HIVQUAL Workbook

Guide for Quality Improvement in HIV Care

Health Resources and Services Administration HIV/AIDS Bureau
New York State Department of Health AIDS Institute

HIVQUAL Workbook

Guide for Quality Improvement in HIV Care

Health Resources and Services Administration HIV/AIDS Bureau
New York State Department of Health AIDS Institute

Developed for the U.S. Department of Health and Human Services
Health Resources and Services Administration
HIV/AIDS Bureau

By the New York Department of Health
AIDS Institute
The National HIVQUAL Project

September 2006

This publication was supported by grant number 231030010FR from the HIV/AIDS Bureau, Health Resources and Services Administration. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Health Resources and Services Administration.

"Untitled" - painting by Frank Holliday, HIV-positive artist

New York State Department of Health AIDS Institute

Guthrie Birkhead, M.D., M.P.H.
Director

Humberto Cruz, M.S.
Executive Deputy Director

Barbara Devore, M.P.A.
Executive Deputy Director

Bruce Agins, M.D., M.P.H.
Medical Director

Office of the Medical Director HIV Quality of Care Program

Bruce Agins, M.D., M.P.H.
Medical Director

Clemens Steinböck, M.B.A.
Director of Quality Initiatives

Franklin Laufer, Ph.D.
Director for Performance Measurement

Todd Mohrmann, M.A.
Manager, HIV Guidelines Program

The HIVQUAL Project

Bruce Agins, MD, MPH
HIVQUAL Project Director

Clemens Steinböck, M.B.A.
HIVQUAL Specialist

Lily Jiang
HIVQUAL Project Data Manager

Chris Wells
HIVQUAL Data Analyst

Nanette Brey-Magnani, Ed.D.
QI Consultant

Amelia Broussard, Ph.D., R.N., M.P.H.
QI Consultant

Johanna Buck, M.A., R.N.
QI Consultant

Kathleen Clanon, M.D.
QI Consultant

Onelia Crespo, M.D.
QI Consultant

Lori DeLorenzo, M.S.N, R.N.
QI Consultant

Jeffrey A. Menzer, R.N., A.C.R.N.
QI Consultant

Margaret Palumbo, M.P.H.
QI Consultant

Barbara Rosa, R.N.-C., M.S.
QI Consultant

Dan Sendzik
QI Consultant

Nancy Showers, D.S.W.
QI Consultant

Saneese Stephen, R.P.A.-C., M.P.A.
QI Consultant

Table of Contents

Index.. 7
Introduction 13
Workbook Use 15
National HIVQUAL Project 17
Overview of the HIVQUAL Model 21
Resources 26

Program Cycle - HIVQUAL Model
Step I:
Develop and Plan a Quality Management Program 28
Identify Leaders and Key Stakeholders 30
Form a Quality Management Committee 32
Develop a HIV Quality Management Management Plan 38
Strategize Implementation of the Quality Plan 49
Step II:
Facilitate Implementation of HIV Quality Program 55
Establish Performance Measurement Systems 57
Review Performance Measurement Data 60
Establish Improvement Project Teams 61
Support Quality Improvement Activities. 63
Step III:
Evaluate HIV Quality Management Program 69
Evaluate HIV Quality Management Program Effectiveness 71
Evaluate Project Team Performance 75
Learn from and Respond to Past Performance 77
Strategize to Sustain the HIV Quality Program 78

Project Cycle - HIVQUAL Model

Step 1:

Review, Collect and Analyze Project Data 82
Review and Collect Project Data 84
Analyze and Share Results. 90

Step 2:

Develop a Project Team 93
Establish Project Team Dynamics. 95
Write an Improvement Project Memo. 98

Step 3:

Investigate the Process. 103
Understand the Process 106
Identify Underlying Causes. 110

Step 4:

Plan and Test Changes 116
Conduct Plan-Do-Study-Act (PDSA) Cycles 118
Plan for Pilot Tests 120
Conduct Pilot Tests. 125

Step 5:

Evaluate Results with Key Stakeholders 127
Summarize Improvement Project Results 129
Evaluate Results with HIV Quality Committee 132

Step 6:

Systematize Changes 134
Sustain Improvements. 136
Assess Team Effectiveness 140

Additional Resources

Sampling and Data Collection 142
Construct a population Sample. 143
Design a Data Collection Tool 147
Assign and Train Abstractors 151
Validate Results. 156

Index

A

Assessment tool, quality program 72

B

Baseline data, analysis 84
Brainstorming 110

C

Cause-and-effect diagram 110, 113
Cause analysis 110

D

Data abstractors. 86, 151
Data collection 84, 142
Display of performance data 92

F

Flowchart. 108

G

Gantt chart 102

H

HIVQUAL Project 17
HIV treatment guidelines 85

I

Ideas for pilot tests. 121
Indicators for HIV care 45, 58, 88
Indicator selection 40
Investigating the process 103

L

Leaders and key stakeholders. 30

O

Organizational assessment tool 72

P

Pareto chart 115
PDSA cycle 118
Performance data, collection 86
Performance measurement system. 57
Pilot test, evaluation 125
Pilot test, implementation 125
Pilot test, selecting. 120, 121
Presenting data and/or QI projects 90, 92
Project team memo and workplan. 98, 102
Project team, assessment tool 73
Project team, establishment. 61. 93
Project team, evaluation 75, 132

Q

Quality committee 32
Quality committee membership 34
Quality goals 44, 40
Quality plan management, development. 38, 43, 50, 52
Quality program, evaluation 42, 69
Quality program, implementation. 55

R

Random number table. 148
Responsibilities of quality committee 32
Resources, books, articles, and websites 26

S

Sample size 144
Sample, construction. 86, 143
Staff involvement. 124, 138
Storyboard. 129
Support for improvement project 78
Support for quality program 78, 41
Sustain improvements 136
Sustain quality program 78
Systematize changes. 139

T

Team effectiveness 75, 140
Team ground rules 100, 101
Team roles 95, 97

V

Validation of performance data results 84

W

Workplan, quality program. 49, 52
Workplan, project team. 93, 61

Acknowledgments of HIV Programs

New York State Department of Health AIDS Institute gratefully acknowledges the help of the following HIVQUAL sites and staff who contributed their stories and examples of HIV care to the HIVQUAL Workbook.

STAR Health Center at SUNY Downstate
Box 1240, 450 Clarkson Avenue
Brooklyn, NY 11203
Caseload: 1,100 patients
Staff: 30
Type of facility: Hospital-based clinic, Designated AIDS Center

Contact: Kristina Brown, R.P.A.-C., Quality Improvement Coordinator
Phone: 718-270-2842
Fax: 718-270-2298
Email: Kristina.brown@downstate.edu

Albany Medical Center
47 New Scotland Avenue MC158
Albany, NY 12208
Caseload: 1,400 patients
Staff: 75 – 85
Type of facility: Academic center

Contact: Sheila Boyle, Process Improvement Coordinator
Phone: 518-262-4025
Fax: 518-262-8460
Email: boyles@mail.amc.edu

Brooklyn Hospital Center
121 De Kalb Avenue, Box 197
Brooklyn, NY 11201
Caseload: 800
Staff: 39
Type of Facility: Hospital

Contact: Dan Sendzik, Executive Director
Phone: 718-940-5934
Fax: 718-940-5515
Email: dps9001@nyp.org

Circle of Care
260 S. Broad Street, Suite 1000
Philadelphia, PA 19102
Caseload: 1000+
Staff: 12
Type of Facility: Provider network

Contact: Brian M. Green, Manager-Quality Improvement & Planning
Phone: 215-985-2627
Fax: 215-732-1252
Email: brian@familyplanning.org

Hennepin County Medical Center
701 Park Avenue, 41A North
Minneapolis, MN 55415
Caseload: 1379
Staff: 12.95
Type of facility: Public hospital

Contact: JaneAnn Hall, IT Specialist
Sandy Bergner, R.N.
Phone: 612-873-2121
Fax: 612-904-4684
Email: JaneAnn.Hall@co.hennepin.mn.us

Interfaith Community Health Center
220 Unity Street
Bellingham, WA 98225
Caseload: 135
Staff: 55
Type of facility: Community health center

Contact: Sam Curd, Care Coordinator for Ryan White Primary Care Program
Phone: 360-676-6177
Fax: 360-671-3574
Email: Sam_curd@opportunitycouncil.org

Kings County Hospital Center
Center for HIV Outpatient Primary Care Evaluation (H.O.P.E.)
451 Clarkson Ave, Bldg H
Brooklyn, NY 11203
Caseload: 900
Staff: 20
Type of facility: Hospital-based outpatient clinic

Contact: Saneese Stephen, R.P.A.-C., M.P.A. Associate Director
Phone: 718-245-2808
Fax: 718-735-4165
Email: stephens@nychhc.org

Middletown Community Health Center
21 Orchard Street
Middletown, NY 10940
Caseload: ~110
Staff: 7
Type of facility: Community health center

Contact: Dina Kapzynski, Quality Improvement Coordinator
Phone: 845-343-7614, ext 239
Fax: 845-343-5390
Email: dkapzynski@middletownchc.org

Judy Brooks, Quality Consultant
Phone: 760-471-0418
Fax: 760-471-0418
Email: jbqualnrse@aol.com

Additional thanks to Gavin Imperato, Shalmali Karnad, Sara Brownschidle and Anne Conlin of the AIDS Institute for their efforts in collecting the HIV snapshots and their work on this book.

Montefiore Medical Center
AIDS Center
Center for Positive Living
111 East 210th Street
Bronx, NY 10467
Caseload: 2,200
Staff: 97
Type of facility: Hospital-based outpatient clinic

Contact: Joan Vileno, R.N. Quality Improvement Coordinator
Phone: 718-920-2859
Fax: 718-405-0610
Email: jvileno@montefiore.org

North County Health Services
150 Valpreda Road
San Marcos, CA 92069
Caseload: 350
Staff: 35
Type of facility: Community health center

Contact: Alicia Nunez-Liriano, Director of HIV Programs
Phone: 760-736-6725
Fax: 760-736-3210
Email: aliriano@nchs-health.org

St. John's Riverside Hospital
Two Park Avenue
Yonkers, NY 10703-3497
Caseload: 250 – 350
Staff: 25
Type of facility: Hospital

Contact: Kay Scott, A.C.S.W., C.A.S.A.C.
Phone: 914-964-7595/7412
Fax: 914-964-7321
Email: kscott@riversidehealth.org

St. Joseph's Family And Women's Care
145 North 6th Street
Reading, PA 19601
Caseload: 375
Staff: 4
Type of Facility: Hospital

Contact: James Pratt, Program Director
Phone: 610-378-2551
Fax: 610-378-2562
Email: jamesprattjr@catholichealth.net

Unconditional Love, Inc.
1495 N. Harbor City Blvd.
Melbourne, FL 32935
Caseload: 598
Staff: 25
Facility: 7 Solo/Group medical practice

Contacts: Phyllis Johnson, R.N., C.Q.I.
Joyce Goode, A.R.N.P.
Phone: 321-253-0846
Fax: 321-253-1004
Email: chc@spacey.net

Unity Health Care, Inc.
70 N Street, NE
Washington, DC 20002
Caseload: 2,774
Staff: 35
Type of facility: Community and homeless health centers

Contact: Julie Ahlrich, R.N., B.S.N. Health Center Manager
Phone: 202-727-0660
Fax: 202-727-0375
Email: jahlrich@unityhealthcare.org

University of Miami School of Medicine
Department of Obstetrics & Gynecology (D-53)
1400 NW 10th Avenue
Miami, FL 33136
Caseload: 4,218
Staff: 55
Type of facility: Academic medical center

Contact: Barbara Messick, M.P.H.
Phone: 305-243-2160
Fax: 305-243-2152
E-mail: bmessick@med.miami.edu

University of Pittsburgh Medical Center
200 Lothrop Street, 603 Falk
Pittsburgh, PA 15213
Caseload: 1,000
Staff: 25
Type of facility: Hospital-based university clinic

Contact: Margaret A. Palumbo, M.P.H. Administrative Director, HIV Program
Phone: 412-647-2038
Fax: 412-647-5519
Email: palumbom@msx.upmc.edu

UT Southwestern Medical Center
Dallas Family Access Network
CMC-Pavillion
1935 Motor Street
Dallas, Texas 75235
Caseload: 4,076
Staff: 26
Type of Facility: University Medical Center

Contact: Elizabeth (Betty) Cabrera, Executive Director
Phone: 214-456-5897
Fax: 214-456-2860
Email: BETTY.CABRERA@childrens.com

Acknowledgments of Reviewers

We also want to thank the following HIV providers for volunteering their time to review the HIVQUAL Workbook. Their comments and feedback shaped the development of this book and we are tremendously grateful for their commitment to quality improvement in HIV care.

Betsy Siegel, R.N., B.S.N.
Infectious Diseases Clinics of Emory, Atlanta, GA
Betsy_Siegel@emoryhealthcare.org

Brian M. Green
Circle of Care, Philadelphia, PA
brian@familyplanning.org

Cheryl Hamill, R.N., M.S., A.C.R.N.
University of MS Medical Center
Jackson, MS
chamill@medicine.umsmed.edu

Cynthia Gail Manor
Austin Travis County Health & Human Services
Dept. Austin, TX
Cynthia.Manor@ci.austin.tx.us

Daphyne Williams, M.P.H.
Sixteenth Street Community Health Center,
Milwaukee, WI daphyne.williams@SSCHC.ORG

Debbie Konkle-Parker, Ph.D., F.N.P.
University of Mississippi Medical Center
Jackson, MS
dkparker@medicine.umsmed.edu

Deborah Dewey
New York State Department of Health AIDS Institute
Albany, NY
dmd16@health.state.ny.us

Donald Hardin
Washington University School of Medicine, St Louis, MO
dhardin@im.wustl.edu

Donna Needham, R.N.
Thundermist Health Center, Woonsocket, RI
donnan@thundermisthealth.org

Elizabeth Cabrera
Dallas Family Access Network, Dallas, TX
BCABRE@childmed.dallas.tx.us

Ellen Tanner
New York State Department of Health AIDS Institute,
Albany, NY
etv02@health.state.ny.us

Erica Avery
Phoenix Indian Medical Center, Phoenix, AZ
erica.avery@mail.ihs.gov

Fran Rotunno, R.N.
VidaCare, Inc., New York, NY
frotunno@vidacare.org

Gloria Jorgensen, R.N.
CHC/RVC, Davenport, IA
gjorgensen@davchc.com

Jan Hufnagle, R.Ph.
Caring Together Pharmacist, York, PA
hufnagle@yorkhealthcorp.com

Jeffrey Guidry, Ph.D.
UT Southwestern Medical Center, Dallas Family Network
Dallas, TX
jguidry@hlkn.tamu.edu

Judith A. Aberg, M.D.
Washington University School of Medicine
St. Louis, MO
JABERG@im.wustl.edu

Kimberly L. McCombs
Washington University School of Medicine - Project ARK
St. Louis, MO
McCombs_K@kids.wustl.edu

Kristen Ries, M.D.
University of Utah, Division of Infectious Diseases
Salt Lake City, UT
kristen.ries@hsc.utah.edu

Laura Friedman, C.S.W.
Mount Sinai Medical Center, New York, NY
Laura.Friedman@msnyuhealth.org

Paula Merrill
Marks, Mississippi
Twomarksters@aol.com

Phyllis Johnson, R.N.
Unconditional Love, Inc, Melbourne, FL
chc@spacey.net

Richard Johnson
Comprehensive Care Clinic - Lancaster General Hospital
Lancaster, PA
rbjohnso@lancastergeneral.org

Robert J. Di Vito, Esq.
DeKalb County Board of Health, Decatur, GA
rjdivito@gdph.state.ga.us

Sally Hughes Lee, M.S.N., Ed.D.
Quality of Life Health Services, Gadsden, AL
sallyhugheslee@yahoo.com

Sandy Frentz
Sioux Falls Health Department, Sioux Falls, SD
sfrentz@SIOUXFALLS.org

Steve Palermo, R.N., M.B.A., C.P.H.Q.
USF Infectious Disease Clinic, Tampa, FL
Steve_Palermo@doh.state.fl.us

Susan Weigl
Callen-Lorde Community Health Center, New York, NY
sweigl@yahoo.com

Tacy Kirkendall
University of Nebraska Medical Center, Omaha, NE
tkirkendall@unmc.edu

Introduction

The road to quality improvement in HIV care may be likened to a journey. But that journey is generally not a trip on a well-groomed path. The ever-changing nature of HIV care presents myriad challenges along the road that leads to the summit of improved care for patients. Once this path has been forged and trodden, it becomes smooth and familiar. Ideally, this proven path will be traveled often and branch into new roads in response to the changing system of care.

Whether a facility is located in the inner city or a rural area, a large hospital-based program or a small neighborhood center, the challenges of ensuring that HIV patients receive appropriate care are shared. To name a few: keeping current with the sheer breadth of knowledge, skills and experience underpinning effective HIV treatment; serving the increasing needs of people living with HIV/AIDS, their partners, family members and friends; and dealing with limited resources, ever-present time pressures and budget constraints. Successfully achieving and sustaining quality improvements in HIV care over time requires not attending to individual processes and projects in isolation but rather understanding how all the pieces fit together and balance one another, how changing one element can change the rest, and how sequencing and pace affect the whole structure of delivering care.

The New York State Department of Health AIDS Institute has worked for more than ten years with HIV providers to help them build capacity and capabilities for quality improvement. The HIVQUAL Workbook captures the combined expertise and accomplishments of participating HIV programs around New York State and the nation, and the knowledge of HIVQUAL consultants who guide providers through the challenges and the key tasks related to improving the quality of HIV care.

The HIVQUAL Workbook is based and structured on the HIVQUAL Model and its Program and Project Cycles. Workbook content explains the purpose of each cycle and then describes the key tasks for its successful completion. The Program Cycle focuses on the necessary steps to plan, build and sustain an HIV-specific quality infrastructure while the Project Cycle shows how to implement a quality initiative to improve one aspect of HIV care.

As you review the information, begin to consider its applicability within your facility. Ask yourself how these practical materials can help your facility address daily challenges and improve comprehensive HIV care.

If your organization participates in the National HIVQUAL Project, some of the materials in the Workbook may already be familiar to you. We hope you will use this Workbook as a resource for the ongoing implementation of quality improvement at your site.

If your organization has not been part of the HIVQUAL Project, we hope this Workbook will give you and your colleagues a clear road map for making quality improvement a reality in your HIV program and provide you an opportunity to share our quality experience. The Workbook materials are adaptable to your facility whether or not you participate in HIVQUAL. It is our sincere hope that after using the HIVQUAL Workbook you will join us in this exciting initiative devoted to improving care for people living with HIV.

Good luck in your quality improvement journey!

Workbook Use

Purpose

The HIVQUAL Workbook provides you with a practical guide for improving the quality of HIV care, offering step-by-step guidance on how to build a quality program, orchestrate quality improvements and then sustain those improvements.

Target Audience

The Workbook is applicable to all HIV programs, regardless of caseload, geographic location or service delivery model used. Anyone interested in making quality improvements within a facility can use the HIVQUAL Workbook; it does not assume existing quality knowledge nor does it require participation in the HIVQUAL Project. This section will introduce you to the organization of the Workbook and describe how to get started using these materials.

Structure

There are ten different tab sections in the HIVQUAL Workbook. As shown in Figure 1, the first nine tabs correspond to the steps in the HIVQUAL Model. Supplemental resources are found behind the last tab, Tab 10.

Sections in the HIVQUAL Workbook covering the HIVQUAL Model include the following components and corresponding icons.

HIVQUAL Model

The 'dual circles' icon shows the two interdependent cycles of the HIVQUAL Model and provides a 'road map location' in this document for each of the nine steps. The Program Cycle ('outer circle') shows the sequence of activities for developing a facility's HIV quality improvement program. (Program Step I is highlighted here). The Project Cycle ('inner circle') shows the steps for conducting specific quality improvement projects.

Figure 1: HIVQUAL Workbook Structure

PROGRAM CYCLE			
Tab 1	Step I: Develop and Plan a Quality Management Program	Tab 6	Step 3: Investigate the Process
Tab 2	Step II: Facilitate Implementation of HIV Quality Program	Tab 7	Step 4: Plan and Test Changes
Tab 3	Step III: Evaluate HIV Quality Management Program	Tab 8	Step 5: Evaluate Results with Key Stakeholders
PROJECT CYCLE		Tab 9	Step 6: Systematize Changes
Tab 4	Step 1: Review, Collect and Analyze Project Data	ADDITIONAL RESOURCES	
Tab 5	Step 2: Develop a Project Team	Tab 10	Sampling and Data Collection

Snapshot of HIV Care

These real-life examples describe how HIV care providers have completed the entire step or a key activity within the step. The 'camera' icon will call attention to a real-life snapshot of HIV care.

Additional Resource

The 'open-book' icon directs you to other publications or resources that you may want to consult for additional information.

Toolbox

Throughout the Workbook, Toolbox content explains how to apply quality tools at appropriate times during the quality improvement process. A 'Toolbox' icon calls attention to Toolbox explanations.

Real-World Tip

A 'light bulb' icon designates suggestions that can help you to successfully implement an activity. These concrete and practical tips summarize best practices of current HIVQUAL Project participants.

Getting Started

This HIVQUAL Workbook may be used both as an introduction to quality improvement in HIV care facilities and as a reference tool. If your HIV care facility is just embracing the quality improvement movement for the very first time, you may want to review the Workbook in its entirety and then go back and use the step-by-step guidelines to direct a quality improvement cycle and to plan, implement and evaluate a quality program. HIV care facilities experienced in quality improvement may simply choose steps on an as-needed basis—those that are most relevant to the current improvement needs of your facility.

If you have questions about the HIVQUAL Workbook, wish to receive additional copies, have a success story to submit for future editions or want to learn about participating in the National HIVQUAL Project, visit our website at www.hivqual.org or you may call 212-417-4614.

We wish you the very best in your efforts to improve the care of people living with HIV and hope that this Workbook serves you well in this journey.

The National HIVQUAL Project

What is HIVQUAL?

The HIVQUAL Project represents the joint efforts of the New York State Department of Health AIDS Institute and the Health Resources and Services Administration (HRSA) HIV/AIDS Bureau. It is a national project funded by HAB Division of Community Based Programs and supports Title III and Title IV grantees in their efforts to sustain quality improvement in HIV ambulatory care.

