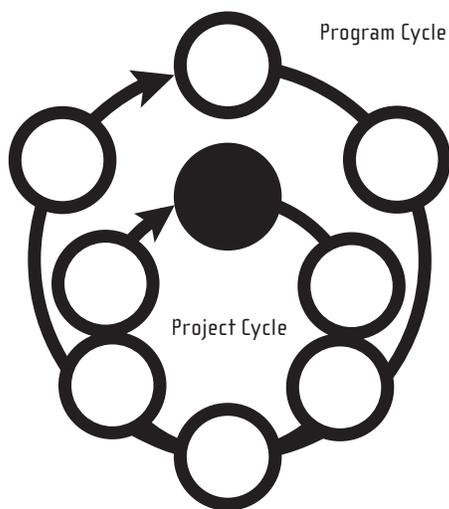


Project Step 1: Review, Collect and Analyze Project Data.



The Big Picture

Before HIV staff members can begin to orchestrate quality improvement work, the current performance level is assessed. If existing data systems do not provide sufficient information on a specific aspect of care, an indicator is defined and baseline data are collected. Once a decision is made to improve the performance, a project team, the main vehicle of the quality improvement activities is initiated.

What To Do

- Review and collect project data.
- Collect project data.
- Analyze and share results.



Snapshot of HIV Care

By the numbers: Collecting data to identify improvement opportunities

The quality improvement project cycle starts with determining the current level of the quality of care at the facility. The quality management plan may have incorporated performance measurement if data were available. If not, the quality committee needs to assemble the data it needs in order to focus its improvement efforts.

Frequently, many facilities—both large and small—do not have adequate data systems to provide the needed initial performance measurement data. Often their response is “we need a new, facility-wide data system before we can even begin our quality improvement work.” While such data systems can support and facilitate quality improvement, it is not a necessity. Existing data collections methods can be used or modified to adequately collect performance measurement data.



Snapshot of HIV Care...*Continued*

The North County Health Services (NCHS) in San Marcos, CA used a diverse team to determine how to best measure indicator performance. They first explored the feasibility of adapting their existing data collection tools to capture their identified indicators and presented their findings to the quality committee. “The dialogue between the providers and the quality committee resulted in slight modifications to an existing data collection instrument that was well suited for staff implementation. The team easily figured out how to modify the tool to include several indicators suggested by the care providers,” notes Judy Brooks, Quality Consultant.

Improving the facility-wide data system can be a long-term quality goal, but the lack of one should not be used as a reason not to proceed. Existing data collection tools and systems can provide the information needed to start quality projects. HIVQUAL3 software or CAREWare can be used to collect and analyze performance data.

Presentation counts

Quality committees have learned that how and to whom data are presented is important. If staff have been reluctant to get involved in the quality program, effective presentation of performance data can be used to elicit an “Oh my gosh” moment—the realization that their facility’s performance is not what they had assumed and that quality improvement were needed. Often, it is not until the facility’s leadership sees the performance measurement data that they realize the need for a quality management program and quality improvement activities.

“Showing where the facility is in relation to the national benchmarks has proven to be a great way to get the support you need from key managers,” advises a quality consultant. “Physicians and nurses are often data driven, evidence-based. It often takes display of the data to get them to acknowledge the facility’s actual quality of care. Unfortunately, it may take shocking or embarrass-

ing them to get their involvement and support for quality improvement. Conversely, facilities that demonstrate high quality care want to maintain it. Data can be effectively used to help sustain quality care.”

Staff may be used to using their own impressions or anecdotes to drive their decisions. Performance measurement takes the “guess work” out of the process and ensures that quality improvement efforts are based on actual data. HIVQUAL consultants report a transformation in the way facilities operate: “Once you realize the power of having and using actual data to make decisions and set priorities, you’ll never go back to not having data for decision-making.”

The quality management plan may need to address the need for staff training on data collection and data analysis. Many staff may feel that they don’t know how to read graphs or interpret tables. Providing some basic training may help overcome this “math anxiety.”

Measurement is not an end. It’s the beginning.

Unfortunately, many quality committees stop their work once they’ve collected their initial data. “Performance measurement alone is not quality improvement,” states one HIVQUAL consultant. “However, if you want to do quality improvement, you have to do performance measurement.” The initial performance data “should be used by the quality committee to guide its improvement efforts.”

