas for improvement, and they allow programs to start small with controlled initiatives that can broaden in scope with time and experience. Moreover, CQI initiatives empower staff and consumers at all levels to become involved in decision making and to take ownership of their work. Program evaluation becomes an ongoing, dynamic process in an atmosphere that celebrates all CQI successes, no matter how small.

CQI programs are also critical for improving efficiency and services at the systems level. However, implementing CQI programs across a set of providers simultaneously, as opposed to within a single provider, poses unique—and sometimes formidable—challenges. The HIV/AIDS Bureau is currently helping CARE Act Title I and Title II grantees, which are required by law to create CQI programs, to address these concerns. For example, in August the Bureau completed a CQI pilot in five EMAs; the project focused on quality in case management and clinical care in an effort to articulate and define obstacles to CQI at the EMA level. The Bureau has also contracted with the National Alliance of State and Territorial AIDS Directors to assess the feasibility of addressing CQI at the State level by using the Institute for Healthcare Improvement's (IHI's) Breakthrough Series on quality improvement through collaborative learning.

Although CQI programs should be tailored to address the needs and challenges of specific organizations and service systems, quality experts have identified several characteristics critical to

effective CQI. Accordingly, HRSA has published the *Quality Management Technical Assistance Manual*,* which outlines a nine-step process to help grantees construct and execute quality management programs (Figure 1). It is designed to help staff experienced in quality management as well as those who are new to CQI concepts. The steps, which are outlined below, can serve either as a checklist for organizations with existing CQI plans or as a launch pad for those just starting out.

CREATING AN EFFECTIVE CQI PROGRAM FOR HIV CARE: NINE CRITICAL STEPS

Step 1: Confirm the Commitment of Leadership and Establish a Supportive Organizational Structure

CQI programs should build support and “buy-in” from organization leaders. Individuals authorized to commit resources, delegate responsibilities, and dedicate time for related CQI activities must be prepared to play a pivotal role. Without their support and commitment, CQI processes will never become permanent practice. Quality improvement must focus on system performance, rather than individual employee performance, and staff members at all levels must be given ownership, accountability, and investment in the process. However, staff should be made aware that CQI should never be used in a punitive manner. To ensure that all employees have a solid understanding of CQI concepts and techniques, programs should contain an education component.

A commitment to CQI provides ongoing benefits for managers and staff alike. Once workers are experienced in CQI, they can serve as mentors to train a new generation of in-house quality experts.

Step 2: Establish a Quality Management Plan

Before launching an HIV-specific CQI program, organizations should explore existing systemwide CQI resources. For example, HIV programs at large medical institutions can tap into existing organizational CQI plans, which are often mandated by other regulatory bodies, such as the Joint Commission on Accreditation of Healthcare Organizations. Individual HIV CQI projects are most likely to succeed under the umbrella of a structured (as opposed to an ad hoc) HIV quality program. Many organizations choose to convene a senior-level committee to develop a CQI plan. Once developed, HIV CQI plans should be distributed to all relevant staff.

Things to Remember

- **Start small. Tackle simple contained issues first, and build CQI experience over time.**
- **Choose projects likely to be successful, at the outset.**
- **Just get started—just do it.**

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* For more detailed information, templates, and real-life examples, grantees are encouraged to consult the *Technical Assistance Manual*, which is available online at <http://hab.hrsa.gov/tools/QM/>.

Figure 1: NINE CRITICAL STEPS TO QUALITY MANAGEMENT

Step 1: Confirm the Commitment of Leadership and Establish a Supportive Organizational Structure

- Establish support of program leadership for quality management (QM) and confirm commitment.
- Commit resources to support QM activities.
- Provide education about continuous quality improvement (CQI) tools and techniques to all levels of staff, including senior leadership.
- Establish a method to inform all levels of staff, including senior leadership and board of directors, about QM initiatives.
- Delineate expectations of staff related to QM.
- Delineate specific QM responsibilities of staff.

Step 2: Establish a Quality Management Plan

- Establish a quality guidance team or steering committee, or use existing leadership meetings to oversee the QM program.
- Develop an organizational QM plan that delineates goals and objectives for the QM program.*
- Establish QM priorities.
- Develop a timeline or calendar of activities for the year.
- Select a QM approach, such as the Plan-Do-Study-Act (PDSA) cycle or the Chronic Care Model.
- Clarify QM responsibilities of staff.