In 1995, the AIDS Institute implemented a pilot project to determine the feasibility of using the New York State quality improvement capacity-building model model in Title III programs nationally. This successful pilot project was undertaken in Pennsylvania among six grantees, each of which demonstrated significant improvements after a 15-month program that included bimonthly on-site visits by a consultant with quality improvement expertise. Following this success, the Title III program supported the expansion of the HIVQUAL Project to other states in 1997. During the past 5 years, the HIVQUAL Project has steadily evolved to support the growth of quality management programs among Title III and Title IV grantees, further expand the profile of indicators in the project's software, provide over 100 grantees with on-site consultation, demonstrate improvements in the quality of HIV care and incorporate new methods and tools in the quality improvement field.

On-site consultation services and other resource materials help participating HIVQUAL sites learn how to systematically plan, implement and evaluate a quality management program and conduct quality improvement projects. Benchmarking of key clinical issues is promoted. Publications such as the HIVQUAL newsletter with examples of best practices as well as regional workshops provide numerous opportunities for peer learning and information sharing.

HIVQUAL Goals

The overarching intent of the National HIVQUAL Project is to build the capacity and capability among Ryan White Title III and Title IV grantees to sustain quality improvement in HIV care by providing on-site consulting services. As such, key HIVQUAL Project goals and objectives are to:

- Improve the quality of care for persons with HIV receiving care in Title III and Title IV-supported programs.
- Promote quality improvement activities.
- Promote self-reporting of HIV performance. measurement data based on clinical guidelines
- Provide site-specific consultation to build quality improvement capacity which is responsive to the specific organizational needs of grantees.

HIVQUAL Principles

The National HIVQUAL Project promotes the following practical quality improvement principles to help HIV providers improve the quality of HIV care within their facilities:

- Infrastructure enhances systematic implementation of quality improvement activities.
- Performance measurement lays the foundation for quality improvement.
- Indicators are based on accepted guidelines or developed through formal group-decision making methods.
- Quality improvement should be integrated into ongoing planning and work of HIV programs.

HIVQUAL Indicators

Improving elements of HIV care are best based on a system of routine performance measurement. The HIVQUAL methodology helps HIV care facilities to measure and analyze performance data in an effort to:

- Shape and guide quality improvement activities.
- Identify critical aspects of HIV care for improvement.
- Monitor the quality of care and services provided.
- Assess baseline and follow-up performance data to determine if improvements have been made.

The Project uses a variety of quality indicators. HIV-QUAL Project indicators are listed in Figure 2. A more detailed description of these indicators can be found on page 88.

Figure 2: HIV Indicators

HIVQUAL INDICATORS:	
HIV specialist care	Gynecological care
HIV monitoring (CD4 cell count and viral load testing)	Mycobacterium tuberculosis (PPD) screening
Antiretroviral (ARV) therapy medication	Syphilis serology
ARV therapy management	Pneumococcal vaccination
ARV treatment education	Substance use assessment
Adherence to ARV therapy	Mental health screening
Lipid screening	Dental care
PCP prophylaxis	Ophthalmologic care
MAC prophylaxis	Basic patient education

Benefits of HIVQUAL Participation

The benefits of participating in the National HIVQUAL Project include:

- On-site quality improvement consultation service with HIVQUAL consultants.
- Organizational assessment of your existing quality management program.
- Establishment of an HIV quality infrastructure for ongoing monitoring and continuous improvements in care.
- Performance measurement software, HIVQUAL3, and technical support.
- Benchmarking of performance data with other participating Title III and Title IV grantees.
- Development of skills and experience in applying quality improvement methods to HIV care.
- Sharing of best practices and success stories with other clinics via HIVQUAL publications, workshops and other peer-learning opportunities.
- Stronger links to HRSA.

The HIVQUAL Project has led to performance improvement at participating facilities. An analysis of HIVQUAL performance data found that facilities that participated in the HIVQUAL project improved their performance in all but one of HIVQUAL indicators. Figure 3 shows the five year performance trends of facilities participating in the HIVQUAL Project over the five year period 2001-2005. The improvements in performance, with the exception of pelvic exams and MAC prophylaxis, are statistically significant at $p<0.01$; with the improvement for MAC prophylaxis is significant at $p<0.05$. Improvements were not seen in viral load monitoring; this decrease is most likely attributable to a change in the standard of care and the corresponding indicator for more frequent viral load monitoring. (These results were presented at the International AIDS Conferences in Bangkok in 2004 and Toronto in 2006.)

HIVQUAL3 Software

The HIVQUAL Project supports quality improvement and performance measurement among grantees through the use of its existing software, called HIVQUAL3. This software program is an MS-Access runtime application that provides an efficient means of measuring and reporting clinical performance. Data from participating grantees are compiled in annual blinded benchmarking reports, which are distributed to grantees at the end of each data collection cycle. These comparative data provide a powerful stimulus to grantees, while recognizing the successes of those with higher scores.

This HIVQUAL3 software includes indicators based on clinical practice guidelines developed by the New York State Department of Health AIDS Institute, its expert advisory committees, and the Title III and Title IV HIVQUAL Advisory Committees. Indicator definitions are consistent with public health guidelines.

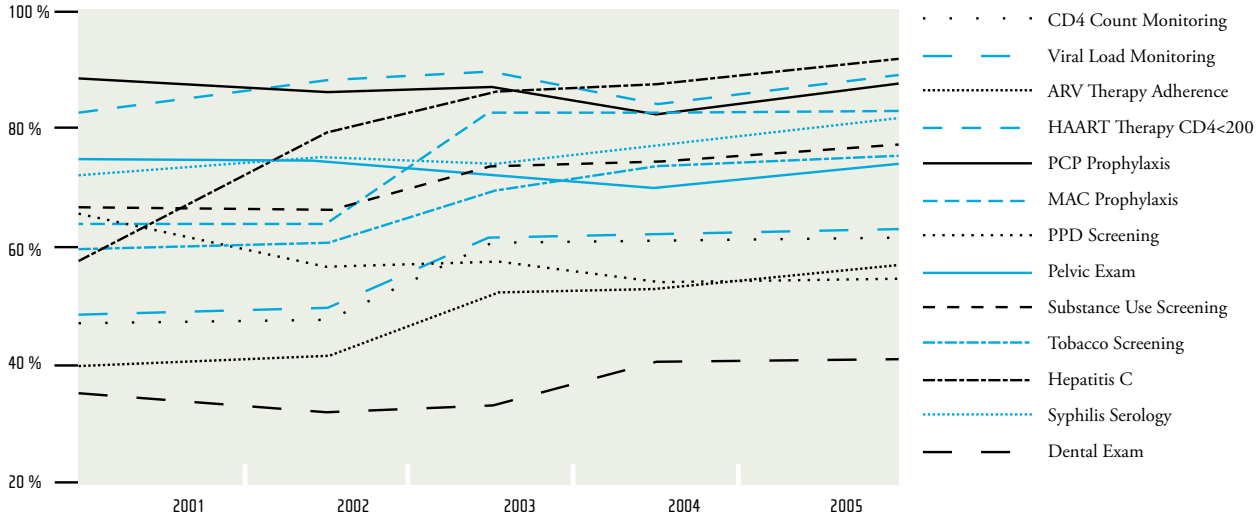
Features of the HIVQUAL3 software include:

- A simple vehicle for the rapid generation of reports to monitor clinical performance for those patients entered in the database.
- Current performance data for use in internal quality programs and external benchmarking with other HIVQUAL Project participants.
- Data analysis for different subgroups, including age, gender, viral load, race/ethnicity and exposure categories, CD4 count, and clinic site.

Use of HIVQUAL3 software is not required for participation in the project if existing systems produce reports that are equivalent to those generated by HIVQUAL3. Please note that HIVQUAL3 is not designed to be a clinical tracking program for patients in a clinic.

If your program is interested in fully participating in the HIVQUAL Project, please contact your HRSA Project Officer. Or, for more information about the HIVQUAL Project, visit our website at www.hivqual.org or you may call 212-417-4614.

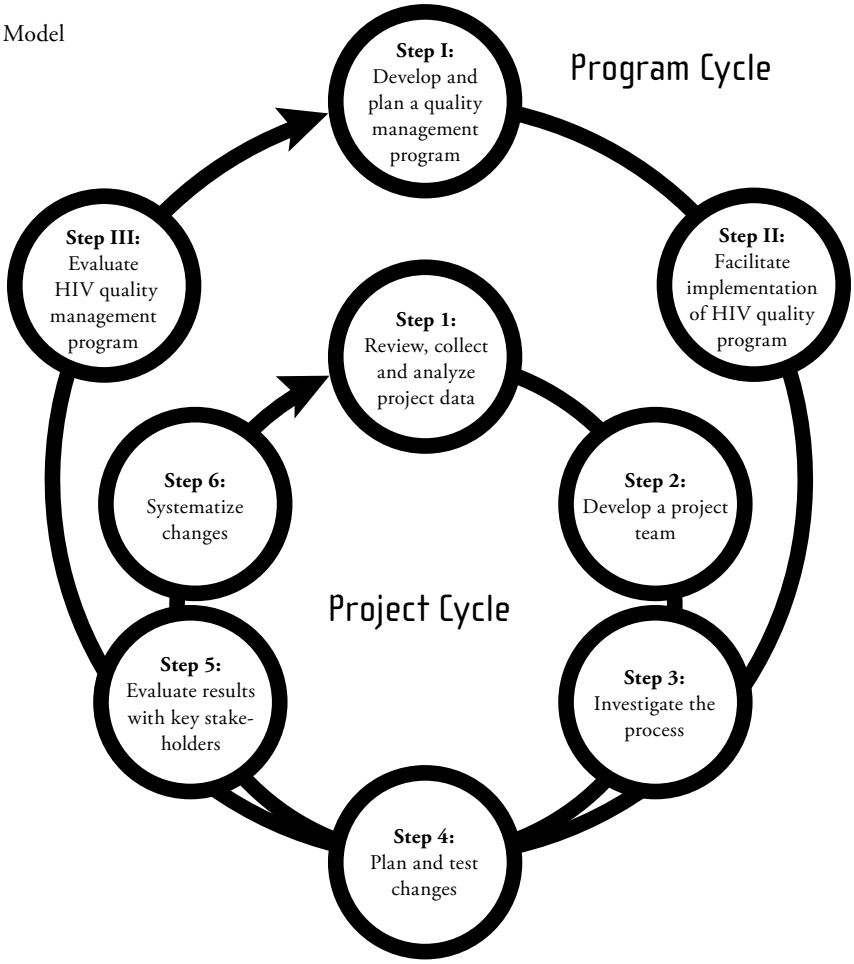
Figure 3: HIVQUAL Performance Data
5 - Year Trends



Overview of the HIVQUAL Model

The HIVQUAL Model, pictured below Figure 4, was developed by the New York State Department of Health AIDS Institute, in collaboration with the HIVQUAL consultants, to assist health care facilities developing a quality infrastructure that supports ongoing processes to improve the quality of HIV care. The Model emphasizes the concept that in order to achieve sustainable improvements in quality, activities need to focus both on the structural programmatic level and on the project level. Accordingly, the Model is divided into two interdependent cycles: 1.) a sequence of activities for developing a grantee's HIV quality management program or Program Cycle ('outer cycle') and 2.) steps for conduct-

Figure 4: HIVQUAL Model



ing specific quality improvement projects or Project Cycle ('inner cycle'). By incorporating parallel cycles of activities at both the program and project levels, the Model allows grantees to build a sound HIV-specific quality infrastructure that will support the quality improvement processes. The Model is a practical guide for HIV programs, regardless of their service delivery model, patient caseload, or site location.

Program Cycle

The HIV Quality Program Cycle describes the activities necessary to build and sustain an HIV-specific quality infrastructure: developing and planning an internal quality management program, facilitating the implementation of the program and evaluating the quality program. These program activities are completed by the leadership of the HIV program in conjunction with HIV quality staff. Generally, leadership and staff form a quality committee to organize and facilitate the HIV program's efforts.

In working with a variety of health care facilities, HIVQUAL consultants observed that HIV programs have significantly better results in achieving and sustaining improvement efforts over time when an HIV- specific infrastructure for quality is in place. Such a quality infrastructure is important whether an organization is newly undertaking quality improvement or experienced in quality initiatives.

Program Step I: Develop and Plan a Quality Management Program.

The Program Cycle's first step is devoted to establishing and/or maintaining a quality management program throughout the organization. The HIV program leadership, together with the HIV staff, develop or refine an HIV-specific quality management plan that describes the intent of the program, prioritizes annual HIV quality goals and projects, establishes accountability, and outlines resources for quality improvement activities.

Program Step II: Facilitate Implementation of HIV Quality Program.

Once the infrastructure for the HIV quality program is set, the work necessary to achieve the goals is initiated. Most quality improvement activities are achieved through a series of improvement projects each addressing single quality issues in the areas where change is needed the most. During program facilitation, the HIV quality committee helps implement the quality plan by orchestrating these projects. Specifically, quality committee members establish cross-functional project teams, educate the teams in quality improvement concepts and techniques, and oversee the progress. They also coach teams through project difficulties and help maintain a free flow of information with, and among, team members.

Program Step III: Evaluate HIV Quality Management Program.
In this step of the Program Cycle, the HIV quality committee periodically (at least, annually) evaluates the improvements achieved by individual project teams and develops strategies to sustain the improvements over time, including effective communication methods, recognition of performance, and promotion of success stories. Leadership also assesses the effectiveness of the entire HIV quality management program, including goals and infrastructure (as outlined in the quality management plan). Opportunities for improvement in future HIV quality workplans are identified.

Together, the three steps in Program Cycle are an ongoing process. Once the HIV program leadership and the HIV quality committee evaluate their efforts from the previous year, they return to the first step to develop and plan quality efforts for the upcoming year.

Project Cycle

HIV quality leaders and the HIV quality committee select areas in which a facility needs to improve at the program level. But the improvement activities themselves are made by quality improvement teams at the project level.

An HIV quality improvement project is the main vehicle by which a facility makes incremental process improvements to its various care elements and changes its processes and systems of care. Specific indicators (such as ARV management, PCP prophylaxis and GYN exams) are used to measure care elements to ensure sustained success over time.

There are six primary steps in a Project Cycle. Although the Model and the subsequent discussion cover only one improvement project effort, several projects can and often do, occur simultaneously.

Project Step 1: Review, Collect and Analyze Project Data.
In the first step of the Project Cycle, team members collect and review performance measurement data and identify specific indicators for process improvement. Data collection methods are identified and collection tools are designed to measure the current level of performance. The results are shared with the HIV quality committee. This step helps the project team to set realistic process improvement goals and make informed improvement decisions.

As an example, consider a quality improvement team which has been asked to improve the annual GYN exam process. The team begins by collecting data from a sample of female medical records and determines that 65 percent of patients have received a pelvic exam in the previous year. After discussing the results with the HIV quality committee, they decide to investigate why the rate is lower than expected and how to improve the GYN exam rate.

Project Step 2: Develop a Project Team.
In this step, the project team workplan outlines what and how work will be accomplished during the Project Cycle, including project goals and resource limitations.

Returning to the example, the GYN improvement team sets a goal to improve the exam rate to 80 percent and outlines a plan to specifically investigate the pelvic exam appointment process.

Project Step 3: Investigate the Process.
During this step, team members investigate the process being reviewed and chart the sequential steps of the process flow for better understanding. The resulting flowchart helps reveal potential problem areas. From here, members identify and prioritize possible causes.

In the GYN example, the project team members create a flowchart to outline the GYN exam appointment process. Based on this information, the team further investigates potential causes and identifies the inconsistency of making annual pelvic exam appointments as a major underlying cause. In other words, providers are not alerted when the next GYN exam is due.

Project Step 4: Plan and Test Changes.
With the information gathered in Project Step 3, team members select potential solutions for pilot testing. A pilot test is a small-scale implementation of a change. It is used to determine if the change works and if it should be implemented HIV program-wide. During this step, the team plans for and implements pilot tests (PDSA cycles), and then assesses the impact of those changes to ensure that they result in improvements.

For the GYN improvement team, one of the proposed changes is to identify records for GYN exam appointments directly through the HIV program's electronic medical record system rather than manual scheduling. For the pilot test, team members implement the new identification process for 2 weeks and then measure the percentage of records that were properly identified along with the increased number of pelvic exams.

Project Step 5: Evaluate Results with Key Stakeholders.
During Project Step 5, pilot test results are reviewed and evaluated. The team reviews the pilot test results with the HIV quality committee and other stakeholders (those who have a vested interest in the process). Together, they discuss whether the change should be implemented system-wide.

For example, the GYN improvement team members discover that 100 percent of the records were properly identified by the HIV program's electronic medical record system and that the pelvic exam rate increased to 81 percent. They discuss their results with the HIV quality committee and key stakeholders.

Project Step 6: Systematize changes.

Finally, in Project Step 6, team members make successful project-related improvements part of the daily work process in an effort to sustain the improvements over time. They also assess the project's effectiveness against the original plan and make plans to re-measure performance at regular intervals and monitor improvements.

In the GYN example, the team updates front desk procedures to reflect the new identification process and orients all staff on the change. After a few weeks, members re-measure the percentage of women receiving an annual pelvic exam and discuss how to sustain appointment gains long-term.

The six steps of the Project Cycle help to ensure that process improvements are based on data rather than anecdote, are piloted before implemented facility-wide, and are re-measured for long-term effectiveness. Similar to the Program Cycle, the Project Cycle is ongoing in order to support continuous quality initiatives. Once changes are systematized for one project, you are ready for the next improvement opportunity. Both cycles of the HIVQUAL Model are essential to a facility's quality strategy. Without a well-grounded quality improvement program, project efforts are poorly coordinated and quality improvements are difficult to sustain. Without cycles of projects, the quality program is essentially an effort on paper only.

Resources

HIVQUAL Publications

- HIVQUAL Group Learning Guide: Interactive Quality Improvement Exercises for HIV Health Care Providers. A publication of the New York State Department of Health AIDS Institute and the Health Resources and Services Administration HIV/AIDS Bureau, Updated 2006; www.hivqual.org
- Measuring Clinical Performance: A Guide for HIV Health Care Providers. A publication of the New York State Department of Health AIDS Institute Updated 2006; www.hivqual.org
- Patient Satisfaction Survey for HIV Ambulatory Care. A publication of the New York State Department of Health AIDS Institute, 2002; www.hivqual.org

HRSA Publications on Quality

- Improving Care for People Living with HIV/AIDS Disease. Institute for Healthcare Improvement, HRSA/HAB. HIV/AIDS Bureau Collaborative. Order via the HRSA Information Center at www.ask.hrsa.gov or call 888-ASK-HRSA.
- The Modular Quality Improvement Curriculum for Improving HIV Care. Institute for Healthcare Improvement, HRSA/HAB, HIV/AIDS Bureau; www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Tools
- Quality Management: Technical Assistance Manual. HIV/AIDS Bureau (HAB) of the Health Resources and Services Administration (HRSA); www.hab.hrsa.gov/tools/QM

Books on Quality

- Agresti, Alan. An Introduction to Categorical Data Analysis, Wiley Series in Probability and Statistics. Applied Probability and Statistics, May 1996.
- Brassard M, Ritter D, Rilter D, Oddo F. The Memory Jogger II. Goal /QPC, Lawrence MA; 1994.
- Carey, R.G., and Lloyd, R.C. Measuring Quality Improvement in Healthcare. New York: Quality Resources, 1995.
- Delbecq, A., Vand de Ven, A. and Gustafson, D. Group Techniques for Program Planning: A Guide to Nominal Group and Delphi Processes. Middleton, WI: Green Briar Press, 1975/1986.
- Gerteis M, Edgman-Levitan S, Daley J, Delbanco T L. Through the Patient's Eyes – Understanding and Promoting Patient-Centered Care. San Francisco, CA: Jossey-Bass; 1993.
- Graham, N. Quality in Health Care: Theory, Application, and Evolution. Gaithersburg, MD: Aspen Publications, 1995.
- Institute of Medicine Committee on Quality of Health Care in the US, Institute of Medicine, Crossing the Quality Chasm: A New Health System for the 21st Century, National Academy Press, 2001.

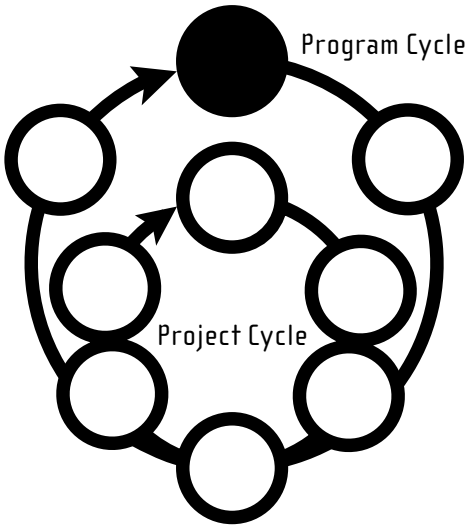
Books on Quality...Continued

- Langley Gerald J., Nolan, Kevin M., Nolan, Thomas W., Norman, Clifford L., and Provost, Lloyd P. The Improvement Guide: A Practical Approach to Enhancing Organizational Performance. San Francisco, CA: Jossey-Bass Publishers, 1996.
- Rogers E. Diffusion of Innovation. New York: Free Press; 1995.
- Scholtes, Peter R., Joiner, Brian L. and Streibel, Barbara J. The Team Handbook. Second Edition. Madison, WI: Joiner Associates Inc., 1996.
- Swanson, Roger C. The Quality Improvement Handbook: Team Guide to Tools and Techniques. Delray Beach, FL: St. Lucie Press, 1995.

Websites on Quality

- National HIVQUAL Project - www.hivqual.org
- National Quality Center - www.nationalqualitycenter.org
- New York State Department of Health AIDS Institute - www.hivguidelines.org
- Agency for Healthcare Research and Quality (AHRQ) - www.ahrq.gov/qual
- HIV/AIDS Treatment Information Service - www.aidsinfo.nih.gov
- HRSA Bureau of Primary Health Care Quality Center - www.bphc.hrsa.gov/quality
- HRSA Center on Quality - www.hrsa.gov/quality
- Infectious Diseases Society of America - www.hivma.org/HIV/tocCEN.htm
- Institute for Healthcare Improvement (IHI) - www.ihi.org
- Johns Hopkins AIDS Service - www.hopkins-aids.edu
- National Quality Measures Clearinghouse - www.qualitymeasures.ahrq.gov

Program Step I: Develop and Plan a Quality Management Program



The Big Picture:

Quality management programs are most successful when led and supported by the leadership of the HIV facility. Leaders can provide an environment conductive to establishing changes. In Program Step I, those individuals who will champion the improvement efforts at strategic levels are identified. These individuals then assume responsibility for the HIV quality management plan—a blueprint to guide quality initiatives for the upcoming year.

What To Do:

- Identify leaders and key stakeholders.
- Form a quality management committee.
- Develop HIV quality management plan.
- Strategize to implement the quality plan.