Review and Collect Project Data.

Before committing valuable resources for quality improvement activities, it is important to assess the current performance level of the selected aspect of care for the following reasons:

- **Validation:** Reviewing data will provide staff with actual performance measurement, rather than relying on hunches or assumptions.
- **Baseline information:** Data at baseline provide critical background information at the beginning and will allow project teams to track progress over time.
- **Prioritization:** The project team can use data to prioritize their quality improvement efforts.

If existing data are not available or adequate for the quality improvement project, then baseline data should be collected as part of the quality improvement project. Depending on your facility's information systems, these data can be collected using your existing data systems. If the quality committee decides that existing data systems do not capture what is needed for the quality improvement work, then data need to be collected manually using newly defined indicators.

To collect project data, three key steps are identified:

- Defining measures
- Collecting performance data
- Analyzing project data

Defining Measures

A challenge in making quality improvements in HIV care is to select specific quality of care indicators that are relevant to the improvement project and best represent the issues under review. A quality of care indicator is a carefully defined measure of a specific aspect of patient care quantifying how a facility provides patient care against standards of care. Generally, indicators are based on specific standards of care derived from guidelines issued by professional societies and/or government agencies.

To initiate the selection process of potential indicators based on internally- and externally-developed guidelines, quality-related funding requirements as well as individual performance measurement 'wish lists' are generated. A broad representation of staff and leaders facilitates this process and secures support throughout the improvement project.



Additional Resource

For additional background on performance measurement and how to select an indicator, refer to *Measuring Clinical Performance: A Guide for HIV Health Care Providers*. You can download this publication at www.hivqual.org.

For the final selection of indicators, all measures are prioritized each indicator based on the following four measurement criteria:

- **Relevance.** Does the indicator relate to a condition that occurs frequently or has a great impact on the patients at your facility?
- **Measurability.** Can the indicator realistically and efficiently be measured given the facility's finite resources? Will the indicator show the impact of changes?
- **Accuracy.** Is the indicator based on accepted guidelines or developed through formal group-decision making methods?
- **Improvability.** Can the performance rate associated with the indicator realistically be improved given the limitations of the facility and patient population?

If those who are responsible for the selection process answer "no" to any of these questions, the indicator—while still relevant to patient care—is probably either too difficult to measure or less than critical to patient care. On the other hand, if the team answers "yes" to all of the questions, they have most likely found a viable indicator. At times, more than one indicator is selected to best assess and to balance the core aspect under review.



Real-World Tip Available Treatment Guidelines.

Treatment guidelines for HIV and AIDS are available from several online sources, including:

- New York State Department of Health AIDS Institute (www.hivguidelines.org)
- AETC National Resource Center (www.aids-ed.org)
- Johns Hopkins AIDS Service (www.hopkins-aids.edu)
- HIV/AIDS Treatment Information Service (www.aidsinfo.nih.gov)
- Infections Diseases Society of America (www.idsociety.org)
- HIV InSite (www.hivinsite.org)

Once a list of potential indicators has been identified, the group further defines them. This is accomplished by writing the indicator in the form of a question (e.g., 'Was the CD4 count measured and the result documented in the past four months?') to which there are a certain range of responses based on patient documentation (e.g., 'yes', 'no', 'NA').

At this step, it is important to define the measure by clearly documenting the 'yes' and 'no' responses. For example, a team can further define the criteria for 'yes' and 'no' re-

sponse options by specifying what kind of documentation is acceptable, the specific timeframe that is needed to perform the activity, or any other clinical (e.g., patient in care, CD4 <200) or demographic (e.g., age, gender) parameters needed to make the measure as clear and precise as possible.



The Toolbox on page 88 shows examples of indicator definitions for a variety of indicators.



The Toolbox on page 91 shows the minimum number of charts to review based on the patient population size.

Collecting Performance Data

Either quality management committee or project team members will need to identify data collection methods and design collection tools to measure the current level of performance. The most complete source of patient information on diagnosis, treatment, and clinical outcomes of care is the medical record. Team members will need to find the most efficient way to collect information from the facility's records, to draw a sample of those records for measurement, and to select the person(s) who will collect the data.