Step 3: Determine Performance Measures and Collect Baseline Data

- Based on QM priorities, determine performance measures.
- Develop indicators to measure performance.
- Define measurement population and delineate eligibility criteria.
- Create a data collection plan that includes sampling strategy and method of data collection (e.g., chart abstraction, interviews).
- Create data collection tools.
- Create instructions for data collection tools.
- Train personnel who will collect data.
- Conduct pilot test of tool.
- Establish process of communicating with staff about measurement process.
- Collect data.

Step 4: Analyze Data

- Analyze data and review the results.
- Identify areas where additional data are required.
- If historical data are available, compare for trends.
- Display and distribute data to communicate findings and results.
- Identify areas for improvement.

Step 5: Develop a Project-Specific Continuous Quality Improvement Plan

- Establish a project-specific QM team that represents all staff integral to the service or issue.
- Identify a team leader or sponsor.
- Delineate specific goals for the team.
- Allocate time and resources for the team.
- Delineate team responsibilities.
- Develop timeline for reporting findings and improvement strategies.

Step 6: Study and Understand the Process

- Analyze the root causes.
- Use CQI tools and techniques to understand the process.
- Document and track progress by using tools such as activity logs, issue identification logs, and meeting minutes.
- Report progress to senior leadership and staff on a regular, defined basis.

Step 7: Develop and Implement an Improvement Plan

- Identify potential solutions to make improvement to the systems of care.
- Recognize quick fixes and long-term solutions.
- Try a small test of change, and analyze results.
- Refine improvement plan.
- Develop timeline for implementation of plan.
- Delineate team responsibilities.
- Implement changes.
- Track changes and improvement actions.

Step 8: Remeasure

- Determine interval for remeasurement.
- Remeasure indicator after change has been implemented.
- Look for incremental improvement.
- Communicate results to team, staff, and leadership.
- Determine need for and level of remeasurement on an ongoing basis.
- Develop a plan for sustained improvement.

Step 9: Celebrate Success

- Communicate results of the project to all levels of the organization, including consumers, when appropriate.
- Congratulate team in a public forum (e.g., staff meetings and board of directors meetings).
- Select a new project and begin at step 3.

* A specific QM plan targeted to HIV services should be developed. If the HIV program is part of a large institution that has an established QM plan, the QM plan should include portions of the HIV-specific plan.

Figure 2: Examples of CQI Indicators and Outcomes⁵

Indicators are measures used to track an organization's performance of a particular element of care. The indicator may measure a particular function, process, or outcome. Indicators are usually based on specific standards derived from professional or government guidelines.

Element of Care	Indicators	Outcomes
Tuberculosis screening	Annual testing	<ul style="list-style-type: none"> • % of PPD tests read • % positive • % of patients with positive PPD tests completing TB prophylaxis

Outcomes are benefits or other results (positive or negative) for clients that may occur during or after their participation in a program.

Step 3: Determine Performance Measures and Collect Baseline Data

The next step in developing a CQI initiative is to establish performance indicators. Some indicators are used to track an organization's performance of a particular function or process. Others measure clinical outcomes, thereby providing an in-depth glimpse into what actually happens to a patient as a result of a clinical intervention.⁷ Indicators usually reflect professional or government guidelines and standards. Most organizations, however, lack the resources to track performance in all areas simultaneously. Therefore, CQI teams should narrow the scope of their work by selecting indicators related to high-volume, high-risk, or problem-prone areas (Figure 2).

The first step in choosing an indicator is to determine which outcomes are central to the mission of the HIV program. A review of the program's work plan is one way to prioritize efforts. What did the work plan set out to accomplish? Do data support each goal and objective?

Formal HIV CQI programs, such as HIVQUAL,⁴ which was developed by the New York State Department of Health AIDS Institute, can be useful resources for identifying key indicators. The IHI Collaborative, whose Chronic Care Model⁸ focuses on ensuring the delivery of evidence-based clinical care, is another resource.

Once indicators have been chosen, a system for collecting, organizing, and analyzing data must be developed. For example, if an annual purified protein derivative test—which is used to screen for tuberculosis—is selected as a key indicator, the CQI team should start reviewing medical records and other documentation to determine the HIV program's current PPD screening adherence rate.