Snapshot of HIV Care

Training Your Staff – A Great Start

It's not necessarily important where you start in developing your quality program. It's that you start.

Providing training on quality management to staff is often an initial and key step that can build interest, motivation and ownership for the quality program. Interfaith Community Health Center, Bellingham, WA trained its staff and board members so that everyone had a common knowledge base from the start and were able to participate in the planning process. Including the entire staff and governance helped jump start the program. "The general sense in the clinic was that the time for this kind of consistency had come," says Sam Curd, Care Coordinator. "The idea of making quality improvements has been embraced."

Snapshot of HIV Care...Continued

What Should Your Quality Infrastructure Look Like?

Over time quality experts in the field noted that in order to sustain quality improvement gains, a sound quality management infrastructure is needed. Sitting down with staff and defining the quality infrastructure is critical to map out who needs to be involved, what goals you have for your quality program and when staff meet to talk about quality. Whether you are a stand-alone community health center or a multi-site agency or network, this process takes time, involves others and requires decisions by leaders.

The Dallas Family Access Network (Dallas FAN) is composed of a lead agency and subcontractors that provide medical and social services. When developing their quality program, they needed to form a consensus on what they were going to measure and how the quality program would be structured. Decisions had to be acceptable to both the lead agency as well as to the subcontractors—many of which had their own existing quality management programs and different data collection systems.

"Networks are challenging," states Elizabeth (Betty) Cabrera, Executive Director. The process was lengthy. "We didn't want to develop a whole new set of indicators for people to measure, so we had to get buy-in from network members." Identifying indicators that were common across the network and were able to be measured was also challenging. "We know that our comprehensive services work, and we want to be able to measure how it makes a difference for our clients."

Involving Staff And Consumers

Julie Alrich, at Unity Health Care, a multi-site agency in Washington, DC says that it is important to resist the temptation to have only one person develop the plan. "This would have simplified the process, but we would have missed the opportunity to have discussions and constructive dialog." States Alrich, "The group approach not only allowed everyone to feel ownership of the final product, but it also served as an educational forum. By creating the quality management plan together, we were able to learn from each other."

Recruiting quality committee members is often difficult at facilities where staff already feel over-worked. However, at the PATH Center at Brooklyn Hospital, interested staff had to be turned away because of overwhelming interest in serving on its committee. Dan Sendzik, Executive Director attributes the popularity of this committee to the leadership's support. "Staff are eager to participate," he says. The committee's work is seen as important. "The issues discussed are real and relevant. People want to be part of the decisions that will affect their day-to-day work." Also, Sendzik believes, people also see professional and personal benefits to participating on the committee. "People feel they are learning something from being on the committee. The committee has a seminar quality about it that attracts professionals who want to learn more."

The Circle of Care, Philadelphia, PA sought to involve consumers in the development of quality indicators for their family-centered primary care and case management services. Providers and consumers worked together. A consumer panel using a "talk show" format was part of the process. The group developed a consensus document on four primary care and four case management indicators.

Outlining Your Quality Program On Paper

Too often when staff moves on or other priorities appear, no staff member seems to clearly remember what the next steps are. A simple written quality management plan can help you to remember how HIV programs can accomplish their quality goals, where they left off at their last quality committee and clarifies the roles and responsibilities of staff. During a recent national conference call, an HIV provider noted that 'stealing shamelessly, sharing senselessly' was their approach to learn from other already existing plans. She noted: "Seeing and reviewing other plans, made me realize a common framework and how simple they can be. They were really helpful." The message was load and clear, use established templates and get started.

Identify Leaders And Key Stakeholders.

Simply stated: leadership is an essential component of an HIV quality program. For HIV programs just beginning on a quality journey, leadership helps in getting those quality efforts off the ground and making sure they do not peter out after a few well-intentioned months. For those HIV programs that have an existing quality program, leadership is crucial to maintain and support ongoing changes to the HIV care delivery system.

Leaders are those individuals who have the ability to formally and informally influence and inspire others providing a vision and direction for the quality program. Leaders create the culture in which quality is both prized and promoted.

In addition to leaders, key stakeholders are also instrumental in an HIV quality program. Stakeholders are those who have an interest in seeing quality efforts succeed. This category of people might include patients, advocacy groups, board members, or representatives from funding organizations.

Dialogue is initiated to listen to the voices of leaders and key stakeholders. The objectives are to:

- Better understand the environment in which the quality management program works.
- Get input and buy-in in key areas for the quality program.
- Develop a vision for the quality program and strategically outline the goals and objectives.
- Identify potential members for a quality management committee or leaders of quality activities.

In most cases, this dialogue is informal. But the information gathered should be documented so that the ideas and opinions can be integrated later into the development of an HIV-specific quality program.

The Toolbox on page 31 provides a simple chart for identifying individuals. Use the chart to answer the following question: Who are the key individuals at your HIV facility from whom you can obtain input and build a sustainable quality management program?

Real-World Tip
Engage Leaders And Key Stakeholders.

Keep the following guidelines in mind when engaging individuals who will be involved in the HIV quality program:

- Talk with program staff and patients; include as many people as is feasible.
- Interview the leaders and stakeholders about their ideas for building a successful quality management program.
- Hold focus groups or interviews with patients to identify their needs and expectations.
- Consult routinely with the Consumer Advisory Board (CAB) and ask for recommendations.
- Meet with the facility's board to discuss the main directions for the HIV quality program.

Toolbox:

Identification of Quality Improvement Leadership

WHO	NAME
Formal Leaders	
Medical Director	
HIV Program Administrator	
Practitioners	
Nurses	
Case Managers	
Quality Improvement Staff	
Others	

KEY STAKEHOLDERS	
Patients	
Board Member(s)	
Patient Advocate(s)	
Project Officer/Grant Representative	
Others	

OTHERS	
Individuals who influence others because of their personality, ability to get things done, or in-depth knowledge	

Form A Quality Management Committee.

In order to build momentum for HIV quality improvement activities, a group of individuals can be brought together—an HIV quality management committee. These individuals build an HIV facility's capacity and capability for quality improvement. Some of the same people identified as leaders or key stakeholders may also serve on the quality committee.

The major task of a quality management committee is to help ensure everything is in place at an HIV facility for the improvement efforts to succeed and be sustained over time. The quality committee plans and oversees all quality program activities at the facility, particularly the quality improvement projects completed by individual project teams.

Members of the quality committee have five main areas of responsibility:

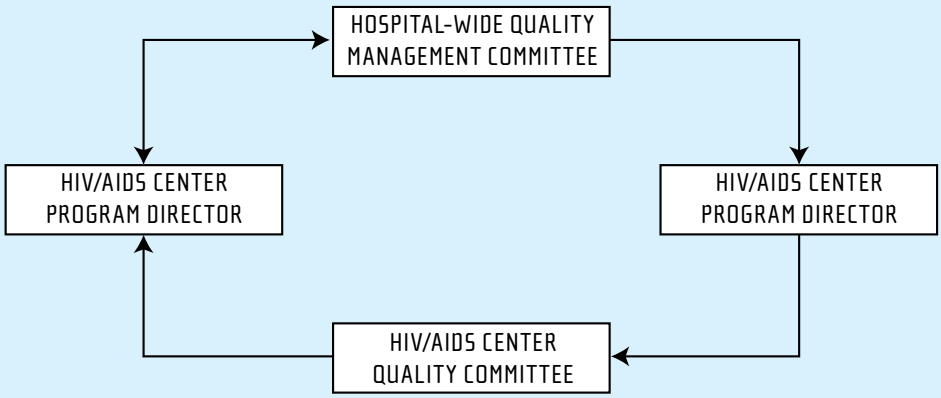
- Strategic planning. The quality committee is charged with strategizing how to best establish and maintain a sustainable quality management program. The committee develops the facility's HIV quality management plan and prioritizes goals and projects so that the most critical areas are addressed first. The committee assumes responsibility for outlining the quality management program infrastructure, identifying performance measures, and planning for program evaluation.
- Facilitating innovation and change. A quality committee removes any negative restraints or barriers to achieving and sustaining improvements. Depending on the given situation, this may require changing policies that could potentially impede improvements. Some level of training may be necessary to prepare staff for change. Or, it might be as simple as promoting open, two-way communication to ensure everyone at a facility feels that they have a voice in the quality management program.
- Providing guidance and reassurance. On a routine basis the quality committee oversees the progress of quality activities to ensure that they are staying on track and to provide guidance. Quality improvement projects will involve some measure of changing the status quo. Departures from routine conventions can become challenging. The quality committee needs to listen, observe, be responsive to staff needs during the improvement process, and provide support and encouragement at appropriate junctures.
- Establishing a common culture. In order for an HIV quality management program to succeed, staff will want to be "on board." To gain the buy-in of staff and stakeholders, the quality committee should demonstrate a true commitment to the quality program. Success in making HIV care improvements results in quality being a shared value among everyone at a facility.
- Allocating resources. HIV facilities already face many time constraints and resource pressures on a daily basis. The HIV quality committee needs to ensure that staff has both the time and the information necessary to actively participate in the projects set forth in the quality management plan.

Toolbox:

Organizational Chart for Quality Management

The following example showcases the organizational structure for quality management:

'The hospital-wide Quality Management Committee oversees internal quality improvement activities that are performed at the HIV/AIDS Center. The overall responsibility for the HIV/AIDS Center lies with the Program Director who authorizes the HIV/AIDS Center Quality Committee to plan, assess, measure, and implement performance improvements throughout the entire HIV/AIDS Center. The HIV/AIDS Center Quality Committee reports back to the hospital-wide Quality Management Committee.'



Selecting quality committee members

Quality committee participation depends on several factors including HIV service delivery model, co-located services, and program size. Typically a cross-functional representation of all professional backgrounds proves most effective in planning and decision-making. Visualize taking a vertical and horizontal slice of your organization.

The Toolbox on page 35 lists the titles of individuals who are logical candidates to serve on a quality committee at two different HIV care facilities.

If your facility already has a quality management program and an HIV quality committee in place, plan to annually review and (as necessary) revise the list of committee members. In putting together an HIV quality committee for the first time, the HIV medical director in consultation with staff and the facility's leadership decides who should serve on the committee.

Real-World Tip
Build A Credible Committee.

An HIV quality committee should be an actively engaged committee which can make a difference. To build a credible committee:

- Build a cross-functional group; draw from different service areas within the clinic.
- Identify individuals who are potential influencers and can get things done.
- Start with a small group of individuals who are most critical to the program's success.
- Keep everyone informed about the process.
- If applicable, include cross-title representation (Ryan White Title III and Title IV) in this committee.
- Include patients and/or stakeholders on the committee.
- Identify a person who will facilitate the meeting.

Notes

Additional Resource

The HIVQUAL Group Learning Guide "Leadership for Quality" exercise can help you teach small groups about a quality leader's roles and responsibilities. It could also be used as an icebreaker when a facility's quality program leaders meet for the first time. You can download this publication at www.hivqual.org.

Toolbox:
Quality Planning Meeting Agenda

Purpose: Family Health Center's first draft of the annual quality management plan
Date: December 3, 2005
Time: 1:00 – 4:00pm
Place: Conference Room A
Participants: Dr. Jane Dissan, Dr. Vincent Seaton, Taimi Miller, René Santos

TIME	TOPIC	WHO
1:00	Check-in	All
1:05	Review meeting purpose and agenda topics	Dr. Dissan
1:15	Review and discussion of 2006 quality improvement goals (Handout A)	All
1:45	Review of project improvement team results for 2005 (Handout B)	All
2:15	Determine the focus of the quality management plan for 2006	All
3:45	Summarize next steps/action items	René Santos

Toolbox:
Quality Improvement Leaders

This Toolbox provides two examples of quality committee membership to highlight the differences between various HIV delivery systems.

QUALITY COMMITTEE MEMBERS FOR A TEACHING HOSPITAL (HIV CASELOAD: 700)
Chief of Infectious Diseases
AIDS Center Administrator
Director of Ambulatory Care
Director of Quality Improvement
Director of Nursing
AIDS Center Nurse Practitioner
Clinic Coordinator for Case Management
Senior Staff Nurse
Patient Representative
Title 4 Provider

QUALITY COMMITTEE MEMBERS FOR A NEIGHBORHOOD HEALTH CENTER (HIV CASELOAD: 100)
Medical Director
Senior Staff Nurse
HIV Nurse
Case Manager
Patient Representative

Getting committee work done

To be effective, the HIV quality committee needs to have basic operational ground rules in place.

- Chairperson identification. One individual is responsible for directing the activities of the quality committee, mediating and resolving conflicts among committee members, and representing the quality committee to other parts of the HIV facility. This chairperson needs to fully understand the HIV facility's quality goals and principles.
- Meeting frequency and duration. A regular quality committee meeting schedule should be set up at least bi-monthly. The scheduled time should be as convenient as possible for all committee members. Meetings should start and end on time to facilitate attendance.
- Documentation. Every quality committee meeting should have an agenda to guide points of discussion and prevent the session from running over time. If it's not possible to develop an agenda in advance, the first few minutes of the meeting should be spent writing one on a flipchart. Likewise, minutes of the meeting should be recorded to summarize the discussion points and remind committee members about action items to be performed. In the event that new staff or consumers join the quality committee, such historical documentation can be valuable in getting them up to speed.
- Communication. It is important to keep staff and consumers informed about committee activities. Many quality committees do this effectively by sharing meeting minutes with the facility board, staff and consumers. This helps staff to understand the improvement issues and challenges facing the quality committee. You may consider posting your findings in the hallways and waiting rooms for consumers to see how the facility is working to improve HIV care.

Real-World Tip
Prepare The HIV Quality Committee.

HIV quality committee members cannot be expected to be experts in all the knowledge and skills required to plan and oversee quality activities. The following practices can contribute to committee's success:

- Educate all committee members about quality improvement methodologies and tools.
- Develop a committee charter to outline the committee purpose and member responsibilities.
- Initially provide a wide range of performance data to inform members about the status-quo.
- Spend time to develop an agenda and necessary handouts for meetings; share them prior to the meeting.
- Keep minutes; brief minutes are better than no minutes.
- At least once a year, dedicate a quality committee meeting to reviewing and/or revising the committee's charter.
- Create a 'notebook' that includes the quality management plan, workplans, agendas, and minutes.

Toolbox:

Quality Improvement Committee Minutes

QUALITY COMMITTEE MEETING	
DATE	December 20th, 2005
MEMBERS PRESENT	Victoria S (chair) Catherine G; Hannah W; Daphnee C; Sheldon M; Barbara W; Michael D; Susan G; Stephen A, MD; Tom D; Janet W; Isaac K; Leona W; Peter S; Clemens S
CALL TO ORDER AT	8:00am
MEETING WAS ADJOURNED AT	8:00am
MINUTES FROM LAST MEETING	Reviewed and Approved
ANNOUNCEMENTS	None

QUALITY COMMITTEE MINUTES

TOPIC/AGENDA	DISCUSSION/FINDINGS	FOLLOW-UP
• Pediatrics	• The results of a Pediatric Outpatient review were presented indicating compliance rates of 73 percent for growth/nutrition. It was discussed that the compliance rate of the Dental Care indicator has increased from 22 percent in 8/2005 to 75 percent in 11/2005. It was also discussed that the 30 percent rate of compliance for the TB status indicator is due to inaccessibility for follow-up appt. for the PPD reading.	• The rate of compliance for the growth/nutrition indicator will be followed up by the forms committee. Actions regarding PPD reading need to be discussed by the program's leadership. Follow-up by Steve A
• Social work	• The results of a Social Work Inpatient Review were presented indicating that 89 percent of our inpatients were receiving medical care previous to the admission. It was discussed that patients are being followed up by a private attending. It was discussed that some clarification needs to be provided regarding the results of the review.	• It was suggested that a meeting take place between Catherine G, Barbara W and Clemens S to revise the review tool and to discuss the presentation of the results. Follow-up by Catherine G
• MMTP	• The results of an Annual Medical Review were presented. It was discussed that the indicators used in the review tool are based from OASIS' Standards. It was also discussed that as of 11/19 MMTP began working jointly with CTRPN. The results of a Counseling Admission Review were presented indicating low compliance rates for agreement for testing (25 percent), completed within first week of treatment (20 percent). Orientation completed and signed w/in 30 days (67 percent). It was discussed that there was additional information added to the interviewing process and the conversation.	• It was suggested that we go beyond what OASIS asks for as indicators and include HIV testing and Hepatitis indicators to the review tool. It was discussed that there should be automatic referrals for HIV counseling and testing (for new admission to program and to annual review). Follow-up by Susan G
SUBMITTED BY:	Daphee C; December 27th, 2005	

Develop An HIV Quality Management Plan.

Lasting improvements in HIV care do not happen overnight. True to the HIVQUAL Model, the planning process is also continuous. In particular, an HIV quality management plan serves as the blueprint for quality initiatives. It describes the overriding purpose of a facility's quality program, the infrastructure that supports quality activities, and its goals for the upcoming year. It also serves as a reference tool for both current and future staff. The following two steps are needed:

- Deciding on a planning approach
- Creating the quality management plan

Deciding On A Planning Approach

The planning process to develop a quality management plan provides an opportunity to create a sense of ownership among staff members and consumers for the facility's improvement initiatives. Before diving into the details of your quality management plan, decide on a general approach for developing and finalizing the plan that includes a wide representation of staff and stakeholders. Select from one, or a combination, of the following planning options.

- Planning meeting. Facilitate a yearly meeting in which decisions are made regarding the key components of the quality management plan. Prior to the annual meeting, gather and distribute background information to participants pertaining to the meeting and prepare a draft of recommendations to give focus to the decision-making process.
- Series of planning meetings. Break the annual meeting down into smaller steps and plan a series of short meetings.
- Planning group. Rather than a large-group meeting, form a group comprised of two to three individuals who are responsible for delineating a process to gather staff and stakeholder input to subsequently finalize the quality management plan.

Whichever option is chosen, the planning meetings should be held at a scheduled time and place with an agenda prepared. A sample meeting agenda is shown in the Toolbox on page 35.

Additional Resource

For guidance in teaching small groups how to develop a quality improvement management plan, see the HIVQUAL Group Learning Guide "Quality Improvement Management Plan" exercise. The exercise could also be used to familiarize a leadership group before starting to develop a plan. You can download this publication at www.hivqual.org.

Creating The Quality Management Plan

A quality management plan defines a quality program's strategic direction and provides a blueprint for upcoming improvement activities for the HIV program. While there is no universal "how-to" template for creating a quality management plan, this section outlines the basic elements that should be covered:

- Quality statement
- Quality improvement infrastructure
- Performance measurement
- Annual quality goals
- Participation of stakeholders
- Evaluation

The Toolbox on page 43 showcases an HIV facility's quality improvement management plan which illustrates examples for each element. More examples are listed later in this step.

Quality Statement

What do we want to be?

A quality statement describes the purpose of the HIV quality program. It is the end to which all other program activities are directed. Some programs may refer to this as their quality mission statement, others as their guiding purpose for quality activities. To write a quality statement for the quality management plan, assume an ideal world and ask yourselves, "What do we want to be for our patients and our community?"

Quality Management Infrastructure

How are we organized?

The quality management infrastructure describes how the program is structured and staffed in order to get work done:

- Leadership: Who is ultimately responsible for the HIV program's quality initiatives?
- Quality committee structure: Who chairs the HIV quality committee? Which staff serves on the quality committee?
- Quality committee meeting frequency: When will the quality committee meet to assess progress and plan future activities?
- Quality committee reporting: What is the relationship of the quality committee to the facility at large? How will the quality committee communicate its progress to staff and consumers?

If your facility uses organizational charts to illustrate how groups and individuals are aligned across the facility, consider using the same model to create a quality program organizational chart. The Toolbox on page 33 shows an example.

Performance Measurement

How will we assess progress?
Performance measurement is a method for identifying and quantifying the critical aspects of care within your facility. This is essential to assembling baseline performance data and measuring the effectiveness of improvement efforts over time.

Most HIV quality programs assess progress using quality of care indicators. A quality of care indicator is a measured aspect of patient care used to evaluate the extent to which a facility provides a particular element of care. Generally, indicators are based on specific standards of care derived from guidelines issued by a professional society and/or government agency. For example, the frequency of viral load tests is an indicator for how well a facility conducts HIV monitoring. Based on current guidelines, a viral load test should occur every three to four months.

Identify aspects of care for performance measurement, keeping in mind four main criteria:

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

Real-World Tip
Beg, Borrow, And Steal Indicators.

When choosing quality of care indicators, feel free to adopt indicators that your facility has already designated as a priority from the following websites:

- National HIVQUAL Project (www.HIVQUAL.org)
- National Quality Center (www.NationalQualityCenter.org)
- New York State Department of Health AIDS Institute (www.hivguidelines.org)
- Improving Care for People Living with HIV/AIDS Disease. Institute for Healthcare Improvement, HRSA/HAB. HIV/AIDS Bureau Collaborative. Order via the HRSA Information Center (www.ask.hrsa.gov) or call 888-ASK-HRSA
- National Quality Measures Clearinghouse (www.qualitymeasures.ahrq.gov)

If you 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 you answer "yes" to all of these questions, you have most likely found a viable indicator that will give you the most benefit for your measurement resources.

The Toolbox on page 45 shows several elements of HIV care and corresponding aspects which may be used as indicators.

Annual Quality Goals

What are the priorities for the quality program?
Quality goals are endpoints or conditions toward which the facility will direct its efforts and resources during project work. Quality goals help staff focus on improving aspects of care. While an HIV program is able to measure several key performance indicators, the available resources for quality improvement work might limit the HIV program to conduct one to three quality improvement projects per year. The quality committee needs to work with staff and stakeholders to develop annual goals so that they are understood and embraced by everyone at the facility. Prioritization helps the facility to direct resources toward the issues that need it the most. The following three criteria can be helpful to a quality committee in prioritizing annual HIV-specific improvement goals:

- Frequency: How many patients received and how many did not receive the standard of care?
- Impact: What is the effect on patient health if they do not receive this care?
- Feasibility: Can something be done about this problem with the resources available?

For further description of how to establish annual HIV quality goals, see the Toolbox on page 46.

Participation Of Stakeholders

How will we get staff members and consumers on board?
If HIV quality improvement activities are to become a reality at a facility, provisions need to be outlined in the quality management plan for actively engaging staff and consumers, communicating information about quality improvement activities and providing opportunities for learning about quality.