The Additional Resources section on page 142 provides information that the quality committee or the project team need to complete this step. Consult the material for detailed information on how to:

- Construct a population sample. Data sampling allows the facility to make inferences about a total patient population based on observations of a smaller subset of that group (the sample), saving both time and resources during data collection. To select a sample population, the larger eligible population (measurement population) must first be identified. Defining this measurement population requires identifying those patients who are eligible to be selected for the sample based on pre-established criteria (e.g., patients with two medical visits during the year) and those who are not eligible for selection (e.g., patients with CD4 >200).
- Design a tool. Based on selected indicators to assess the performance level, a data collection tool is created to assist and facilitate the data collection process.
- Train data collectors. Those who are assigned to collect data should be given an opportunity to review the measurement process. They should also be instructed on how data collection will contribute to the project team and to the facility's overall quality management program.
- Collect data. Clinical data abstraction, the process of gleaning data from a larger data set, is achieved through record review and/or administrative review. With record review, a designated data collector directly collects data manually from individual medical records, whereas with administrative review, the individual gathers information from data previously collected in the facility's administrative database or log.

- Validate results. Performance measurement data are only as good as the process from which they are collected. Steps should be taken to ensure the process works by assessing its reliability and effectiveness.

Analyze Project Data

Analysis of project data provides a starting point to determine whether care currently falls short, meets, or exceeds the desired quality level. By analyzing project data the quality management program is able to answer the following basic questions:

- What is the current level of performance?
- Will improvement in the current level make a difference in the quality of care at our facility?

Notes



Real-World Tip Keep Data Measurement Simple.

Keep in mind the following practices in reviewing performance measurement data:

- Use only as much data as necessary; more is not necessarily better.
- Train team members in data collection process.
- Realize that there is no ‘perfect indicator’ and agree early on the best indicator.
- Limit data analysis to the achievement of the identified indicators.
- Keep in mind that performance measurement is only the first step—quality improvement is about changing the current system, not just measuring.
- Communicate project data early on; don’t wait to get ‘perfect results.’



Additional Resource

Carey, R.G., and Lloyd, R.C. Measuring Quality Improvement in Healthcare. New York: Quality Resources, 1995.



Toolbox: Examples of Indicator Definitions

These are the HIVQUAL indicators for clinical and case management performance. Further details, page 152.

ARV Management

For patients receiving antiretroviral therapy, treatment is managed appropriately.

Adherence to ARV Therapy

For patients receiving antiretroviral therapy, adherence is discussed and measured every four months.

HIV Specialist Care

A consultation with an HIV specialist is provided every four months.

CD4 Cell Count

A CD4 cell count test is performed every four months for all patients, with the exception of those incarcerated, hospitalized and recently relocated during the four-month review period.

Viral Load

A viral load test is performed every four months for all patients, with the exception of those incarcerated, hospitalized and recently relocated during the four-month review period.

Lipid Screening

For patients receiving antiretroviral therapy, a lipid screen is performed every year.

PCP Prophylaxis

For patients with CD4 counts <200 cells/mm³, appropriate PCP prophylactic therapy is prescribed.

MAC Prophylaxis

For patients with CD4 counts <50 cells/mm³, appropriate MAC prophylactic therapy is prescribed.

TB Screening

For patients without a history of previous TB treatment or positive PPD test result, a PPD is placed and results read every year.

Hepatitis C Screening

The patient's Hepatitis C status is documented in the medical record. For HCV+ patients, alcohol counseling and HCV education is provided. The patient's Hepatitis A status is documented in the medical record.



Toolbox:

Examples of Indicator Definitions...*Continued*

Mental Health Screening

A mental health screening is performed during the review period. Assessment components include: cognitive function, screening for depression and anxiety, psychiatric history, psychosocial assessment, sleeping and appetite assessment.

Ophthalmology Exam

For patients with CD4 counts <50 cells/mm³, a referral for an ophthalmology exam is documented.

Annual Pelvic Exam

For female patients (>18 years and 13-18 sexually active), a pelvic exam and Pap smear is performed every year.

Annual Syphilis Serology

A serum syphilis screening (i.e., VDRL or RPR) is performed every year.

Annual Discussion of Substance Use

A discussion of substance use (and treatment) is provided every year.

Annual Discussion of Tobacco Use

A discussion of tobacco use (and cessation) is provided every year.