Step 4: Analyze Data

At the beginning of any CQI project, baseline data on the selected indicators should be reviewed to pinpoint discrepancies between current practices and best

practices.⁶ Data should then be presented in the simplest and most understandable form possible, using run charts or other graphs when appropriate. To ensure confidentiality, data should be reported in the aggregate or by unique identifier.

Step 5: Develop a Project-Specific CQI Plan

If data analysis reveals that the HIV program is underperforming on a given indicator, it is time to develop a targeted, project-specific CQI plan and project team. A clear and understandable goal or aim should be articulated in simple and direct language (e.g., "Increase from 85 percent to 98 percent the proportion of case management clients whose initial intake form is completed" or "Decrease the waiting time for new patient appointments from 4 weeks to 1 week").

To improve a process comprehensively, everyone whose roles relate to its implementation should be involved in the CQI initiative. The number of team members will vary, depending on the organization's size and other factors, but six to eight members is a good rule of thumb. Team members should be selected carefully to ensure that every step of the process is represented. For example, if the goal is to reduce new appointment wait times from 1 month to 2 weeks, the CQI project team might include the following members:

- Scheduling staff
- Senior provider staff
- Clinical providers (physicians, nurse practitioners, physician assistants)
- Data management staff
- Unit managers or supervising staff.

It is important that the CQI project team document key issues discussed and decisions made as well as next steps and assigned tasks. Documentation helps motivate staff, makes meetings more efficient, and is essential for demonstrating compliance with CARE Act legislative quality requirements. One strategy that has proven successful among various Ryan White-funded agencies is the inclusion of CQI activity reports at each staff, department, or program meeting.

Step 6: Study and Understand the Process

To improve performance, the CQI project team must examine all procedures and

processes related to the indicators or outcomes targeted for improvement. Of the various CQI tools and techniques available, flow charts are especially useful. A first flow chart can be created to depict the way in which a process currently works. A second flow chart can then be created to depict how the process *should* work (figure 3, p. 6). Another useful diagnostic tool is the cause-and-effect diagram, which can help the team identify and define an outcome or problem, determine underlying causes, and identify deviations from best practice.

Also useful for evaluating the many factors affecting quality are tools such as

the Chronic Care Model, which summarizes the basic elements for improving care in health systems at the community, organization, practice, and patient levels. Ultimately, the model aims to transform a health care system from one that is essentially reactive to one that is proactive and focused on keeping patients as healthy as possible (for more information, see www.improvingchroniccare.org).

Step 7: Develop and Implement an Improvement Plan

Once key problems have been identified and their root causes analyzed, it is time to develop and implement an improvement plan. The team generates a list of

A CASE STUDY: Increasing the Rate of TB Screening in an HIV Clinic

Greater New Bedford Community Health Center is located about an hour from Boston and serves nearly 20,000 people through six programs. The Infectious Disease Program, which provides primary care to 340 HIV-infected adults and children, began participating in the HIVQUAL project in June 1998.

The CQI Project

The Infectious Disease Team elected to focus its first quality improvement project on tuberculosis screening rates, using the purified protein derivative test. Baseline data were analyzed to determine current performance. A review of 51 randomly selected patient medical records revealed that only 18 percent of patients had received a PPD screening in the previous year. The team set aside one Infectious Disease staff meeting per month for the initiative.

The Goal

The team defined its goal as "75 percent of medical records of HIV patients will have documentation of either a previous positive PPD test or a PPD test within the previous year." This information was communicated to the Quality Management (QM) Committee through an "improvement project memo." Both the infectious disease medical director and the program manager are members of the QM Committee; they arranged to report progress to the committee every 6 months.

The Diagnosis

At the second PPD meeting, staff developed a flow chart of the PPD placement process, from provider order to documentation in the medical record. They identified three possible causes for the low PPD rate:

1. The doctor or nurse practitioner did not order a PPD placement during the patient visit.
2. The PPD was placed, but the patient did not return in 3 days to have it read.
3. The PPD test results for patients tested elsewhere were not documented in the medical record.