- Engage staff and consumers. Gaining staff and consumer support for quality improvements requires capturing and integrating their voices. The needs and expectations should be understood and their feedback are reflected in the quality improvement management plan. To accomplish this, the quality committee should seek staff and consumer input to the extent feasible. Staff meetings and other informal one-on-one discussions are both appropriate methods. A short questionnaire might be developed and circulated.
- Communicate information about quality improvement activities. It is important that staff and consumers know about the facility's quality initiatives on an ongoing basis. A quality management plan should document how the facility will share information about its quality activities and project results. Options include providing

Additional Resource

Measuring Clinical Performance: A Guide for HIV Health Care Providers is a step-by-step guide to measuring HIV performance. Excerpts of this publication are included at the back of this Workbook on page 142. If needed, you can refer to the information for details about how to select and measure quality of HIV care. You can download this publication at www.hivqual.org.

updates at staff meetings, sharing quality committee meeting minutes, publishing newsletters, external committees and to consumers.

- Provide opportunities for learning about quality. Because staff members ultimately bring the quality management plan to life, it is likely that staff will need to be educated in some basic quality concepts and skills. The quality management plan should describe how the facility intends to provide staff training and learning opportunities. Options include self-study of quality manuals and quality posters, or attendance at formal training sessions about quality. As appropriate, these learning interventions could be shared with consumers.

Evaluation

How will we evaluate our overall performance as a program? Performance measurement provides the hard data about improvements to care delivery over time, but it is also important to assess how efficiently the program is operating as a whole. There are two areas to consider in evaluation:

- Quality improvement projects conducted during the year. The projects should be a worthwhile investment in the facility's quality of care and result in improvements that are sustainable over time.
- Effectiveness of the quality management plan. The quality plan should provide the vision and organization required to evaluate the effectiveness of the entire quality program.

At this point, the management plan only need to outline when a program evaluation will be conducted. Program Step III on page 69 provides additional information about how to actually conduct a quality program evaluation and who should be involved in the process.

The Toolbox on page 50 provides another example of one HIV facility's quality management plan.

Additional Resource

Delbecq, A., Vand de Ven, A., and Gustafson, D. Group Techniques for Program Planning: A Guide to Nominal Group and Delphi Processes. Middleton, WI: Green Briar Press, 1975/1986.

Toolbox:

Quality Management Plan

Consider the following example of a quality management plan for 'Campus Care Center,' an ambulatory clinic serving over 250 HIV+ adults located within a large academic hospital:

Quality Statement

The mission of the HIV Quality Management Program is to plan, assess, measure, and implement performance improvements in the systems and processes which affect the quality of care and services of the AIDS Center at the "Campus Care Center." The Quality Program strives to continuously improve the quality of care and services in a multidisciplinary team approach and is consistent with the organization-wide approach to quality improvement.

Quality Improvement Infrastructure

The overall responsibility and leadership for the HIV quality program lies with the Medical Director, who authorizes the quality committee to plan, assess, measure, and implement performance improvements throughout the entire clinic.

The membership of the quality committee reflects the diversity of disciplines within the "Campus Care Center." The members of the committee include the Medical Director (who serves as chairperson), one medical provider, one nurse, one case manger, one peer counselor, and one support staff member. The chairperson will report back to the overall committee responsible for hospital-wide quality activities. Membership is approved by the Medical Director.

The quality committee will have at least 10 scheduled meetings per year, tentatively planned for the second Wednesday of each month from 8:30-9:30 a.m. Additional meetings may be called as needed. Minutes of meetings will be kept and will be distributed to each member of the committee and to all necessary hospital-wide committees. A written summary of the meeting will routinely be made available to staff and consumers.

Performance Measurement

We will measure the following quality of care indicators on a quarterly basis:

- HIV monitoring (viral load, CD4 count)
- Antiretroviral therapy management
- Treatment adherence
- Treatment readiness education
- Access to expert HIV care
- Opportunistic infections prophylaxis (PCP, MAC)
- Tuberculosis screening (PPD)
- Gynecologic care (pelvic exam with PAP smear, GC, chlamydia screening)

Toolbox:

Quality Management Plan...Continued

- Substance use screening
- Dental and ophthalmology care
- Mental health screening and referral
- HIV patient education

Annual Quality Goals

Based on last year's performance rates, the quality committee prioritizes the following quality projects:
Two quality improvement project teams will be initiated in order to improve

- GYN rate (annual pelvic exam) to 90 percent or above and
- Annual Mental Health Screening of all HIV patients rate to 60 percent or above.

Participation of Stakeholders

One of the quality goals of "Campus Care Center" is to involve staff actively in the HIV Quality Program and its quality improvement activities. All staff members will be asked to participate in at least one quality improvement team. The participation in the quality program should be part of job expectations.

Findings of quality improvement activities as well as summary reports of quality committee meetings will be shared with staff to ensure open communication flow within the HIV program. Based on the belief that staff should be actively involved in the HIV quality program and its activities, all current and new staff members will receive the hospital's quality manual of quality improvement methodologies and review key chapters during bi-weekly staff meetings. In addition, staff will be provided annually with a 2-hour training session about quality improvement principles and will receive the hospital's quarterly newsletter on quality tools and techniques.

Consumers will be invited to the 2-hour training session about quality improvement principles and will receive the hospital's quality newsletter.

Evaluation

At the end of the year, the quality management plan will be assessed against its goals. This will facilitate planning of future quality improvement plans. An annual organizational assessment will be performed using the most current HIVQUAL Orginizational Assessment Tool. Additionally, all quality improvement projects will be revisited and evaluated to learn more about future quality improvement projects regarding goal accomplishment, resource efficiency, and team collaboration.

Toolbox:
Quality of Care Indicators

ELEMENT OF HIV CARE	QUALITY OF CARE INDICATOR(S)
HIV Monitoring	• CD4 cell count test performed every 4 months • Viral load measurement test performed every 4 months
Antiretroviral (ARV) Management	• Appropriate management of patients on ARV therapy based on whether the patient is deemed clinically stable or unstable • Antiretroviral (ARV) therapy medication • Treatment adherence to ARV
Screening	• Annual PPD screening • Annual lipid screening • Annual hepatitis (HCV) screening • Annual mental health screening
Opportunistic Infection (OI) Prophylaxis	• PCP prophylaxis (CD4<200/mm^3) • MAC prophylaxis (CD4<50/mm^3)
Gynecological Care	• Annual pelvic exam • Annual chlamydia test • Annual PAP smear • Annual gonorrhea culture
STD Management	• Annual syphilis serology
Substance Use	• Annual assessment of substance use • Annual assessment of tobacco use
Coordination of Care	• Annual dental exam • Annual ophthalmologic care (CD4<50/mm^3)
Patient Education	• Basic patient education • ARV treatment education
Case Management	• Comprehensive assessment • Service plan • Follow-up on service plan goals and referrals every 4 months • Coordination of services every 4 months

Toolbox:

Establishment of Annual HIV Goals

The following four steps may assist an HIV program to identify and establish annual goals for the HIV quality management plan:

1. Assess where you are. Analysis of historical performance data helps to identify areas of strength and weakness where improvement may be needed the most. Understanding the current status-quo most often leads to meaningful goals that both staff and stakeholders will relate to and support. Consider sources such as internal performance data, consumer satisfaction survey results, staff input, consumer advisory committee, or external benchmarks.

2. Understand your parameters. Identify the basic parameters that describe your HIV program and the community it serves. Putting together such a succinct description of the program, including the aspects of HIV care you currently deliver, the demographics of patients served, and the external expectations of funding/regulatory agencies helps to identify where to focus quality improvement efforts.

3. Prioritize your annual goals. The assessment of past performance and the picture of the current environment give the quality committee the necessary information to brainstorm a list of annual HIV goals. A list of potential annual goals can be easily generated at a single quality committee meeting once an initial assessment is performed. The quality committee can then prioritize the goals.

4. Quantify where you want to be. Annual HIV quality goals need to be measurable. Based on the information gathered in the previous three steps, the annual quality goals need to be restated in quantitative terms such as: "85 percent adherence to antiretroviral therapy for all HIV+ patients receiving HAART therapy" or "To reduce patient 'no shows' by 15 percent."

Toolbox:

Checklist for the Review of an HIV-Specific Quality Management Plan

How to Use this Plan:

A Quality Management (QM) Plan defines a quality program's strategic direction and provides a blueprint for upcoming improvement activities for the HIV program. While there is no universal "how-to" template for creating a quality management plan, this checklist outlines the basic domains that should be covered in each plan: Quality statement, Quality improvement infrastructure, Quality Plan Implementation, Performance measurement, Annual quality goals, Participation of stakeholders, Evaluation, Capacity Building, Process to update the Plan, and Communication. This checklist can be used to assess your quality management plan for completeness and to identify areas which need to be incorporated into the plan. Keep in mind that this checklist should be used as a reference and assessment tool and that the most important step is to get started.

DOMAIN IN QM PLAN	DESCRIPTION	COMMENTS
Quality Statement	• Provides brief purpose describing the end goal of the HIV quality program and a shared vision to which all other activities are directed; assume an ideal world and ask yourselves, "What do we want to be for our patients and our community?"	
Quality Infrastructure	The quality infrastructure includes the following elements: • Leadership: Identifies who is responsible for the quality management initiatives • Quality commitee(s) structure: Documents who serves on the quality commitee, who chairs the committee, and who coordinates the QM activities • Roles and Responsibilities: Defines all key persons, organizations, and major stakeholders and clarifies their expectations for the quality management program • Resources: Identifies the resourses for the QM program	
Annual Quality Goals	• Quality goals are endpoints or conditions toward which quality program will direct its efforts and resources • Selects only a few measurable and realistic goals annually (not more than 5); uses a broad range of goals • Indicates that those annual goals are established priorities for the QM program • Establishes thresholds at the beginning of the year for each goal	
Participation of Stakeholders	• Lists internal and external stakeholders and specify their engagements in the QM program • Provides opportunities for learning about quality for staff • Includes community representatives, as appropriate • Specifies how feedback is gathered from key stakeholders	

Toolbox:

Checklist for the Review of An HIV-Specific Quality Management Plan...Continued

DOMAIN IN QM PLAN	DESCRIPTION	COMMENTS
Performance Measurement	• Identifies and quantifies the critical aspects of care and services provided in the organization; ensures integration with other titles or accrediting bodies, GPRA, Program Assessment Rating Tool (PART) measures and unmet need • Identifies indicators to determine the progress of the QM program • Indicates who plans to develop collect, and analyze data • Indicates who is accountable for collecting, analyzing, and reviewing performance data results and for articulation of findings • Includes strategies on how to report and disseminate results and findings; communicate information about quality improvement activities • Processes in place to use data to develop new QI activities to address identified gaps	
Capacity Building	• QI capacity building of providers and spread QI performance measurement systems and QI activities • Identifies methods for QI training opportunities • Provision of technical assistance on QI and support for QI activities • Indicates how data are being fed back to providers and key stakeholders	
Evaluation	• Evaluates the effectiveness of the QM/QI infrastructure to decide whether to improve how quality improvement work gets done. • Evaluates QI activities to determine whether the annual quality goals for quality improvement activites are met • Reviews performance measures to document whether the measures are appropriate to assess the clinical and non-clinical HIV care	
QM Plan Implementation	• Specifies timelines for implementation to accomplish those goals - workplan • Specifies accountability for implementation steps • Provides milestones and associated measurable implementation objectives	
Process to update QM Plan	• Identifies routine schedule to at least annually update QM plan • Specifies accountability - indicates who will initiate process to update/revise plan • Indicates a sign-off process to finalize plan; potentially include internal/external stakeholders; include signatures of key stakeholders	
Communication	• Outlines process to share information with all stakeholders at appropriate intervals • Identifies format of communication • Identifies communication intervals	
Formatting	• Clear and easy to follow layout and organization of content • Clear dating of document, including date of 'experation'; page numbers	

Strategize To Implement The Quality Plan.

An annual workplan benefits the quality implementation efforts by:

- Clearly documenting the necessary steps to implement the quality management plan.
- Assisting the quality committee to allocate the appropriate resources essential for quality activities, including project teams, staff training, data collection, and evaluation efforts.
- Effectively communicating quality activities to staff and stakeholders.
- Creating a template to monitor the implementation process of the quality management plan.

Simply stated, an annual workplan answers the questions of what, when, where, and how a quality management plan is implemented. Although there are different approaches writing this workplan, a template should include, at minimum, the following categories:

- Major quality goals. A straightforward goal statement divides the workplan into categories under which several activities are noted to accomplish each goal.
- Quality activities. Each activity is briefly explained. The documentation should be informative and concise at the same time, to keep the form practical and user-friendly.
- Responsibility. A staff person or team is identified to oversee and report back on the implementation of each activity.
- Date of Completion. The duration and/or date by which each activity is completed should be noted.

During the evaluation stage, the quality committee can use this workplan to assess the implementation efforts by the facility. Additionally, it generates a template for future planning efforts and workplans.

The Toolbox on page 52 illustrates an annual workplan by one HIV facility which outlines several goals, related activities, the staff person responsible for implementation, and the date of completion.

On page 102 of this Workbook, the process of developing a Gantt chart is described in detail. This tool is helpful for many programs to visually display project goals and milestones.

Toolbox:

Quality Management Plan from a Large Hospital - Based Facility

ALBERT EINSTEIN MEDICAL CENTER
The Immunodeficiency Center
Quality Assessment and Improvement Plan
Fiscal Year 2002

1. Mission Statement
The purpose of the Quality Improvement (QI) Program is to ensure that all patients of the Immunodeficiency Center (IDC) are receiving healthcare as recommended by the Department of Health and Human Services (DHHS), The International AIDS Society of the United States of America (IAS-USA), and the United States Center for Disease Control (CDC). We will utilize QI principals and methodologies as a basis for improvement of care and services. By identifying opportunities for improvement, collecting and analyzing data, developing and implementing plans and subsequently evaluating those plans we can continuously improve the processes and systems that influence patient outcomes. This QI Program is consistent with the organization-wide approach to quality improvement at Albert Einstein Medical Center.

2. Priorities for IDC QI Program
- Establish an organizational structure within the IDC that supports QI. This includes but will not be limited to: membership, frequency of meetings, roles and responsibilities, resources, and reporting systems.
- Adopt standards of care set forth by the DHHS, IAS-USA, and the CDC.
- Track clinical outcomes to ensure standards of care are being met for all patients of the IDC.
- Educate IDC Staff about QI methodologies and techniques through training sessions.
- Facilitate the active involvement of IDC staff in the quality program and its quality improvement activities.
- Ensure that QI activities are routinely conducted to continuously improve the quality of care and services.
- Facilitate communication among Administration, Department of Medicine, and IDC staff on findings, conclusions, actions, and resolution of performance improvement issues.
- Participate in the Albert Einstein Medical Center Quality Improvement Program through the Performance Committees of the Departments of Medicine and the Immunodeficiency Center.
- Document and report performance improvement activities.

3. Scope and Organization
The Immunodeficiency Center (IDC) at The Albert Einstein Medical Center provides full-service care for patients at all stages of HIV disease. The patient population served at present is approximately 250 in number and comes from various socioeconomic, ethnic, and racial backgrounds. Included among the services provided are: HIV primary care, HIV prevention and disease education, mental health counseling, nutritional assessments and education, and care access counseling. Service for referrals to Gynecology, Obstetrics, Psychiatry, Radiology, Oncology, Gastroenterology, Cardiology, Nephrology, Ophthalmology, Pulmonary, Neurology, Surgery, Orthopedics, Rehabilitation, and Rheumatology is available on site.

It is the goal of the IDC Quality Improvement Team to provide compassionate and comprehensive care in accordance with the guidelines mandated by the United States Department of Health and Human Services, the International AIDS Society of the United States of America and the United States Center for Disease Control. The Immunodeficiency Center's quality program incorporates the values of the Albert Einstein Healthcare Network and is reflective of its stated mission. The IDC QI committee core membership consists of the Medical Director, Nurse Practitioners, and the CQI Coordinator. Other members of the IDC Staff such as Social Workers, Dietitian, Nurse Manager of the Community Practice Center, Medical Assistants and the Office Manager will be involved, as appropriately indicated.

4. Statement of Authority and Accountability
Hospital Accountability
IDC quality improvement activities are reported to the performance committee of the Department of Medicine and the AEMC Quality Management Department. These departments report to the Board of Trustees of the Albert Einstein Medical Center, which in return support The Immunode-ficiency Center's QI program. The Board of Trustees is ultimately responsible for all quality related activities.

Immunodeficiency Center Accountability
The Medical Director, with the assistance of other staff, has primary responsibility for the quality of patient care provided as well as the daily operation of the IDC. The Medical Director reports to the Chairperson of the Department of Medicine. The Chairperson of the Department of Medicine appoints a Department Quality Representative, who is responsible for coordinating the development and implementation of the Quality Assurance Improvement Program (QAIP). The Quality Management Department assists the development and implementation of the Department of Medicine Quality Assurance Improvement Program (QAIP).

The IDC has a CQI coordinator who is responsible for the coordination of all QI activities between the hospital, the Department of Medicine and the IDC. The CQI Coordinator is accountable to the Medical Director of the IDC, the program administrator, and the Hospital Quality Management Department.

Toolbox:

Quality Management Plan...Continued

Consumer Input
An important goal of the Immunodeficiency Center is meeting the needs of our patients and ensuring their satisfaction with our services. To achieve this goal, the IDC will incorporate feedback received from our Consumer Advisory Board (CAB) and suggestions culled from the distribution of periodic patient satisfaction surveys. Information will also be gathered from two monthly educational meetings that are held in the IDC conference room.

QI Committee Structure and Function
The Immunodeficiency Center Quality Improvement Committee will be responsible for:

- Development and implementation of an annual Quality Improvement Plan.
- Overseeing implementation of team projects.
- Peer review of patient charts.
- Monitoring and measuring performance of service standards with regard to clinical treatment, case management, and related services.
- Educate team members in tenants of QI process and implementation.

The IDC Quality Improvement Committee will meet bi-monthly at a time that will allow attendance by all members.
The CQI coordinator will compose an agenda consisting of:

- A review of minutes from previous QI meeting to ensure open issues have been or are in the process of being resolved.
- Review current findings of ongoing QI projects, such as newly internally or externally acquired data, problems, and corrective actions.
- Implementation and evaluation of QI team projects.
- Address all concerns of the Medical Director, QI Core Committee and QI team members.
- Suggestions and recommendations for new improvement projects.
- Minutes from QI Core Committee meetings will be recorded by the CQI Coordinator. Documentation of meetings and activities of individual QI projects will be the responsibility of that project's team leader.

CQI Team Structure/Function
CQI teams shall be selected at the discretion of the IDC quality committee. Team members will utilize their process experience and knowledge to:

- Improve one quality aspect through routine meetings of a multidisciplinary CQI Team.
- Use QI methodologies to investigate and improve the HIV delivery process.
- Document and report, internally and externally, QI team activities.

5. Key Indicators
The IDC will utilize the HIVQUAL QI program strategy to measure key indicators of HIV health care for patients. The program provides software that allows for computerized accountability of quality improvement. Clinical indicators that will be measured include, but are not limited to:

- CD4 cells and viral loads
- Pneumonia and flu vaccines
- PAP smears and GYN care
- Prophylaxis for PCP, MAC
- PPD screening
- Antiretroviral therapy
- Referrals to specialists, specifically Ophthalmology, Dermatology and Gynecology

The Immunodeficiency Center will also track medication adherence, emergency room use, annual RPR's, eligibility and administration of Hepatitis vaccines, and patient no-show rate.

Data Collection
Quarterly chart review will be conducted to gather data on key indicators. The appropriate information will be captured on data entry sheets, which will facilitate transfer into the HIVQUAL database. The data will be entered into the database by the CQI coordinator or assigned medical assistant. The responsibility for generating all reports for review or analysis will fall to the CQI coordinator. Reports will be presented to the hospital QA Department and the Department of Medicine quality committee.

6. Improvement Evaluation
All projects will be evaluated on a quarterly basis (until improvement of key indicators reaches an 85 percent compliance level). If the level of performance indicators measured does not improve from baseline, continued monitoring and intervention is indicated. IDC interventions include: training and education of team members, revision of present clinic policies, or development of new policies. When a measured indicator reaches a satisfactory level of improvement, the project will be discontinued. Periodic monitoring of discontinued project indicators will be reviewed to ensure continued compliance with agreed upon thresholds.

Updated by: Patrick Coady
Date of approval: March 31, 2003 Date(s) modified: July 17, 2003

Toolbox:

Annual Quality Management Workplan

GOAL: ESTABLISH AN EFFECTIVE HIV QUALITY MANAGEMENT PROGRAM

		2005 - 2006											
ACTIVITY	WHO	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Revise HIV quality management plan	John	X	X										
Develop annual quality workplan	John		X	X	X								
Prepare planning information (data collection, program assessment/evaluation, organizational priorities, HRSA grant) – for bimonthly meeting.	Mindy			X	X	DUE							
Review HIV quality management plan. Make changes if needed	Mindy					X	DUE						
Discuss and set annual goals	John		X			X	DUE						
Monitor implementation of plan Revise as needed	Committee			X				X				X	
Evaluate quality management program	Committee												X
Quality improvement project teams – at bimonthly meetings	Committee		X		X		X		X		X		X
Program goals	Committee		X				X						X
Annual organizational assessment	Committee	X											

GOAL: ESTABLISH ONGOING DATA COLLECTION AND REPORTING TO SUPPORT PERFORMANCE MEASUREMENT

		2005 - 2006											
ACTIVITY	WHO	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Determine and define quality indicators (clinical, non-clinical) measured thru HIVQUAL	Committee	X		X									
Collect and analyze data on indicators	Mindy		X			X			X			X	
Train data abstractors	Mindy	X	X										
Validate results	Mindy			X									
Review with Quality Committee	Committee			X		X			X			X	
Conduct HIV patient satisfaction survey	John									X	X		
Adapt survey and brief test cycle	John				X	X							
Revise survey, if necessary	John						X						
Review with Quality Committee	Committee								X			X	
Share and report results	Committee			X									
Prepare findings	John				X								
Share with staff	Alex						X					X	
Share with Board	Alex												X

Toolbox:

Different HIV Program Models of Care

Recognizing different service delivery models for HIV care, the following table highlights some nuances for several delivery systems how to best develop and plan a quality management plan.

SMALL HIV PROGRAMS

- Given the reduced number of quality committee members and the likelihood that the same members will conduct quality activities, envision a quality structure that accommodates participation. Piggy back on the existing meeting structures, and find informal ways to meet (but do not forget to document).
- Find a balance between available resources and goals for the quality program. Although the same elements of a quality management plan (quality statement, quality improvement infrastructure, performance measurement, annual quality goals, evaluation) apply for smaller HIV programs, make sure that each element is covered in your plan. Be realistic when establishing the goals and objectives for your program.
- Make the quality committee membership as inclusive as possible. Include stakeholders such as providers from referral services and consumers on your committee.
- Be sure to document your quality activities and committee meetings to ensure consistency beyond staff turnover.