Annual Dental Exam

A dental exam is performed every year.

Comprehensive case management assessment

A comprehensive case management of client needs occurs within 30 days of initial client contact.

Case management service plan development

A case management service plan is developed with client participation within 45 days of initial client contact and is based upon needs identified in the case management assessment.

Case management follow-up on service plan goals and referrals

Case management follow-up regarding service plan goals, referrals and patient attendance at appointments is documented in the client record every 120 days. All goals and referrals identified in the service plan are addressed.

Case management coordination of services

Case management coordination of services (communication between the case manager and any health or social service provider) is documented on a quarterly basis in the client's record.

Analyze And Share Results.

Baseline data analyses and results are shared with the HIV quality committee. Communicating baseline data to health care providers, consumers and governing boards at the facility helps everyone to better understand the data collection process and the meaning of the data.

Whenever possible, the summary of performance measurement data should include graphics such as tables or charts. Graphic displays help to convey outcomes at a glance. Text should be used sparingly for background and/or explanatory information. The level of detail provided through graphics and text will generally depend on the target audience.

Commonly used charts to graphically present performance measurement data include:

- **Run chart:** a graph showing measurements on the vertical axis against time on the horizontal axis
- **Pie chart:** a circle divided into wedges to show relative proportions; the sum of all portions equal 100%
- **Control chart:** a run chart with statistically determined upper and lower control lines drawn on either side of a process average; used to analyze different types of variations
- **Histogram:** a bar graph that shows the distribution (variation) in a set of data, illustrating how often different values occur



The Toolbox on page 92 shows examples of these types of charts. Most computer spreadsheet programs can be used to construct them.



Real-World Tip Make Your Case With Your Results.

After measuring the current performance level, it is important to use the results and subsequent analyses effectively:

- Begin the analysis with a few questions or hypotheses before spending too much time 'digging' through the data.
- Limit the display of data results to summarize your most important findings.
- Display data graphically whenever possible.
- Publicize the results; post graphic displays in hallways and waiting rooms so that staff and patients can see the baseline and progress.



Toolbox: HIVQUAL Sample Size Chart

The following table indicates the minimum number of records for performance reviews based on eligible population. See page 142 for further information on sampling and data collection.

TOTAL ELIGIBLE POPULATION	MINIMUM NUMBER OF RECORDS TO REVIEW
Up to 20	All
21 - 30	24
31 - 40	30
41 - 50	35
51 - 60	39
61 - 70	43
71 - 80	46
81 - 90	49
91 - 100	52
101 - 119	57
120 - 139	61
140 - 159	64
160 - 179	67
180 - 199	70
200 - 249	75
250 - 299	79
300 - 349	82
350 - 399	85
400 - 449	87
450 - 499	88
500 - 749	94
750 - 999	97
1000 - 4999	105
5000 or more	107



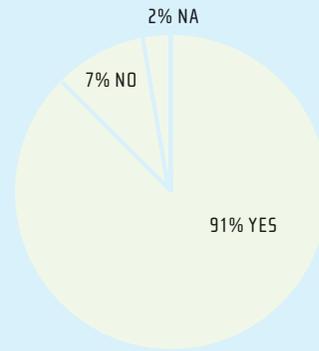
Toolbox:

Display of Measurement Data in Graphic Form

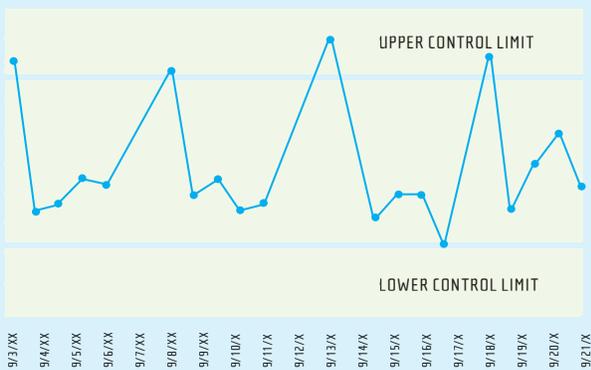
Run Chart: Annual PPD Rate



Pie Chart: Did patient receive PCP prophylaxis?



Control Chart: Waiting Time



Histogram: Reasons for No GYN Exam in Medical Record