The Solution

The team decided to address these underlying causes by taking the following steps:

- During their morning chart preparation, the nurses and case managers would place Post-it notes in the patient's medical record reminding the doctor or nurse practitioner of the need for PPD placement.
- Patients who received a PPD would be given a "Return to Clinic in 3 Days" reminder note and a reminder call the night before the PPD was to be read.
- Patients who receive methadone would be given a form letter and return envelope for the methadone-dispensing nurse to record the results of the most recent PPD.

The Results

The impact of the three interventions was tremendous. The PPD rate rose from 18 percent to 62 percent during the review period (1999), and the rate was maintained in 2000 (64 percent). Not only were significant improvements achieved and maintained, but the Infectious Disease Program staff are now comfortable using quality improvement techniques to make improvements in many other clinical areas.

Figure 3: Improved Clinic Check-in Reduces Wait Time.

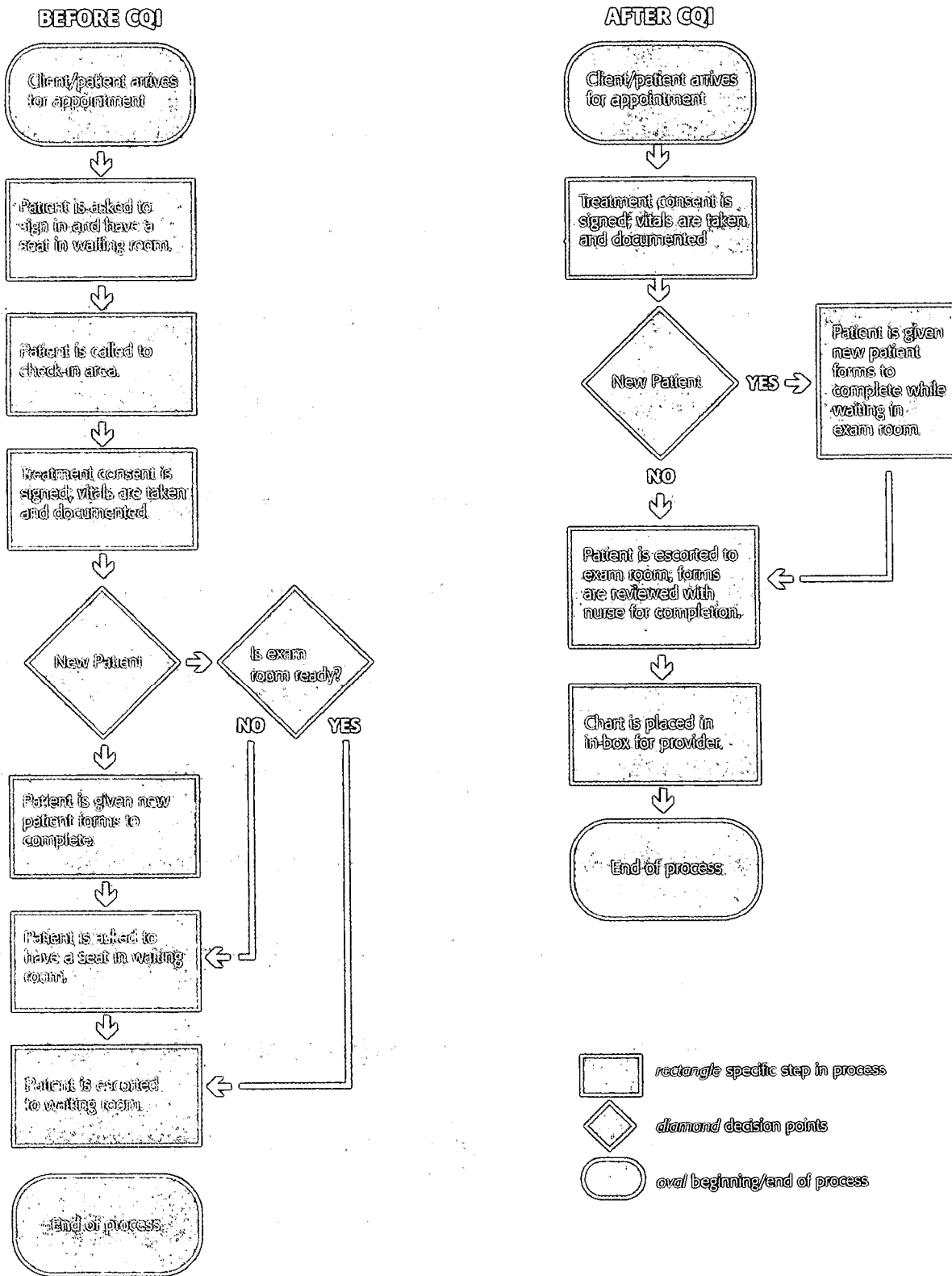
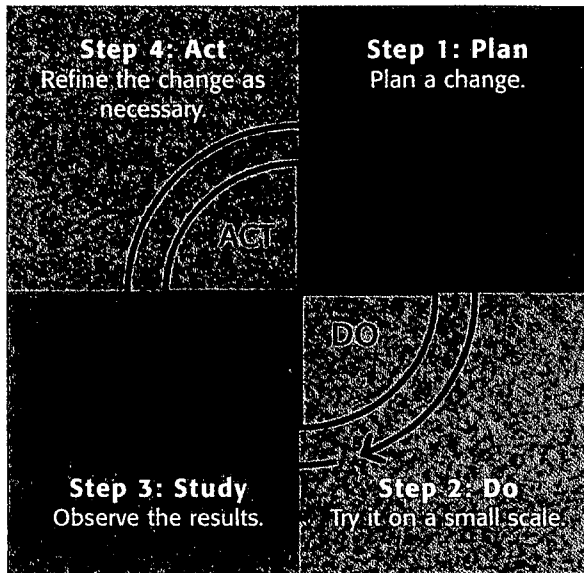