HIV NETWORKS AND MULTI-SITE AGENCIES

- Identify and include representatives from the entire network on your quality committee so that they can voice their input in the development of the quality program. This will create a sense of ownership when outlining the quality expectations.
- Find strategies to best communicate results and updates about the quality program. Share minutes, reports and findings with all sites in the network. Rotate site presentations of their quality activities at committee meetings.
- Create a sense of collaboration beyond the individual HIV facility. Promote benchmarking and sharing best practices among sites.
- Rotate quality committee meeting locations among network members.
- In addition to clinical measures, identify indicators that assess the network performance regarding communication, sharing of information, data collection, etc.
- Establish consistency across the network regarding data collection, data reporting, and methodologies to conduct quality activities while allowing individual providers to address their unique challenges.

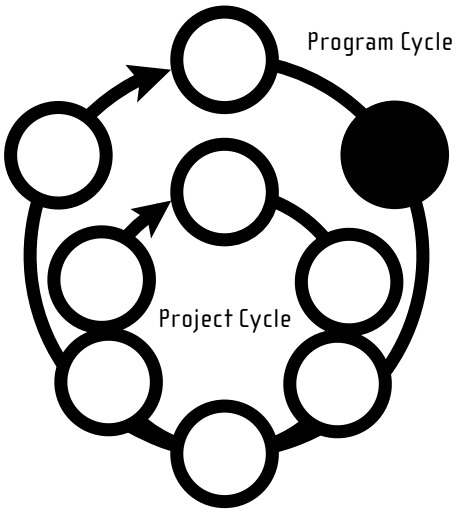
Toolbox:

Different HIV Program Models of Care...Continued

ADVANCED HIV PROGRAMS

- Identify ways to include consumers in the quality improvement structure. Educate and promote consumers to become members on the overall quality committee. Invite consumers to participate in project teams.
- Gather routine feedback from consumers to shape your quality program. Create a routine communication link to your Consumer Advisory Committee (CAB). Hold frequent focus groups with them and sincerely follow-up on their recommendations.
- Hire a full-time staff person for quality improvement in your HIV program.
- Establish stronger links with other advanced HIV programs around the country to share experiences.
- Include all staff in the quality program. Conduct a survey with all staff to identify barriers to quality. Ask staff which quality projects should be prioritized. Create 'competition' among staff (e.g., two quality teams work on the same quality aspect).
- Create ways to rapidly and systematically respond to quality findings.
- Select non-clinical and service-oriented measures in addition to clinical indicators.

Program Step II: Facilitate Implementation of HIV Quality Program



The Big Picture

During Step I of the Program Cycle, the HIV quality program committee develops a quality management plan. During Program Step II, the HIV quality committee helps to establish systems to make the plan a reality and gives those staff members who are involved in quality activities the resources and support necessary to succeed.

What To Do

- Establish performance measurement systems.
- Review performance data.
- Establish improvement project teams.
- Support quality improvement activities.

Snapshot of HIV Care

Setting Things In Motion: Implementing The Plan

Moving from paper to action is the first order of business of the HIV quality committee. Sometimes, after completing the quality management plan, quality committee members feel that their work is done and that they need to get back to their "regular" work. Sometimes, they feel overwhelmed by the tasks outlined in the plan, or discouraged by their initial level of performance.

It's important to keep the momentum generated through the planning process. Keep in mind, 'Quality is a Journey,' and requires many small steps. It's useful to build some excitement about the quality management program and to identify some activities that can be successfully accomplished. Create an "early success" which everyone can celebrate. The HIV program at Kings County Hospital, NY routinely shares their data reports not only to staff at the bulletin board but also in the waiting room for everyone to see. These steps generated the necessary buzz and allowed the quality committee to routinely report on their progress.

Snapshot of HIV Care...Continued

Make the committee work as routine as possible

Quality managers have also found it useful to establish standardized formats for committee materials and meetings. Making the order of the meeting and communications consistent help the meetings move efficiently because everyone understands how the meeting will proceed and to analyze the materials.

To be flexible in their approach to improve HIV care and avoid long meetings, one HIV program decided to quickly meet and create simple 'huddles.' As one member pointed out: "We decided that we all had too many meetings every day. To sit down and meet, took too much time. So we agreed to huddle by simply standing around. Once we sat down, it was a meeting."

To maintain the flow from meeting to meeting, HIV programs decides before they adjourn from the quality committee meeting to quickly review the tasks and ensure that all members knew exactly their roles. "This simple step helped us all to keep everyone on track."

Support committee members

Sometimes, in their implementation, quality committees discover something they hadn't considered when developing the program plan. For example, one agency found that before it could start to measure its performance, it realized that they had to do some training for the quality committee members at how to understand and look at data.

"At first I thought that people were hesitant to review performance data because they were concerned about what they would show. But after talking with some committee members privately, I realized that they felt that they didn't know enough about data to be able to talk about it in a meeting," a quality committee chair reports.

"So I asked one of our facility's 'data geeks' to provide a basic presentation to the entire committee. She kept it simple, and provided some good tools. We also made it mandatory for everyone to attend, so not to single out people. It was also good to have a non-committee member do this because we encouraged people to ask her questions on their own."

Establish Performance Measurement Systems.

The quality improvement management plan details the indicators selected for routine performance measurement and the annual goals for which project teams will be formed. To ensure that the quality committee has routine and accurate data on the facility's performance, the following steps are necessary:

- Validate data systems
- Define performance indicators
- Select the data collection method
- Establish accountability for data collection

Validate Data Systems

The task of the quality committee is to find the most efficient way to collect information from your facility's records and to draw a sample of those records for measurement. The most complete source of information on diagnosis, treatment, and clinical outcomes of care is the medical record. Different facilities store information in different ways. Some maintain paper medical records, others use software to create electronic medical records (EMRs). In addition, data can be gathered from billing systems, appointment books, or from areas such as the pharmacy or lab.

Define Performance Indicators

The quality committee needs to ensure that each routine performance indicator is sufficiently defined. The following should be considered:

- Complete definitions of indicators that are based on current guidelines (e.g., ARV treatment education: 'Patients who initiate ARV treatment or undergo a change in class of drug during any 4-month review period(s) will be evaluated whether treatment education has been provided.')
- Frequency of data collection (e.g., monthly, bi-monthly)
- Efficiency of data collection

Select The Data Collection Method

Determine if any data related to your indicators have already been collected. If your data sources capture the patient-specific information you are measuring and can be queried to produce information in the specified time frames, you may substantially reduce your workload. Investigate all possible sources. If you find an existing data source, determine the ease with which you can generate specific patient-level data. More likely than not, you will need to collect at least some data on your own through chart reviews.

Notes

Toolbox:

Performance Measurement Plan

ELEMENT OF HIV CARE	QUALITY OF CARE INDICATOR(S)	DATA SOURCE	COLLECTION METHOD
HIV Monitoring	• CD4 cell count test performed • Viral load measurement test performed	Lab data, patient medical record, electronic medical record system	Every 4 months via lab data system
ARV Management	• Appropriate management of patients on ARV therapy • ARV therapy medication	Patient medical record, electronic medical record, pharmacy data	Every 4 months via chart review and pharmacy data
Screening	• Treatment adherence to ARV • PPD screening • Lipid screening • Hepatitis (HCV) screening • Mental Health screening	PPD log, patient medical record, electronic medical system, lab data	Annually through chart review
Opportunistic Infection (OI) Prophylaxis	• PCP prophylaxis (CD4<200/mm^3	Lab data, pharmacy data	Annually through lab data, pharmacy
Gynecological Care	• MAC prophylaxis (CD4<50/mm^3) • Pneumococcal vaccination (10 years) • Pelvic exam • Chlamydia screening • PAP smear • Gonorrhea culture	Patient medical record, electronic medical record	Annually through chart review and lab data
STD Management	• Syphilis serology	Lab data	Annually through lab data
Substance Use	• Substance use screening • Tobacco use screening	Patient medical record	Annually through chart review
Coordination of Care	• Annual dental exam • Annual ophthalmologic care (CD4<50/mm^3)	Referral tracking system, lab data, chart review	Annually through chart review
Patient Education	• Basic patient education • ARV treatment education	Chart review	Annually through chart review
Case Management	• Comprehensive assessment • Service plan • Follow-up on service plan goals and referrals • Coordination of services	Chart review	Annually through chart review

Establish Accountability For Data Collection

The quality committee decides who will routinely and accurately measure the selected indicators. Usually, a staff person or a team will be assigned with this task. At minimum, the designated person or team should receive a brief training to review the measurement process and to fully understand each indicator on which data are collected.

The Toolbox on page 58 provides an overview of a Performance Measurement Plan which outlines the various indicators, their data sources and collection methods.

Additional information about sampling and data collection can be found on page 142 of this Workbook. This section particularly addresses issues of :

- Constructing a population sample
- Designing a data collection tool
- Assigning and training abstractors
- Collecting data
- Validating results

Real-World Tip
Collecting Data.

Keep the following rules in mind when the data collection process is planned and the performance measurement plan is under way:

- Keep your data collection as simple as possible.
- Be sure that data collection is limited to quality improvement activities.
- Reduce the sample size to a minimum (select 24 - 107 records per review).
- Measure the high performing indicators less frequency (e.g., change from monthly to semi-annually).

Additional Resource

You can download a software program called HIVQUAL3 for free at www.hivqual.org. This software which includes clinical indicators based on clinical guidelines and case management indicators providers a means of measuring and reporting HIV care and services.

Review performance measurement data.

When developing the quality management plan, take advantage of any existing performance data for selected indicators. Using data in the development of the quality management plan is helpful for:

- Problem identification: Reviewing data helps to verify staff's assumptions and anecdotes about the nature of existing problems.
- Planning and goal setting: Performance measurement data can be used in developing the quality management plan for identifying the annual quality goals and activities.
- Focus: Data help to focus the efforts of the quality improvement activities. Often, data will give the quality committee what to address first.
- Buy-in: A preliminary look at the existing performance level can make problems visible and establish the need for change.

Data that are already available provide a quick and easy way to get started. Sources of existing performance data might include:

- Reports in HIVQUAL3 software.
- Reports from other clinical software programs.
- External audit results from regulatory agencies.
- Information collected through organization-wide quality activities.
- Written logs in HIV programs.

Once you've reviewed these data, determine which areas are in need of improvement and include these in your quality management plan and workplan.

Notes

Establish Improvement Project Teams.

Improvement projects are the vehicle by which staff members address the quality goals set forth in the facility's quality management plan. Typically, a cross-functional group of staff members is assigned to each project. This helps to ensure that multiple viewpoints are represented in the improvement effort.

To the degree possible, the team should include those staff members who influence the project goal as well as those impacted by the goal. A broad representation strengthens the team's ability to make informed decisions and signals to the organization that the program values input from those staff members who are most impacted by the project work. Someone who feels personally invested in a project is much more likely to actively seek its completion. If feasible, include staff members in the selection process.

Creating The Basic Structure For Teams

The facility's quality committee needs to communicate the following information for each project:

- Define the quality goal for the project. This basic information frames the scope of the project and helps improvement teams launch their efforts. For example, a quality committee might describe a project goal as, "improve patient adherence to ARV therapy to 85 percent using a 3-day self-report." The project team starts with this goal.
- Team members assigned to the project. In many clinics, the HIV quality committee decides who will be included on each quality improvement project team. At a minimum, the quality committee should select staff to serve as team leader and/or team facilitator for each quality improvement project.
- Project deliverables. Specifying deliverables (such as the improvement project memo, weekly written updates or a final report) clearly communicates the quality committee's expectations for a project and ensures the committee and the improvement team are 'on the same page.'
- Deadline for completion and any interim deadlines. Clear deadlines for reporting back to the quality committee (such as weekly project updates and a final report in 5 weeks) allow an improvement team to efficiently

plan project activities.

Notifying Team Members And Staff

The quality committee shares the basic project documentation with each staff member so that everyone is aware of the improvement project work. Every opportunity (e.g., staff meetings, internal emails and newsletters) can be used to publicize current and upcoming quality improvement projects.

Real-World Tip
Build A Solid Base.

Consider the following practices in putting together an improvement project team:

- Include at least one member of the HIV quality committee to a project team.
- Choose individuals who have previous experience to serve as team leader or team facilitator.
- Recruit a consumer to participate on a project team to voice concrete concerns and suggest improvements from the consumer perspective. Consumers can also help to promote system improvements to other consumers.
- Provide a training session or update to the team prior to initiating the quality improvement team.
- Provide a list of available projects and allow candidates to self-select. Or ask staff members to list the types of projects they are interested in and factor in their preferences.

Notes

Additional Resource

Scholtes, Peter R., Joiner, Brian L. and Streibel, Barbara J.. The Team Handbook. Second Edition. Madison, WI: Joiner Associates Inc., 1996.

Support Quality Improvement Activities.

The success of the quality management program and its activities requires the support the quality committee and the integration of quality into the facility's HIV care delivery. Key techniques to create a quality culture in HIV programs include

- Providing training and education
- Creating communication pathways
- Recognizing staff members efforts
- Demonstrating program successes

Providing Training And Education

Staff members are trained to provide HIV care, but not necessarily trained to improve the quality of care. Quality improvement has its own body of knowledge and skills that are necessary in completing project work and implementing quality management strategies. Core topics include the principles and techniques of quality improvement and the methodologies of making change.

Staff members may be most familiar with the "workshop" format, where a facilitator presents information to a small group and opportunities are provided to apply the information in structured exercises.

Real-World Tip
Informing Staff About Quality Improvement.

Informed staff members are better participants in quality activities. The following strategies can be used to keep staff up-to-date:

- Provide a copy of this Workbook to all staff.
- Invite outside speakers to present their quality projects to staff.
- Create a training bulletin board in staff areas that highlights one quality tool concept per month.
- Create and distribute a quarterly newsletter about quality or share articles on quality.
- Discuss key quality concepts during every staff meeting.
- Include information about the quality management program in new employee orientation and training.
- Start small. Focus on areas in which staff members have already asked for assistance.

Additional Resource

For guidance in teaching small groups about the primary responsibilities of program facilitation, see the HIVQUAL Group Learning Guide "Facilitation of Quality Program" exercise. The exercise could also be used to kick off a new HIV quality committee's initial facilitation efforts. You can download this publication at www.hivqual.org.

Toolbox:

Quality Improvement Team Reporting Form

TEAM REPORTING FORM	
TEAM	Improving Patient Retention for Initial Medical Appointment
TEAM MEMBERS	John Guercio, Jenny Smith, Susan Rodriguez (team leader), Catrin Papros, SD Huang
DATE	May 15, 2005

PROJECT OVERVIEW	
PROJECT GOAL	The team was initiated to increase the show-rate for medical initial appointments from currently 23 percent to 60 percent.
DATA POINTS	The team collects the show-rate for medical initial appointments from the appointment system every month. Indicator is defined as the percent of patients with initial medical appointments being seen by medical provider on the day of appointment (no walk-ins).

PROJECT UPDATE

INTERVENTIONS (SINCE LAST REPORT)	FINDINGS AND RESULTS	NEXT STEP
• Mailing out new orientation package to patients	• Patients appreciated mailing; contact information in many cases incorrect	• Need to get better contact information of patients to send out orientation packages
• Update patient contact information at every visit	• Front staff updated contact information at every visit; special effort was made to get the entire contact information before initial visit	• Generate report of current contact information to review with patient at time of registration; write corrections onto the form for data entry into the computer.
• Ask for additional contacts to get in touch with patient ("Who knows where you are?")	• New field in computer system was added to enter additional contact information; staff enters information in computer	• Staff needs to be reminded to enter additional contacts in computer
• Make reminder calls	• Phone script for staff is used to make initial appointment; adjustments were made to shorten the script	• A new script needs to be written for initial medical appointments for contacting additional contacts

Creating Communication Pathways

An open flow of communication between the quality committee and staff involved in quality activities helps to ensure steady progress toward established goals. The simplest way to endorse communication is to create an open door policy.

Any reporting expectations or requirements will depend upon individual experience with the improvement process. Checkpoints should be set to review the team's progress or when staff members are expected to report on their activities.

If a more structured process is required, consider adding status updates to the agenda of quality committee meetings or regularly set time aside to discuss the project updates. If meetings aren't possible, ask for a status report in writing and discuss it with team members over the phone or via email.

If a project has fallen behind, the committee should help and encourage staff members to identify and remove any project barriers.

Real-World Tip
Support Quality Improvement Teams.

An HIV quality committee 'jump starts' improvement projects, guides teams in their efforts and keeps improvement activities aligned to the quality management plan. The following practices can help the committee to be effective:

- Appoint one quality committee member to be directly responsible for a quality improvement team.
- Have the quality committee chairperson occasionally participate in improvement project team meetings to answer questions and provide input.
- Reward the progress of improvement teams by officially acknowledging their work or by throwing a 'quality lunch' for the next team meeting.
- Ask quality improvement team members to routinely update staff at internal staff meetings about team progress.

Notes

Toolbox:
Data Follow-up Form

The following Toolbox provides a framework for immediately taking action steps once the data results are presented to the quality committee project team.

1) WHAT ARE THE MAJOR FINDINGS OF YOUR DATA ANALYSIS?

- Overall substance use screening score is 78 percent.
- Documentation of past substance use history is 75 percent.
- Referral for active substance users in only 20 percent.

2) WHAT ARE THE IMMEDIATE STEPS FOR FOLLOW-UP RESULTING FROM YOUR ANALYSIS?

A) SHARING OF DATA

- Share report with all staff; make individual copies and present at next staff meeting.
- Post data points in hallway.
- Present findings to HIV leadership.

B) GENERATING OWNERSHIP

- Ask leadership for input how to improve referral system for active substance users.
- Ask case managers for their input to improve system.
- Create quick questionnaire for staff about barriers for substance use referral.

C) INDIVIDUAL PATIENT FOLLOW-UP

- Identify patients in the review with no referral and arrange referrals.
- Create a list of active substance users and follow-up with them about referrals.

D) ADDRESSING IMMEDIATE SYSTEMS ISSUES

- Arrange meeting with substance use program to improve referral.
- Create new form to track substance use referrals.

3) WHAT ARE YOUR OVERALL PLANS FOR SYSTEMIC IMPROVEMENT?

- Propose a project team to be formed to address this issue.
- Increase reporting frequency of this indicator to monthly.
- Invite representative from substance use program to the overall quality committee.

Recognizing Staff Members' Efforts

Staff members are the backbone of the HIV quality program. Recognize their efforts regularly to reinforce the importance of their quality improvement project work. For example, write letters of recognition and post them in clinic locations where staff, patients and stakeholders will see them. Send an email of recognition to staff. If budget allows, offer small gifts such as movie passes or gift cards to team members upon completion of successful quality improvement activities. Or host a lunch where patients give testimonials of how a particular improvement project directly benefited their health.

Demonstrating Program Successes

Build excitement for the HIV quality program by publicizing its success stories. Recognize team results formally at board meetings, full-staff meetings, conferences, and in reports to internal and external councils or committees. Publish successes in internal newsletters and journals. Mount success storyboards in the waiting room so patients are aware of quality improvement efforts. Look for ways to show how quality improvements affect every aspect of the staff's daily activities.

Keep in mind that achieving quality improvements in HIV care is multifaceted. Quality successes in HIV care result from top-down commitment and empowered staff at all levels. Work to build a sense of staff ownership for the quality program.

Quality improvements become part of an HIV facility's daily routine. All staff members, regardless of job titles or positions, should think of themselves as contributing to quality efforts and improving the care of people living with HIV.

Additional Resource

For guidance in teaching small groups about the importance of organizational support to an HIV quality program, see the HIVQUAL Group Learning Guide "Support for Quality Program" exercise. The exercise could also be used to plan specific tasks for how to build the program's base of support. You can download this publication at www.hivqual.org.

Toolbox:

Different HIV Program Types

Recognizing different service delivery models for HIV care, the following table highlights how several delivery systems can facilitate the implementation of an HIV-specific quality program.

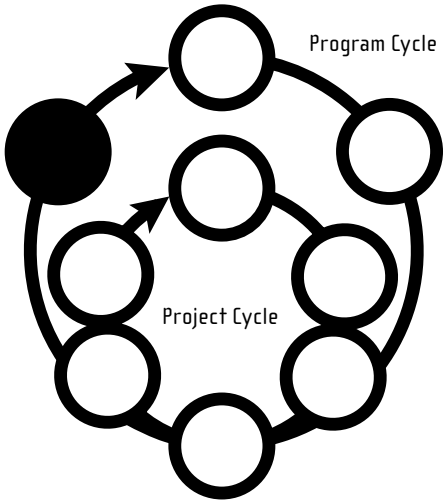
HIV NETWORKS

- Establish a central topic to focus quality activities across the entire network (e.g., ARV management of unstable patients). Share results and findings with all network sites and benchmark across sites. Create 'competition' between teams.
- Create quality champions who can become internal resources for the network. Bring sites with similar quality activities together and showcase the success of your quality champions.
- Identify a data collection system that consistently and regularly measures and compares the performance across the network. Train the data abstractors together. Use standardized data forms.
- Bring representatives of network sites together to jointly develop strategies to implement the quality plan. Train staff together about quality methodologies and techniques. Share policies and procedures.

ADVANCED HIV PROGRAMS

- Provide a quick training on quality for team leaders and/or facilitators of project teams before engaging them in quality activities. Include consumers who participate in these activities in the training.
- Develop a frequent quality newsletter to promote the successes of the quality program. Showcase successes of teams and individuals.
- Develop an award system for staff members which includes financial incentives for quality successes.
- Train all staff annually (e.g., 1-day quality workshop) about quality improvement and the HIV quality program.

Program Step III: Evaluate HIV Quality Management Program.



The Big Picture

In the same way clinical aspects of care are routinely reviewed and changed, the HIV quality program needs to be continuously and systematically evaluated and improved. The HIV quality committee with participation of a cross-section of staff members evaluates the quality infrastructure and activities to assess what worked well, what did not, and why. The findings are incorporated into future planning efforts to ensure that quality improvements continue and are sustained.

What To Do

- Evaluate HIV quality program effectiveness.
- Evaluate project team performance.
- Learn and respond to past performance.
- Strategize to sustain the quality program.

Snapshot of HIV Care

Completing the cycle

Reflecting on what you've accomplished many quality management programs—successful or unsuccessful—often never make it to the third and final step—assessing their program's performance and identifying changes to make to improve their quality program.

"We spend so much time looking at other people and their work that we just don't have the energy when we're done with our improvement projects to look at ourselves," explained one quality manager. To assist with their own review, the quality committee asked a colleague, not on the quality committee, to help facilitate the evaluation process. "We realized we needed some outside help to make sure it got done."

Another facility "turned the tables" and enlisted a couple of staff who had not been involved with the quality program to conduct its own "independent" evaluation of the quality program. Armed

Snapshot of HIV Care...Continued

with the quality management plan, workplan, committee agendas, minutes and project team materials, they presented their findings to the committee, staff, consumers and board at both a meeting and through a storyboard posted where the project teams show their information. "It was scary, but incredibly flattering—they used our materials and methods to help us improve our own quality," the quality manager reported.

One quality committee chair when asked about how her committee had evaluated its plan responded that "we never again looked at the plan once we approved it." To ensure that the quality management plan is reviewed, the implementation plan should routinely include its evaluation. Either a special meeting can be scheduled or a regular meeting of the quality committee can be used.

Learn from past performance

The University of Pittsburg Medical Center learned through their annual evaluation that they needed to find new ways to communicate their quality work. They sought staff input into their annual assessment and the responses indicated that staff were not aware enough of the program to provide the desired feedback—this lack of feedback indicated that the quality program needed to better communicate its efforts and to involve more people in the quality project.

To respond to this need, a "buddy system" has been established—each quality management committee member has a "buddy" to inform about the committee's work and to attend meetings if they are not able to. Sharing the quality committee's work throughout the program year helps to build knowledge among staff about the quality efforts so they feel equipped to evaluate the quality program when asked.

Build support for your quality program

The evaluation process can be used to also garner support for the quality program and to help sustain it. The evaluation process can reveal examples of how the quality program has lead to improvements in the facility's other systems. For example, other committees and departments may model their own communication efforts on the quality committee's sharing of information and creative displays of information. Consumer involvement in the facility's improvement activities may increase as consumers are asked to participate in the quality management program.

Staff, board and consumers can be asked to provide their input through a variety of ways. One facility established a message board that encouraged staff and consumers to provide written comments on the quality projects. "We had quality committee members write a response to the comment and it was posted back to the message board for everyone to read," reports the quality program manager. "It's important that people see that we valued their input. We also observed that people began to read the responses and write new comments to us. It was a great way to provide a mechanism encouraging dialogue. Some of the comments have provided us with great ideas for quality projects, and others haven't really been that helpful. Regardless, we always respond."

Evaluate HIV Quality Management Program Effectiveness.

A quality committee needs to spend time thinking about how to evaluate the following key areas of quality management plan and the annual workplan which outlines the implementation process:

- Quality program infrastructure: Was the quality committee effective in its efforts to improve the quality of HIV care? Does the quality infrastructure require any changes to improve how quality improvement work gets done?
- Annual quality goals: Were annual quality goals for quality improvement activities met? How effectively did you meet your goals? What were the strengths and limitations?
- Performance measures: Were the measures appropriate to assess the clinical and non-clinical HIV care in the facility? Are the results in the expected range of performance?
- Staff and consumer involvement: Did the appropriate staff and consumers participate in quality improvement activities? Were staff informed about ongoing quality activities and about quality improvement methodologies? Were consumers informed about ongoing quality activities? See Snapshot on page 69 to learn how one facility kept everyone involved and informed.
- Annual workplan: Did the implementation process go as planned? Did you meet established milestones? What were the strengths and limitations?

Designing A Program Assessment Tool

An assessment tool can be used to guide the evaluation process. If your organization has an existing assessment tool, see if it could be modified to help evaluate the facility's quality management program. If not, consider adapting the HIVQUAL Organizational Assessment Tool on page 72 to evaluate the HIV quality program and the Annual Quality Workplan on page 52 to evaluate the annual implementation process.

Additional Resource

For the entire HIVQUAL organizational assessment tool, including the scoring criteria, please visit www.hivqual.org.

Toolbox:

HIVQUAL Organizational Assessment Tool

FUNCTIONS	SCORE				
A) QUALITY STRUCTURE	1	2	3	4	5
A.1. Does the HIV program have an organizational structure to assess and improve the quality of care?					
A.2. Were appropriate resources committed to support the HIV quality program?					
A.3. Did the HIV leadership support the HIV quality program?					
A.4. Does the HIV quality program have a comprehensive quality plan?					
B) QUALITY PLANNING	1	2	3	4	5
B.1. Were annual goals established for the HIV quality program?					
B.2. Does the HIV program clearly described roles and responsibilities for the HIV quality program?					
B.3. Did the workplan specify timelines for the implementation of the HIV quality program?					
C) QUALITY PERFORMANCE MEASUREMENT	1	2	3	4	5
C.1. Were appropriate quality indicators selected in the HIV quality program?					
C.2. Did the HIV program routinely measure the quality of care?					
D) QUALITY IMPROVEMENT ACTIVITIES	1	2	3	4	5
D.1. Did the HIV program conduct quality projects to improve the quality of care?					
D.2. Were quality improvement teams formed to improve specific quality aspects?					
D.3. Are systems in place to sustain quality improvements?					
E) STAFF INVOLVEMENT	1	2	3	4	5
E.1. Is the staff routinely educated about quality?					
E.2. Does the HIV program routinely engage staff in quality program activities?					
E.3. Are consumers involved in quality-related activities?					
F) EVALUATION OF QUALITY PROGRAM	1	2	3	4	5
F.1. Is a process in place to evaluate the HIV quality program?					
F.2. Does the quality program integrate findings into future planning?					
G) CLINICAL INFORMATION SYSTEM	1	2	3	4	5
G.1. Does the HIV program have an information system in place to track patient care and measure quality?					

(SCALE: 1 = MIN 5 = MAX)

Toolbox:
Project Team Assessment Tool

EVALUATION QUESTION	INFORMATION NEEDED
GOAL ACHIEVEMENT	
To what extent did the improvement team meet its goal?	Comparison of the improvement project goal with: • Baseline data • Pilot test results • Follow-up measurement data
What resources were needed to achieve the goal?	• Number of team meetings • Frequency of team meetings • Length of meetings • Cost of project materials • Number of team members • Additional staff time/resources needed to sustain efforts
Can the goal be attained more efficiently?	• Comparison of expected vs. needed resources to achieve gain • Monitoring data on improvement indicators following project completion
INTERVENTIONS	
How effective were the changes over the short term?	• Statement regarding degree of goal achievement • Description of how the interventions helped the patients • Comments from staff implementing the interventions
How effective were the changes spread throughout the program?	Description of the extent to which the program or other parts of the organization were involved in the interventions (e.g., which staff; how they were involved; quality committee involvement; policy changes)
How responsive was the program to making these changes?	Staff attitude toward the intervention; reasons why favorable or unfavorable.
TEAMWORK	
Did the team composition help the achievement of the improvement objective?	Names of team members and disciplines/functions cross referenced with causal factors and staff attitude toward the interventions
Did team members have sufficient skill level in making quality improvements to direct their own efforts?	• Description of project results and the degree of goal achievement • Previous exposure and training in quality improvements • Degree of comfort with quality improvement tools
Did the team run effective meetings?	Team members' attendance and participation at meetings

Completing The Program Assessment

"Who evaluates the program?" is a key question. To ensure a range of perspectives, the quality committee and a cross-section of staff members and other stakeholders can complete the program assessment.

It is best to provide time for quality committee members to complete the assessment individually. Staff should also be invited to voice their assessment of the quality program, a simple survey for all staff members is an effective strategy to solicit their feedback. Upon completion of these assessments, convene a quality committee meeting to discuss the composite responses. Quality committee members should reach consensus about the findings and take appropriate actions.

During the process of evaluating the quality program, use the results of the quality program for future planning to shape an effective quality program and update the workplan.

Real-World Tip
Plan For The Evaluation.

Consider the following ideas to evaluate your HIV quality program:

- Decide on the areas to evaluate first and then identify the information you need to collect.
- Reflect the needs of staff, patients and other stakeholders when designing the evaluation process and tools.
- Assign one or two quality committee members to draft the program evaluation tool.
- Dedicate a quality committee meeting to reviewing and discussing the evaluation findings.
- Keep the evaluation tool simple.
- Make your evaluation cycle coincide with funding cycle reporting.

Notes

Additional Resource

For guidance in teaching small groups about the basic activities required to evaluate an HIV quality program, see the HIVQUAL Group Learning Guide "Evaluation of Quality Program" exercise. The exercise could also be used to gear staff members up for their own evaluation cycle. You can download this publication at www.hivqual.org.

Evaluate Project Team Performance.

The purpose of project team evaluation is to assess how effectively project teams have succeeded in improving the delivery of care to HIV patients against the initial team charter. There are three main aspects to quality project evaluation: attainment of goals, effectiveness of interventions, and teamwork. Key questions to consider are:

- Goal achievement. To what extent did the improvement team meet its goal? Can the goal be attained more efficiently? Were the improvements sustained over time?
- Interventions. How effective were the changes? How effective were the changes spread throughout the program? How responsive was the program to making these changes? What did we learn?
- Teamwork. Did the team composition help the achievement of the improvement objective? Did team members have sufficient skill level in making quality improvements to direct their own efforts? Did the team run effective meetings?

Designing A Project Team Assessment Tool

Project teams can create or modify an existing assessment tool. The Toolbox on page 73 shows an example of how a facility could gather information to assess the three areas of goal achievement, interventions and teamwork.

Completing The Project Team Assessment

Sometime before the end of the project—often at the last team meeting—all members of the improvement team should complete the project team assessment.

The Toolbox on page 76 provides a modified version of a group interview technique that could be used to collect the evaluation information. It takes little time and displays information related to several of the questions listed in the Improvement Project Team Assessment Tool on page 73. The steps and instructions are written in an agenda format based on the assumption that it is a team meeting.

Many facilities find it helpful to gather feedback from consumers about how the interventions affect their HIV care. Ensuring input from those affected by the modified care system will provide a complete picture of the project work.

When the project assessment is complete, the improvement team should document the results and submit a copy to the quality committee. The quality committee can review and discuss all the project evaluation data and consider the impact for future planning.

The Toolbox on page 141 provides another approach for project teams to evaluate project team performance.

Toolbox:

Agenda for Project Team Assessment

Date: October 22, 2005
Project team members present: John Waters, Michele Goss, Michael Sacks
Invited guests: Susan Rodrigues (Medical Director)
Purpose: To assess the effectiveness of the project team efforts

AGENDA

TIME	ACTIVITY
5 minutes	Introduce the purpose of the meeting. Review the agenda.
30 minutes	Discussion of project team performance. 1. Brainstorm a list of factors that helped us achieve the goals of the project. 2. Brainstorm a list of factors that hindered us from achieving a higher performance. 3. For each list, identify the most significant factors by voting. 4. Re-write a new list with the factors that received the most votes. 5. Discuss each factor in greater detail.
30 minutes	Make recommendations to the quality committee on the following: • Future goal setting for this project. • Team effectiveness/efficiency for future teams. • Sustaining interventions.
5 minutes	Summarize and discuss next steps.

Learn From And Respond To Past Performance.

Evaluation results can help the quality committee to identify critical issues for future planning.

Reviewing Data

To maximize the lessons learned from evaluation data, the committee should review all program and project evaluation results and identify common themes or problems. Additional data (such as audit results or quality evaluations performed by external agencies) can be used to supplement the internal program and project evaluations and may help to identify future improvement opportunities.

Assessing Impact

In reviewing the data and linking them to overall program objectives, the quality committee assesses the impact on the HIV program and compiles a list of critical issues to be addressed during the upcoming annual planning process. The past performance of the quality management program can be used to learn lessons for future quality activities and how to best adapt the quality infrastructure. Those steps can include changes to the existing quality program by adapting annual goals and performance measures or changes to the annual workplan. It is critical to immediately take action while the evaluation results are still fresh in the minds of the quality committee.

Notes

Additional Resource

Review the HIVQUAL Group Learning Guide "Team Self Evaluation" exercise as it describes the important opportunity for teams to discuss the positive aspects of their group interactions along with the areas that need improvement. In this way, team members help to build a "template" for success for future team projects for their own evaluation cycle. You can download this publication at www.hivqual.org.

Strategize To Sustain The HIV Quality Program.

The key to sustaining the HIV-specific quality program over time is to make quality improvement an integral part of the program's daily acitivities. Taking appropriate actions to sustain the efforts of the quality committee helps to avoid the pitfall of 'taking two steps forward, one step back.'
The quality committee employs the following strategies:

- Clear lines of accountability
- Spread the ownership of the quality program
- Communicate program success
- Routinely assess quality program

Clear Lines Of Accountability

The quality committee maps a clear structure of the HIV quality program, including the staff's roles and responsibilities. Quality improvement activities are incorporated as part of everyone's job description and job expectations. This increases staff awareness and links them directly into the quality program.

Spread The Ownership Of The Quality Program

Quality activities should be embraced by every staff member in order for the HIV quality program to be sustained over time. Explain that all staff members are part of the quality management program and, in order to succeed, the quality program takes root through their involvement. The goals and ongoing activities of the quality program are routinely communicated with staff.

Communicate Program Success

The key messages about quality should be doggedly repeated over and over, and reinforced at every opportunity. Communicating successes of the HIV quality program widens the program's base of support. Techniques include:

- Develop a system for staff reward and recognition
- Champion staff through internal and external promotion of success stories
- Showcase successes visually in facility
- Exchange "best practices" with other HIV programs

Real-World Tip
Broaden The Support For Quality.

Look for ways to create buy-in for ongoing quality of care improvements throughout the HIV facility:

- Identify patients who can provide testimonials about the effects interventions had on patient care.
- Routinely survey staff and consumers about their needs and review at the quality committee.
- Train all new staff members about quality improvement activities at the facility.
- Encourage staff members to become experts in quality improvement; publicly recognize their efforts.
- Involve staff in the decision-making and prioritization of future improvement goals.

Toolbox:

Tips for Different HIV Program Types

Recognizing different service delivery models for HIV care, the following table highlights how several delivery systems can evaluate the HIV-specific quality program.

SMALL HIV PROGRAMS

- Devote one quality committee meeting to evaluate the entire quality program since the same staff members participate on the quality committee and on project teams.
- Use pre-existing forms as much as possible (e.g., HIVQUAL Organizational Assessment Form – page 72) to facilitate evaluation process.
- Take advantage of the small size of the HIV program and plan future quality activities right away based on the evaluation results.

HIV NETWORKS

- Create assessment forms that are consistent across the network for the sake of comparison and peer-learning.
- Organize a special meeting with network representatives to assess the network performance including individual site performance; add measures to assess the performance of the entire network.

ADVANCED HIV PROGRAMS

- Present evaluation findings to the Consumer Advisory Committee and ask consumers for their input.
- Create a survey for all staff members to assess the quality program: Generate ideas for future quality management plans. Use findings to make adjustments to the quality management plan.

Routinely Assess Quality Program

To effectively know whether the HIV program meets its goals, the quality committee routinely assesses the overall performance of the quality program. To keep this strategy alive, it is important to:

- Re-assess performance at pre-established intervals
- Review evaluation data regularly
- Respond to the findings in an immediate and systematic manner

The Workbook describes in Project Step 6 on page 136 the details of how to sustain improvements made by quality improvement project teams.

Real-World Tip

Incorporate Quality Into The Fabric Of The Facility.

The following strategies are helpful to sustain gains made by the quality committee:

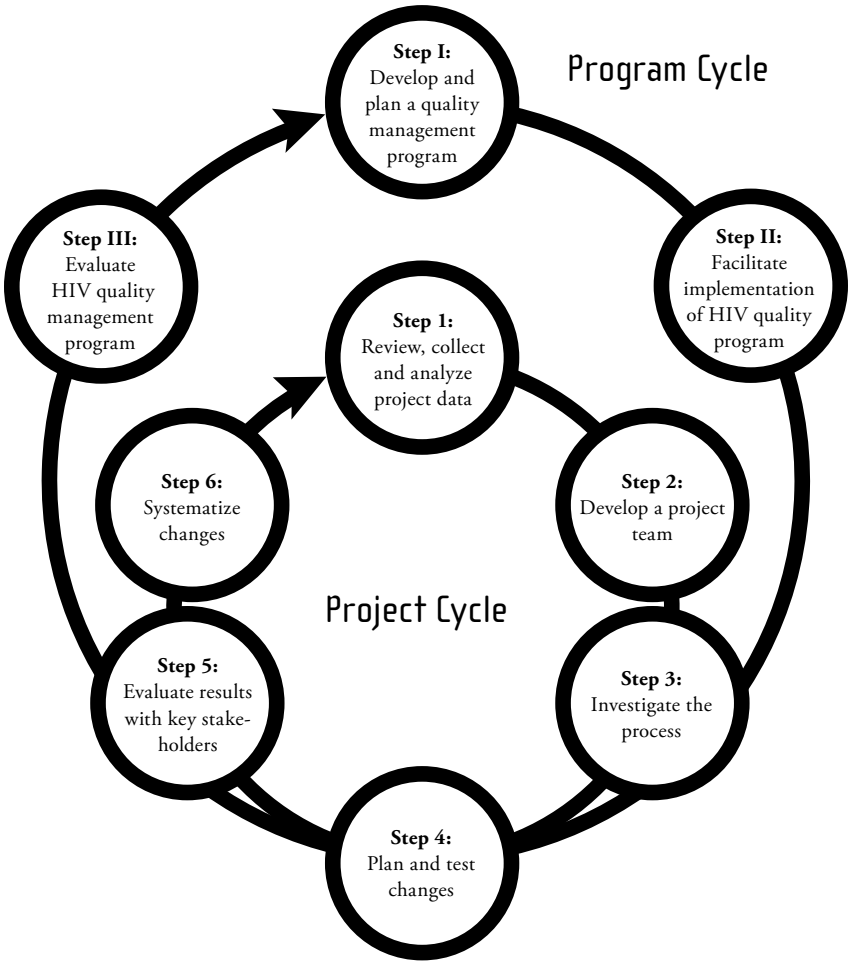
- Make quality improvement part of staff members' job descriptions and expectations.
- Incorporate quality concepts into training of new staff members.
- Provide ongoing quality training opportunities for existing staff.
- Provide opportunities for all staff to participate in quality improvement projects.
- Incorporate best practices identified during quality projects into daily processes.
- Reward successes of quality activities.

Notes

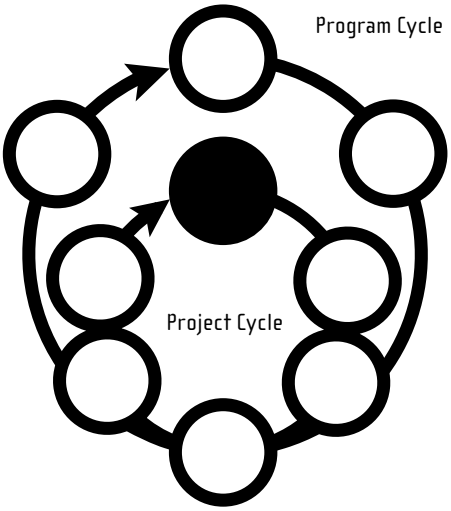
Additional Resource

For guidance in teaching small groups about the importance of sustainability to an HIV quality program's long-term success and how to improve sustainability, see the HIVQUAL Group Learning Guide "Sustainability of Quality Program" exercise. The exercise could also be used to document practical ideas for improving your program's sustainability. You can download this publication at www.hivqual.org.

HIVQUAL Model: Introduction to the Project Cycle



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 embarrassing 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?

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.'

Notes

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/mm^3, appropriate PCP prophylactic therapy is prescribed.

MAC Prophylaxis

For patients with CD4 counts <50 cells/mm^3, 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 pro vider) 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 percent
- 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

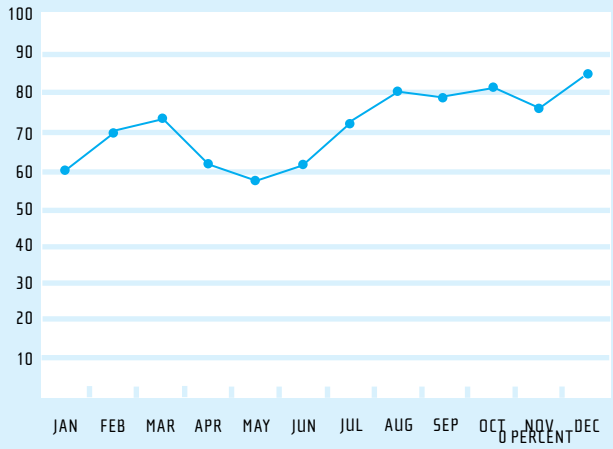
The following table indicates the minimum number of records for performance reviews based on eligible population. See page 142 for further information on sampling and data collection.

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

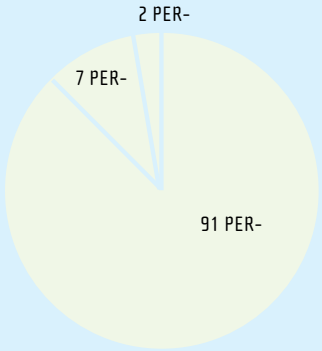
Toolbox:

Display of Measurement Data in Graphic Form

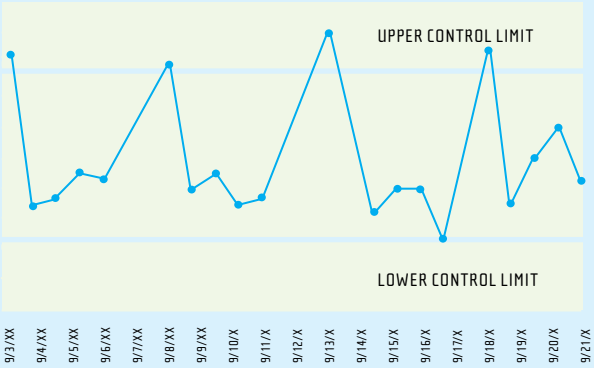
Run Chart: Annual PPD Rate



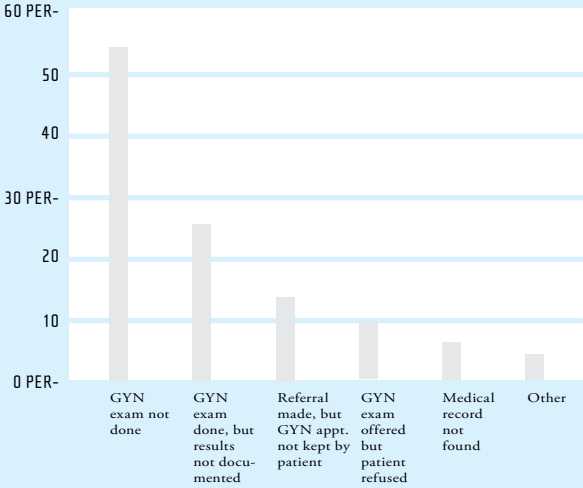
Pie Chart: Did patient receive PCP prophylaxis?