Figure 4: The Plan-Do-Study-Act (PDSA) Cycle⁷



potential solutions for pilot testing. At this stage in the process, the team will have already developed a good sense of what strategies will be most effective for improving a given process. Some solutions can be accomplished easily and can help motivate the team. Other improvements will require pretesting, long-term planning, and an extensive implementation period.

Test changes on a small scale first. Doing so will help clarify what worked and what didn't. Analyze the impact of the change by asking, Did the intervention produce the desired effect? If not, how can it be modified? After new initiatives have been tested and retested, full implementation must begin, in order to ensure that the new approach becomes standard.

A widely used framework for testing an initiative on a small scale is the Plan-Do-Study-Act (PDSA) cycle, also known as

the Shewhart cycle (figure 4). This tool can allow the team to test interventions prior to full-scale implementation. The PDSA cycle involves four steps:

1. Plan: After a root-cause analysis has been completed, identify potential CQI initiatives to improve the process and establish desired outcomes and goals.
2. Do: Before full implementation, test or pilot the initiative on a small scale.
3. Study: Analyze and assess the results. What worked? What didn't? What components of the initiative should be kept, altered, or discarded?
4. Act: Refine the initiative until it is ready for full implementation. Regularly reexamine the new process to ensure that its value is sustained over time.

Step 8: Remeasure

After the CQI project has been fully implemented, outcomes should be measured using the same data collection method outlined in Step 4. Several remeasurement cycles may be required to determine whether the impact is a function of CQI or merely chance.

Once new practices have been fully incorporated into an organization's systems and CQI goals have been attained, remeasurement will be required less frequently. Continue to report results to the team, staff, and senior leadership. At this point, the

program will have invested considerable time and resources in CQI: Data can be a very powerful motivational tool, so be sure to communicate results.

Step 9: Celebrate Success

When the CQI team has achieved its goals, everyone involved should be publicly acknowledged. In the busy, understaffed world of HIV care, activities not directly related to service delivery can fall by the wayside. Staff motivation is no different. Public recognition can go a long way in rewarding and motivating individuals participating in CQI activities, and it will demonstrate the important priority CQI has taken in the organization. Moreover, entities that have successfully completed a CQI project could network with other grantees, sharing success stories and suggestions.

CONCLUSION

CQI is a vital tool for maximizing resources, improving efficiency, and developing solutions to service delivery challenges. Delivery of HIV in the current environment poses many challenges to CARE Act grantees. HIV prevalence and the cost of care are increasing much more rapidly than the resources available for caring for people living with HIV/AIDS. Thus, organizations are required to optimize available resources—that is, forced to do more with less—at a time when the proportion of people living with HIV disease who are uninsured, poor, and multiply diagnosed is higher than ever. CQI brings much-needed promise to this world of increasing need and limited resources, and it helps the care community reach its ultimate goal: improved health and quality of life for people living with HIV/AIDS.