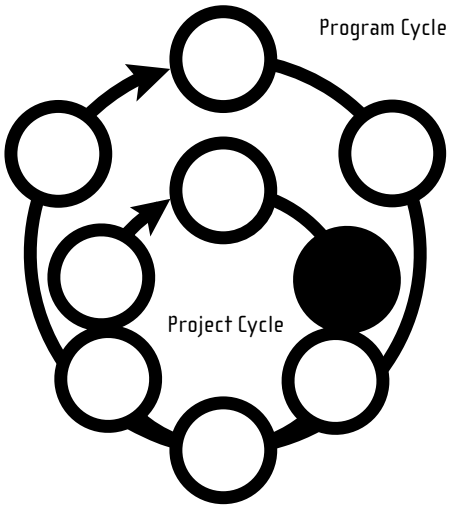
Control Chart: Waiting Time



Histogram: Reasons for No GYN Exam in Medical Record



Project Step 2: Develop A Project Team.



The Big Picture

Team members gear up for the project at hand during Project Step 2. They become familiar with their individual roles and responsibilities and determine how they will work together during the project. As a team they write an improvement project memo to define their direction and scope of work and they strategize about key tasks and time-lines ahead of them.

What To Do

- Establish project team dynamics.
- Write an improvement project memo.

Snapshot of HIV Care

Creating teams that work

"Not another committee meeting to go to." A frequent response of over-worked, stressed health care providers.

How can quality managers create quality improvement project teams that break out of the facility's committee routine and establish quality improvement project teams that are effective vehicles for quality improvement? Quality managers report using many strategies.

Involve new staff and consumers in project teams

Involve new people. "Don't focus on the 'usual suspects' when establishing a project team," suggests on program manager. "Too often, we look to the same people to serve on committees. Because of they're over-extended, we don't get the type of participation we need." Project team members should be selected because they will bring a needed skill or insight to the improvement process. "This isn't about business as usual. It's about changing the usual."

Snapshot of HIV Care...Continued

Administrative and support staff who aren't usually involved in the management functions of the facility should be included in the project team. Their experiences and perspective may lead to an "oh my gosh" moment—the realization of how processes actually work in "real life,"

Consumers can also be involved in project teams. You may need to provide some training and support to facilitate consumers' effective involvement in the team, but their perspective can often be important to the team's work. Try mentoring consumers in the role—pair an experienced consumer with someone who hasn't yet been involved.

Establish expectations of participation. Project team members need to know their roles and responsibilities and understanding that all members are expected to participate. "We started off our first meeting by telling team members that everyone was going to be active. No benchwarmers here," reports one project team leader. "While it was my responsibility to keep everyone on track, my team members also developed the understanding that if we all worked together, we were more likely to complete our work on schedule, implement our improvements, and get back to work!"

New leadership should be involved in the project teams. Don't rely on the same individuals to provide leadership to the team – the Medical Director does not have to be the leader in each team. Establish a process for mentoring future project team leaders by purposively involving new people in leadership roles. Provide training and support so they can assume independent leadership roles in the future.

Focus the team's work

Clearly outline the work of the team. Defining the goal of the team and creating a workplan gets everyone on-board quickly and creates an understanding of what needs to be done. However, the goal needs to be focused and achievable. Kay Scott at St. John's Riverside Hospital, Yonkers, NY reports that their initial improvement goal was to "go global" and created a plan that had great ideas but "was too ambitious." By starting with narrow and focused efforts, Scott reports that they were able to achieve much more than that had anticipated.

Multi-site facilities can create multiple teams—each working on their own project or working on the same cross-site project. Unity Health Care in Washington, DC, a multi-site community health center, has site-specific quality project teams that work on their projects. They participate in cross-site meetings to report their work and share their experiences. This structures works because it fits into the overall corporate structure where responsibility for clinic operations is decentralized to each site.

Establish Project Team Dynamics.

HIV project improvement teams, vehicles of quality improvement activities, meld together the skills, experiences and insights of different staff. Each team will have some unique combination of people, improvement goals and performance measures.

Successful outcomes of improvement projects result most often when a team has clear objectives to guide their activities, the necessary resources to complete project work, support of the quality committee, and the willingness of team members to learn from each other and maintain open communication with the quality committee, staff and consumers.

Defining Roles And Responsibilities

Effective team functioning becomes everyone's responsibility. Team members should take time at the beginning of the project to get acquainted with team members' roles and responsibilities and agree upon how the team will function to get work done.

- Team leader: Someone who fully understands HIV care delivery issues needs to be on the team as team leader. The person selected as team leader also understands the entire breadth of the improvement project so he or she can effectively plan and lead team meetings.
- Team facilitator: Team leaders may wear two hats and also serve as the team facilitator. Generally, the facilitator assists the team leader in planning meetings and developing agendas. A facilitator also tends to the meeting process, for example, ensuring that everyone participates, and helps keep participants on track with the agenda and scheduled times.
- Team member: Team members reflect the range of functions and departments involved in the process being improved in order to build and maintain consensus from key individuals on the solutions to the problems. They should also have intimate knowledge of the process, personal involvement and interest.

The quality committee usually assigns staff members to serve as the team leader and team facilitator for a quality improvement team. Improvement team members can be selected by either the quality committee or by the team leader.

The Toolbox on page 97 chart further illustrates the roles and responsibilities for an improvement project team.

Preparing Teams To Do Work

In the initial phase of an improvement project, the team leader and/or facilitator serve as the driving force to build effective relationships between team members and ensure everyone understands the team's assignment.

The team leader and/or team facilitator ensure team members know each other and recognize how members can complement each other through their expertise and perspectives. Any educational training to successfully start the improvement project is provided by the team leader and/or team facilitator. Team members' experience and the specific nature of the project will dictate the appropriate level of necessary team-building and training.

Real-World Tip
Launch A Team With Purpose.

Whether an improvement project is small or large, simple or complex, the following suggestions can help a team to successfully complete a project:

- Include a quality committee member on the team.
- Involve additional staff who is willing to participate; ask for volunteers.
- Rotate functions of the team.
- Start with a presentation of a successful quality improvement project.
- Generate enthusiasm and excitement at the first team meeting; explain why the work is important or how staff and consumers will benefit.
- Explain the potential for change and limitations early on to explain the project's framework.
- Rotate the role of recorder and timekeeper among team members.
- Include an engaged consumer on the team and be proactive preparing the consumer.

Additional Resource

For guidance in teaching small groups about the roles and responsibilities of project team members, see the HIVQUAL Group Learning Guide "Team Roles" exercise. The exercise could also be used as an ice breaker for the project team's first meeting. You can download this publication at www.hivqual.org.

Toolbox:

Team Roles for an Improvement Project

Team leader:	Lindsey Cabrelli, R.N., Director of Operations
Team member:	Bruce Dixon, Medical Liaison (Team facilitator)
	Angelique Martinez, Clerk
	Michael Sappal, Case Manager
	Lan Huong, Staff R.N.
	Gloria, Consumer
Recorder and timekeeper:	To be rotated among team members
	Updated: October 31, 2005 by Cheryl March, R.N.

TEAM RESPONSIBILITIES	TEAM LEADER	TEAM FACILITATOR	TEAM MEMBER
Provide direction and focus to team activities	X		
Ensure productive use of team members' time		X	
Represent team to clinic management and quality committee	X		
Facilitate team meetings		X	
Ensure balanced participation by all team members		X	
Provide feedback and support to team leader		X	
Suggest problem-solving tools and techniques	X	X	X
Offer perspective and ideas and participate actively	X	X	X
Adhere to meeting ground rules	X	X	X
Complete assignments on time	X	X	X
Support implementation of recommendations	X	X	X
Keep up-to-date on QI training, research and methods	X	X	
Manage the team's time	X	X	
Take and distribute minutes of meetings			X

Write An Improvement Project Memo.

An improvement project memo serves as a project blueprint. Teams develop memos to help ensure that all members work toward the same goals according to a single set of operational guidelines. Completion of the improvement project memo is important to:

- Clarify and focus the team's direction and scope of work.
- Create a standard document for communicating what the project is, what it intends to accomplish, when it is likely to be completed, and who is responsible for the project implementation.
- Refocus team efforts if a team gets stuck on a specific issue.
- Educate new team members coming on board during the project cycle and getting those individuals up to speed.

An improvement project memo typically includes:

- Problem statement
- Improvement goal
- Team leader and team members
- Other (resources, authority, frequency of reporting, ground rules)

The improvement project memo may evolve and change over time as new information and data analysis results become available or additional knowledge is gained. Consider the memo a 'living document.'

For example, a team may increase a target improvement goal from 70 percent to 85 percent as information and data substantiate the new goal can be realistically achieved.

The Toolbox on page 99 provides a sample Improvement Project Memo that teams can easily modify to suit their specific purposes.

Defining A Project Problem Statement

A problem statement describes the problem to be addressed. It should:

- Be stated in concrete terms—terms that clearly describe the problem to be addressed.
- Include quantifiable numbers that indicate the current level of performance (e.g., "Currently 60 percent of women in the HIV clinic receive annual GYN exams.")
- Be relevant to HIV care and services provided by the facility.

Real-World Tip
Keep The Memo Purpose Aligned.

The following fundamentals are helpful in drafting an improvement project memo:

- Ask for input from facility leaders or the HIV committee in writing the memo to gain their buy-in.
- If necessary, redefine the goals over time.
- Communicate the memo to others; email to all staff and post in visible places for consumers.
- Make it simple.

Toolbox:

Improvement Project Memo

PROJECT START DATE:	October 22, 2005
COMPLETION DATE:	April 15, 2006
INDICATOR:	PCP prophylaxis
PROBLEM STATEMENT:	Currently, only 65 percent of patients with CD4 count less than 200 receive appropriate PCP prophylaxis, compared to the state-wide average of 92 percent. In the last year the performance rate declined by 31 percent.
IMPROVEMENT GOAL:	The team will work to improve the clinic's performance on this important prevention measure. The team should focus on increasing the number of patients with CD4 count less than 200 receiving appropriate PCP prophylaxis to 95 percent and above.
TEAM MEMBER:	Ann Cavanaugh, C.S.W. (team leader) Peter Brown Paul Sabo, M.D. Santiago Rodriguez Helen Kearney Cheryl March, R.N.
OTHER: (RESOURCES, AUTHORITY, FREQUENCY OF REPORTING, GROUND RULES)	Team will be given time to meet. There's money for supplies or other similar expenses, but not for additional staff. Mac Martin (MIS department) will be available to help with data analysis. Team members should give a verbal report at the next quality committee meeting, November 15. All team members should be on time and no excuses.

Updated: October 31, 2005 by Cheryl March R.N.

Defining A Project Goal

Effective teams work with clearly defined goals. There is some debate on how high to set the goal: an achievable, realistic or a "stretch" goal. A basic guideline would be: set the goal and then continue making changes until the level is reached at which the effort expended is too great for the gain. In other words, the value of meeting the goal should exceed the cost of doing so.

A good project goal clearly sets forth a goal that is measurable and achievable. The following template can be used in formulating the goal statement: "The team will work to improve the clinic's performance on the (name of the indicator) indicator. The team should focus on (action verb) the number of patients who (state the desired result). Currently, our performance is (percentage). The team should aim to improve this performance to (percentage)."

See the Toolbox on page 99 for a completed example of an Improvement Project Memo.

Setting Team Expectations

Team members should discuss and agree upon ground rules. Ground rules or team norms are what team members can expect from each other. Examples include:

- Agree to start on time and end on time.
- Frequency of meetings, length and time.
- Regular attendance.

An example of team ground rules developed by one HIV clinic is shown in the Toolbox on page 101.

Because the improvement project memo serves as a project blueprint everyone on the team needs to review it and agree on the content. When the team has reached consensus about the improvement project memo, it is submitted to the HIV quality committee for final review.

The project team is ready to get started. A workplan is sometimes used to provide a road map for a team to complete its work. Consider developing a Gantt chart for the improvement project as illustrated in the Toolbox on page 102.

Additional Resource

For guidance in teaching small groups about the purpose and primary elements of an Improvement Project Memo, see the HIVQUAL Group Learning Guide "Improvement Project Memo" exercise. You can download this publication at www.hivqual.org.

Toolbox:
Team Ground Rules

MEMBERS OF THE PERFORMANCE IMPROVEMENT PROJECT TEAM AGREE ON THE FOLLOWING:	
1.	Meeting will start and end on time.
2.	All opinions will be considered with respect.
3.	Meetings will last 45 - 60 minutes and not longer!
4.	Meetings will be held in the group room.
5.	Meetings will be held in an atmostphere that will encourage team members to share their perspectives.
6.	Team members given assignments between meetings will complete their task on time.
7.	All team members will attend meetings on a regular basis.
8.	Team members will inform other team members one week in advance (if possible) of unavoidable absence from scheduled meetings.

Toolbox:
Gantt Chart

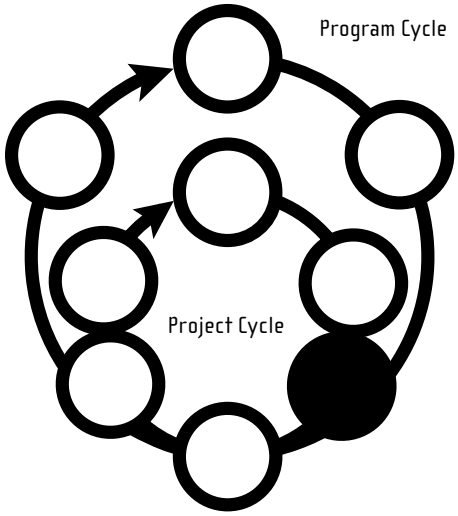
DESCRIPTION	• Graphically displays activities (including roles and responsibilities) in sequential order plotted over time • Depicts when each activity in a project must start and finish • Shows which activities can be accomplished concurrently • Shows the relative amount of time required to complete an activity • Presents the minimum time needed to complete an improvement project
USE	• To plan an improvement project • To monitor the progress of an improvement project
BASIC CONSTRUCTION	1. Identify all the activities that are necessary to complete an improvement project. (Note that these activities are not necessarily related.) 2. Identify the time required for each activity. 3. Identify the sequence of activities (e.g., which ones must be finished before another can begin and which can occur simultaneously). 4. Construct a horizontal timeline along the top axis; mark the appropriate scale for the project duration (e.g., days, weeks, or months). 5. List the project activities on the left vertical axis in order along with responsibility. 6. Mark the period of time from the planned beginning to the planned end for each activity.

Gantt Chart Example: Self Management Program

Implementation Plan of a Self-Management Program to empower patients to become informed and active participants in our health care delivery system.

ACTIVITY	RESPONSIBILITY	WEEKS								
		1	2	3	4	5	6	7	8	9
Collect current written materials about self-management	Mary	X	X							
Prepare presentation and draft educational materials	Mary		X	X						
Discuss at quality management committee	Pat			X						
Discuss with consumer advisory board	Hal			X						
Establish team with providers and consumers	Pat			X	X					
Formulate clear objectives and staff expectations	Mary				X	X	X			
Present at staff meeting	Pat					X				
Implement self-management program with one provider	Jack					X	X	X	X	X
Establish indicator to measure performance	Mary							X	X	
Review new self-management program articles	Pat								X	X

Project Step 3: Investigate the Process.



The Big Picture

After defining and documenting the aspect of care under review, project team members review the process from which the problem originated in order to understand how the problem evolved and why it persists. Identification of these problem areas and their underlying causes provides team members with the necessary information to help solve the problem.

What to do

- Understand the process.
- Identify underlying causes.

Snapshot of HIV Care

Everyone's a detective: "CSI: HIV Care Program"

After the area for improvement is identified and performance data collected, the project team sets off to identify where things may go wrong in the care delivery process. In this process, all team members can act as improvement detectives—critically investigating the current processes and identifying underlying causes. Techniques of investigation include developing flowcharts of process, identifying underlying causes, and brainstorming, but team members should be encouraged to be innovative in how they seek causes and possible solutions.

Using flowcharting to investigate the process for placing and reading PPDs identified two problems: HIV care providers were not sufficiently aware of the need to place PPDs and the patients were not returning to have their PPDs read, report JaneAnn Hall and Sandy Bergner of Hennepin County Medical Center, Minneapolis, MN. The project team then brainstormed the likely causes of these problems—a variety of scheduling problems with providers were identified. On the patient side, staff suspected the reason patients were not returning was because they did not fully understand the purpose of the PPD test or its importance.

Snapshot of HIV Care...Continued

In prioritizing the root causes, Hall and Bergner, say that HCMC staff determined that both issues were "integrally linked" and that both needed to be addressed by simultaneous improvement efforts. These efforts included the development of patient education materials and training nurses to place PPDs in the absence of physicians. These changes had been successful, with increases in both the number of patients receiving PPDs and having the read.

A quality improvement project team at the University of Pittsburgh Medical Center was formed to improve the process of prescription refills. Through their investigation, they found that many of their patients were receiving prescription refills but were not coming in on a consistent basis for medical visits or viral load monitoring. We found that "physicians were providing multiple refills on prescriptions, so patients didn't need to come into the clinic to see their physician and have their lab work done," reports Administrative Director Margaret Palumbo. Lacking adequate policies and procedures regarding refills exacerbated the problem.

The improvement effort included the development of a policy regarding refills (limited to no more than three), medical visits and lab monitoring frequency, and physician management of night and weekend call schedules. The new guidelines were communicated to patients through brochures and when they called in for their medication refills.

"While it was a difficult adjustment for patients and staff, after six months everyone seems to have adapted. As a result of this new policy, patient safety and retention in care has improved," Palumbo reports. "The percentage of patients who kept their quarterly monitoring visit increased from 68 percent to 95 percent over nine months."

The cause or reason isn't always so obvious. Often, project teams feel overwhelmed because they've identified too many possibilities, or systems that they can't control. Sometimes, reducing the number of people involved in the effort can help focus the brainstorming effort. Sheila Boyle, Process Improvement Coordinator at the Albany Medical Center, Albany, NY reports that during one brainstorming activity "we started out with a very large group and got a lot of valuable ideas, but there was an overload of perspectives. There were so many ideas flying around, it because difficult to decide on the next steps. Once we limited to group to only four people that we felt adequately represented the process being investigated, we had more focused discussions and arrived at more concrete solutions and ideas."

Conducting Fieldwork

Team members can also take their investigation out into the field to the places where care or services are actually delivered. One project team sent two team members to its clinic, pretending to be patients, to investigate the clinic visit process. Following the directions given to all patients, the team members actually got lost in their own facility because of errors in the instructions routinely given to patients. Only by walking through these instructions did they learn about a potential reason for patient visit delays.

Frontline staff from different agencies and disciplines in the Dallas Family Access Network (Dallas FAN) traded places with each other to gain an understanding of the network's member agencies and staff. "A nurse working with a case manager and an outreach worker going to an administrative office learned a lot because of the perspective of someone who is from another agency. They gained a great understanding of what goes on behind the scenes at the other member agencies. Now everyone has a new perspective of what it takes to walk in their colleagues' shoes," reposts Betty Cabrera, Dallas FAN's Executive Director.

Snapshot of HIV Care...Continued

Other facility staff can become involved in the process through completing surveys or being interviewed by team members and reviewing the flowcharts and root cause analyses developed by the project team.

Project teams can also include consumers who can provide their perspective of being a client at the facility. The University of Miami School of Medicine, Miami, FL involved consumers in their investigation of low rates of follow-through with mental health referrals and appointments. They learned from consumers that because of the stigma associated with mental health services, consumers were reluctant to engage in these services. Their subsequent improvement project focused on dispelling this stigma.

Everything's connected

Usually the process of investigation leads to new insight about how care is delivered. It can also uncover other aspects of facility operations. For example, one quality manager reports that during one brainstorming session they discovered a problem within their purchasing department. "It turned out that the requests for supplies for the lab were being sent to the wrong supplier. No wonder we never had what we needed!" This process led to improvement projects relating to both staff training and changes in purchasing policies as well as with lab operations, which was the initial focus of the project team. "During this process, it was important not to point fingers at individual staff and to continuously communicate to the team that we had to keep focused on the process, not the person."

Understand The Process.

Preliminary analysis of performance measurement data and other information helped to identify problems. The data point out deficiencies but do not necessarily explain their causes. Further analyses are necessary to refine the team's understanding of the process and target potential problem areas that require improvement.

By definition, a process is a series of steps or actions needed to produce something or to achieve an end. For example, a series of steps are repeated each time a patient comes for an exam—a patient registers, waits to be called, checks in with the nurse, meets with the provider, is examined, has blood drawn, if needed, then, schedules a follow-up appointment.

A process is the basic level at which changes can be made to improve HIV care. Sometimes a relatively simple task requires several steps, any one or more of which may need to be changed.

Charting The Process

One of the best ways to understand a process is to draw a picture of it—and that's basically what flowcharting is. A flowchart shows the steps of any process in sequential order. Flowcharts can be used to illustrate a sequence of events, activities or tasks for processes ranging from simple to complex. There are many styles of flowcharts but most are drawn using a few common symbols.

Flowcharts help staff visualize the process so that it is easier to understand and easier to improve. Teams should take the time to construct a flowchart because it:

- Provides a fast and efficient way to understand the process.
- Identifies potential sources of problems and provides a clear frame of reference for pinpointing the part of the process that requires change.
- Enables the team to communicate to others what they are doing and why.

The flowchart is completed by the project team since each member typically understands part of the process, but not necessarily the whole process. By working together the flowchart has a greater level of detail and accuracy, and agreement is reached more easily. It is important for team members to use information that is based on fact and not anecdote.

To round out the information gathered during flowcharting, a project team may interview those who are affected directly or indirectly by the process. Questions may focus on issues that might hinder the process, for example, waiting time, room availability and preparedness, computer problems, location of patient charts, patient access, and adequacy of the length of time scheduled.

The Toolbox on page 108 provides a step-by-step guide for constructing a flowchart. An example of a flowchart is also included.

Real-World Tip
Gather Input.

The following steps are helpful in drafting and finalizing a flowchart:

- Brainstorm with those who are affected by the process under review.
- Create two flowcharts: one describing the current process and one outlining the desired improved process.
- Share a draft version of your flowchart openly with staff and gather their input; include graphic display to illustrate changes to staff.
- Interview patients or conduct focus groups with patients before finalizing flowchart.
- Measure the time for each step and indicate on flowchart.