CQI is a proven tool for addressing service delivery challenges ranging from HIV counseling and testing to transportation. By helping organizations build efficient service systems that are more responsive to the needs of their clients, CQI optimizes results for the organization and—most important—for the client.

REFERENCES

1. Eisenberg J. Testimony on health care quality before the House Subcommittee on Health and the Environment. 28 Oct 1997. Available at: www.ahcpr.gov/news/test1028.htm.
2. Valenti W. Merging clinical performance and quality assurance in ambulatory HIV care: part 2, outcomes. *AIDS Reader*. 2003;13(5):220-2.
3. Valenti W. Merging clinical performance and quality assurance in ambulatory HIV care: part 2, outcomes. *AIDS Reader*. 2003;13(5):220-22. Available at: http://www.medscape.com/viewarticle/455525_print; Health Resources and Services Administration (HRSA), HIV/AIDS Bureau (HAB). *Technical Assistance Manual: Quality Management*. April 2003. Available at: <http://hab.hrsa.gov/tools/QM/>.
4. The HIVQUAL Project. New York State Department of Health AIDS Institute, 2000-2003. Available at: www.hivguidelines.org.
5. Wagner EH. Chronic disease management: What will it take to improve care for chronic illness? *Effective Clin Pract*. 1998;1:2-4. Available at: www.improvingchroniccare.org.
6. Joshi M, et al. CQI: making a difference at one academic health system. *Semin Med Pract*. 1999;2(1):11-5.
7. Institute for Healthcare Improvement. *IHI Quality Improvement Resources: A Model for Accelerating Improvement*. Available at: <http://ihi.org/resources/qi/qi6test.asp>; Health Resources and Services Administration (HRSA), HIV/AIDS Bureau (HAB). *Technical Assistance Manual: Quality Management*. April 2003. p 39. Available at: <http://hab.hrsa.gov/tools/QM/>.

RESOURCES

The following materials are resources on developing and implementing outcomes evaluation and other evaluation efforts. Some materials focus on clinical outcomes of primary care, and others address quality of life, quality of care, or general evaluation topics.

1. Technical Assistance Manual: Quality Management, Health Resources and Services Administration (HRSA), HIV/AIDS Bureau (HAB). April 2003. This manual outlines a nine-step process to help grantees construct and execute quality management programs. The manual also provides several examples of continuous quality improvement plans, flow charts, indicators, and sample work activities. Available at: <http://hab.hrsa.gov/tools/QM/>.
2. Medical Records Abstraction Form and Instructions. The Office of Science and Epidemiology, HAB, HRSA, has developed a form and instructions that can be used to abstract client demographic and medical data, including outcomes data, from medical records. "Impact of RWCA Title I Funding in Newly Funded EMAs: Medical Record Abstraction Form—Phase I" and "Instructions for Completing the Ryan White EMA Record Abstraction Form" are now available on the HAB Web site: <http://hab.hrsa.gov>.
3. HIVQUAL Software System. Several computerized systems have been developed to document and aggregate data on client services and outcomes; the HIVQUAL software system is among them. Available are the "HIVQUAL Manual Data Collection Sheet," which is a chart showing application and basic algorithms (showing how questions and responses are interconnected within the system), and the sampling methodology for a demonstration project. The system provides a model for recording and abstracting medical data, including outcomes for persons with HIV/AIDS. To obtain information about HIVQUAL, go to <http://www.hivguidelines.org/>.
4. HIV/AIDS Bureau Collaboratives: Improving Care for People Living With HIV/AIDS Disease, Institute for Health Care Improvement, HRSA, HAB. This publication is supported by grant number 54 U69 HA 00042-03 from HRSA, and provides instruction on using a collaborative process to improve quality.
5. Quality Management Manual, HAB. This publication provides a "how-to" on implementing quality management programs within CARE Act grantees and provider organizations. Log on to the national HAB Web site at <http://hab.hrsa.gov> to view or print this manual and to access the tools, resources, and Web links.
6. HIV Clinical Resources, New York State Department of Health AIDS Institute. Information is available at <http://www.hivguidelines.org/>; click on Quality of Care Information and Materials.

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