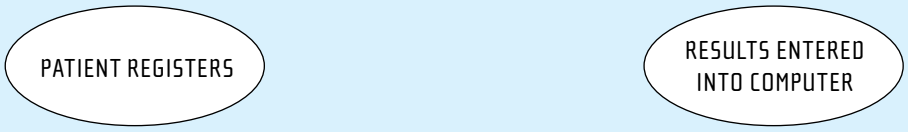
Notes

Additional Resource

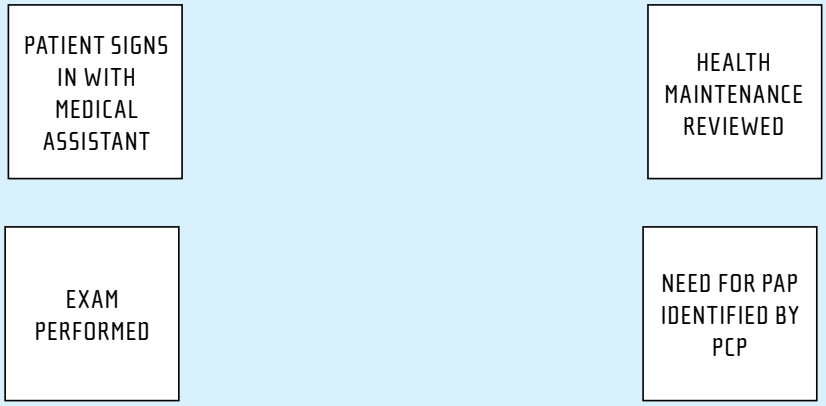
For guidance in teaching small groups about how flowcharts are used during process investigation, see the HIVQUAL Group Learning Guide "Flowchart" exercise. The exercise could also be used by project teams as a warm-up to creating their own flowchart. You can download this publication at www.hivqual.org.

Toolbox:
Flowcharting

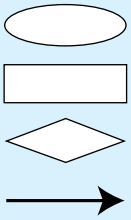
1. Decide on the beginning and ending points of the process. A team working on GYN care defines the beginning point when the patient registers at the clinic and the ending point when documentation of the results of the GYN exam are entered in the computer. There can be more than one starting or ending point.



2. Identify each step of the process. Describe the steps of the process under review and write each step on a 3x5 card.



3. Use common symbols. Try out the following symbols. You can change them if you find a better way to illustrate the concept.



Oval shows START or END point on a process diagram

Rectangle shows an activity in the process

Diamond shows a "YES" or "NO" decision

Arrow connects steps in a process and directs the flow

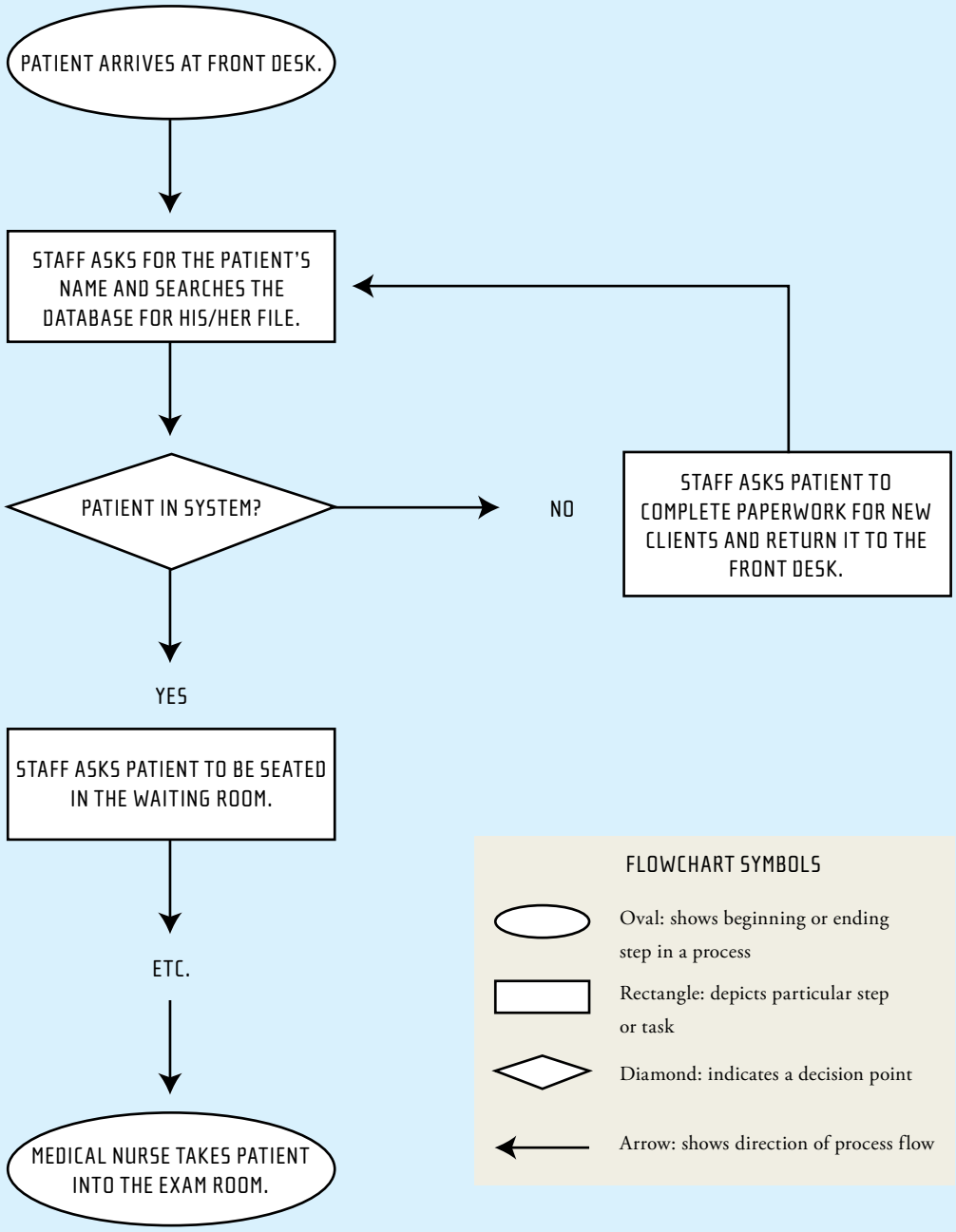
4. Place the cards in sequential order. Place the cards (with tape on the back) on a large piece of paper or a whiteboard and connect the steps with arrows. Usually on the first trial there are frequent changes.

5. Conduct a quick investigation, if needed. At times the team might not sufficiently understand the entire process and need to gather additional input.

6. Identify and agree on key process areas. Step back and look at your diagram. Discuss what steps are problem areas based on team members' experiences. Circle those steps. Time can be wasted on working on "surface" problems, i.e. those you see versus those that give rise to the problem. For each problem identified, discuss likely causes and write them next to each problem. This method combines the flowchart with a cause-and-effect analysis.

Toolbox:

Flowcharting...Continued



FLOWCHART SYMBOLS

- Oval: shows beginning or ending step in a process
- Rectangle: depicts particular step or task
- Diamond: indicates a decision point
- Arrow: shows direction of process flow

Identify Underlying Causes.

Having completed the flowchart, the project team begins identifying potential barriers and the underlying causes of the problem(s). Underlying causes are the reasons a problem happens repeatedly. If the team can identify and eliminate underlying causes, they eliminate the problem. Conversely, if the team fails to correctly identify the underlying causes, they may only 'cover up' the problem and it will probably reoccur. In real life, a quality problem is embedded in a system with a myriad of interdependent steps. To fix just one cause might not fix the system barrier.

Identifying Potential Causes

During process investigation the project team generates ideas about potential causes of the problem, either through group discussions or brainstorming.

Brainstorming is defined as a technique to freely and uninhibitedly generate ideas using a group approach. It is a useful tool when a team needs to generate a large volume of ideas. The Toolbox on page 111 provides a step-by-step guide for brainstorming.

Mapping Underlying Causes

Once the underlying causes are identified, the project team maps the factors that influence the problem. The visual display is important to reach agreement among the team and to clearly communicate the causes of a problem to others at a care facility, especially the HIV quality committee, staff and stakeholders.

The team can use flowcharts by adding the underlying causes at each step or a cause-and-effect diagram. The Toolbox on page 113 provides a step-by-step guide for creating a cause-and-effect diagram and an example.

Additional Resource

For guidance in teaching small groups about how brainstorming is used during process investigation, see the HIVQUAL Group Learning Guide "Brainstorming" exercise. The exercise could also be used to help team members adapt an "anything goes!" attitude before embarking on their own brainstorming session. You can download this publication at www.hivqual.org.

Toolbox:
Brainstorming

Basic Steps for Brainstorming

1. Write the topic statement or question in a central location. It should be clearly defined and written where everyone can see it.
2. Review general rules for brainstorming. Basic ground rules include:
   - Go for quantity of ideas; do not censor your ideas or anyone else's.
   - Utilize free-association and building on previous ideas.
   - Record ideas as stated; do not edit—only clarify, if necessary.
   - Do not discuss or debate the merit of individual ideas.
3. Establish a time limit. 7 to 10 minutes is recommended.
4. Generate ideas with the group until time is up. Begin idea generation by going around the group, allowing one idea per person. Participants may pass if they do not have an idea. Ideas should be written down where everyone can see them. The process of generating ideas usually goes through several cycles. Later cycles tend to have a slower pace, but may result in the most innovative ideas. It is important not to rush the process.
5. Review and refine ideas. Discard any ideas that are virtually identical.

Brainstorming Example of Show-Rate for GYN Appointments

Background:

A project team investigates the show-rate for GYN appointments and presents their results to the quality committee: 51 percent for GYN appointments.

Question for Brainstorming:

What are the reasons for a low show-rate for GYN appointments?

Idea List:

- Staff do not give patient printed appointment card
- Patients unaware of appointments
- Lack of childcare for patients
- Staff give patient wrong appointment information
- Difficult to reach patients directly by phone due to wrong contact information
- Computer system taken down for routine maintenance
- Appointment cards do not include exact clinic address
- Reminder calls placed by someone patient doesn't know
- Computer can only print reminders for appointments within 3 months
- No procedure in place to reschedule broken appointments
- Remote location of clinic
- Only one appointment can be listed on appointment card

Prioritizing Underlying Causes

Not all underlying causes are equal. Prioritization helps teams determine which one of the underlying causes has the greatest impact on the HIV system and potential for improving the aspect of care under review. Teams answer the following question: "Which underlying causes of the problem should we focus on first?"

Prioritization of underlying causes is a decision reached through team consensus. Possible criteria for prioritization are:

- Underlying cause within control of the team
- Impact to consumers (client inconvenience versus 'pain' caused by the problem)
- Difficulty in solving the underlying cause
- Resources required for addressing the underlying cause (e.g., staff time, money or space)
- Impact on delivery system

Real-World Tip
Ask For Input And Eliminate Barriers.

Consider the following tips when identifying and prioritizing underlying causes:

- Don't wait for the perfect solution when you need to remove a barrier; try a solution as quickly as possible.
- Start by investigating 'low-hanging fruit'—those problems with the most impact and value.
- Consult staff which underlying causes are the most important barriers and ask how to eliminate them.
- Find out how similar HIV programs have successfully completed similar quality projects.
- Include consumers when investigating the causes.

The Pareto chart is a quality tool that can be particularly helpful during this step. The Toolbox on page 115 provides an overview of the Pareto charting process.

Notes

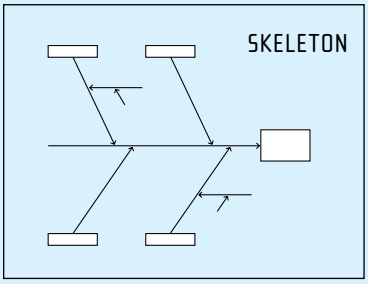
Additional Resource

For guidance in teaching small groups about how cause-and-effect diagrams are used during process investigation, see the HIVQUAL Group Learning Guide "Cause-and-Effect Diagram" exercise. You can download this publication at www.hivqual.org.

Toolbox:

Cause-and-Effect Diagram

The cause-and-effect diagram may also be referred to as an Ishikawa diagram, after the doctor who first developed it, or a fishbone diagram, after the diagram's structure that resembles the skeleton of a fish. The "skeleton" of a cause-and-effect diagram is shown below.

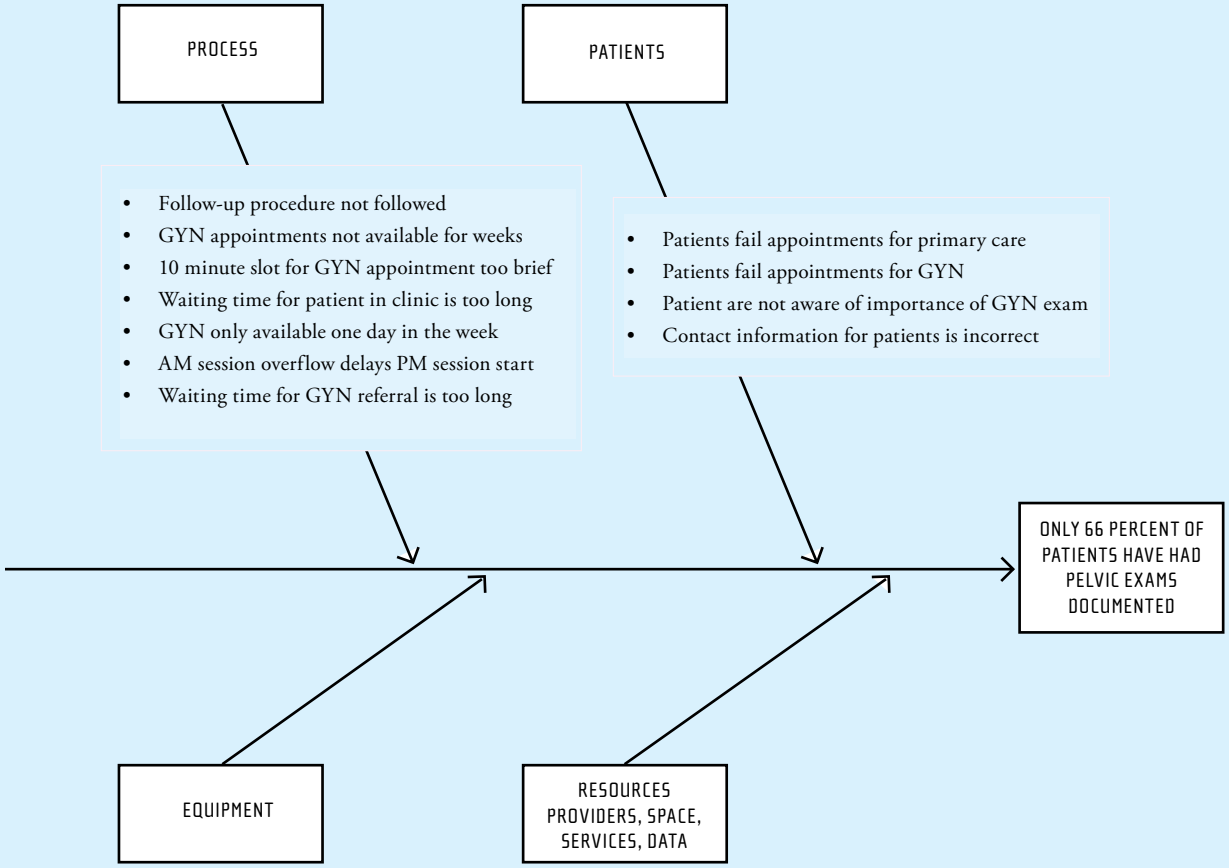


Basic Construction of a Cause-and-Effect Diagram

1. Draw the diagram's skeleton. Explain that the skeleton consists of a horizontal arrow pointing to the effect and additional arrows—representing causes—pointing to the horizontal arrow. Major causes can be separated into basic categories such as: Equipment, Environment, Procedures, People. These are only suggestions. A team should use categories that best fit their improvement needs. Others could be: Methods, Materials, Resources, and Measurement. Make them fit your problem.
2. Write the problem (or desired outcome) in the box at the end of the arrow.
3. Brainstorm potential causes and subcategories to fill in the "bones" of the skeleton if not done prior to this. Review the potential causes. Note how major causes typically have subcategories, identified by asking: Why does this happen?
4. Review and refine causes. This sets the stage to examine a few of the causes further and prioritize them.

Toolbox:

Cause-and-Effect Diagram...Continued



PROCESS

- Follow-up procedure not followed
- GYN appointments not available for weeks
- 10 minute slot for GYN appointment too brief
- Waiting time for patient in clinic is too long
- GYN only available one day in the week
- AM session overflow delays PM session start
- Waiting time for GYN referral is too long

PATIENTS

- Patients fail appointments for primary care
- Patients fail appointments for GYN
- Patient are not aware of importance of GYN exam
- Contact information for patients is incorrect

EQUIPMENT

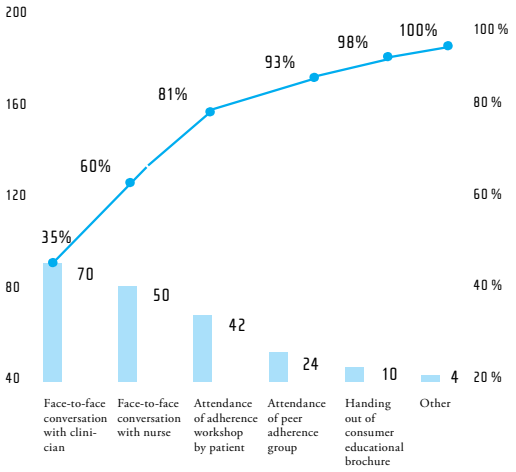
- Due to new computer system, GYN appointments can not be made
- Computers are frequently down
- Phone lines are busy at certain hours

RESOURCES PROVIDERS, SPACE, SERVICES, DATA

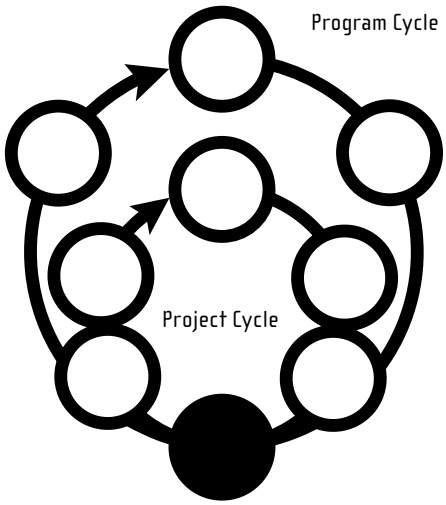
- 2 GYN sessions per week availability
- Only one room in use for GYN
- Provider is overbooked
- Provider is not able to speak Spanish
- Primary care providers are not providing pelvic exams
- Providers are not referring HIV patients to GYN department
- No routine reports by GYN department about frequency of patient visits

Toolbox:
Pareto Chart

DESCRIPTION	In any group of variables that contribute to a common effect, a relative few contributors ('vital few') will account for the majority of the effect while other contributors ('useful many') will have less impact. This principle is called Pareto or "80/20 Rule" which suggests that most effects are the result of relatively few causes, that is, approximately 80 percent of effects come from 20 percent of potential causes. To maximize your efforts, the team needs to identify first the 'vital few' and focus their efforts on those contributors.
USE	• Helps focus improvement efforts by ranking problems. • Allows project improvement teams to identify the 'vital few' causes of problems on which to focus their improvement efforts.
BASIC CONSTRUCTION	1. List response categories on the bottom horizontal axis in order of decreasing frequency, starting on the left side of the chart. 2. Mark the units (e.g., frequency, percent, cost, or time) on the left vertical axis. 3. Mark the right vertical axis from 0 percent - 100 percent. 4. Record the 'raw data' on the chart. 5. Construct a line starting from the top of the tallest bar to show the cumulative percentages.
PARETO CHART EXAMPLE	Which Adherence Interventions Work?



Project Step 4: Plan and Test Changes.



The Big Picture

Improvement changes are tried through 'pilot tests' on a small-scale before committing valuable time and resources to system wide implementation. Those pilot tests are often described as Plan-Do-Study-Act (PDSA) cycles. Selecting and planning pilot tests and evaluating pilot test results are probably the most critical activities in quality improvement projects.

What To Do

- Plan-Do-Study-Act (PDSA) cycles.
- Plan for pilot tests.
- Conduct pilot tests

Snapshot of HIV Care

Experimenting with changes to create lasting improvements

Investigating the process often generates a long list of ideas for changes. "One of our biggest challenges in planning a change was to get the improvement team to think small. Our investigation of the process identified so many possible underlying causes. The team wanted to take them all on," reports a quality manager. "While they all seemed compelling, we finally agreed to focus on only a handful and to prioritize these for our first PDSA cycles."

Often, good ideas don't work as planned. One clinic seeking to improve patient appointment keeping decided to implement a process for reminder telephone calls the day prior to the appointment. Through a PDSA cycle they discovered that over half of the phone numbers they had for their patients were no longer working and that much of the alternative contact information was incorrect. Implementing regular reminder calls with the currently documented

Snapshot of HIV Care...Continued

contact information was not likely to improve appointment keeping and would use a lot of staff resources. They decided that they next needed to test and implement a process for updating patient contact information so that they would have useful telephone numbers to begin reminder phone calls.

Creating a competition between teams has been used effectively to plan and test changes. The Albany Medical Center created some excitement about an improvement project to increase the number of annual comprehensive exams conducted. "We needed to find a way to jumpstart the improvement project and to create a commitment to quality improvement in the facility," reports Sheila Boyle, Process Improvement Coordinator. "We created two teams who competed against each other. Each team had to develop and document an improvement process for identifying patients who were due for their annual comprehensive exam and getting these patients into the clinic." The competition worked, doubling the number of exams usually provided. While the results were still less than the initial goal, it was still successful because "patients received high quality care, and staff became enthusiastic about their work and a commitment and interest in quality improvement took hold in the facility."

Small or big, improvements need to be tested and studied

Improvement efforts can also be small and focused changes. Sometimes changes can be as simple as changing one item on a flow sheet, changing the order of who sees a patient first in the clinic, or placing a reminder sheet on top of a chart.

"Regardless the size of the change—big or small—each cycle needs to be assessed against the predicted improvements and team members involved in deciding the next steps," advices a quality consultant. "The team should learn from both successes and failures and use this knowledge to inform their process."

Improvement efforts can sometime yield bigger results than expected. The quality team at St. John Riverside Hospital developed a simple graphic presentation of patient labs for CD4 and viral loads to help patients better understand their lab results and their relationship to care. The results from this change were better than expected. According to Kay Scott, "The patients were elated with the service. For the first time patients didn't have 'blank looks' on their faces when providers reviewed their lab results with them. Patients were so excited about receiving the graphic printout that they told their case managers and other providers about them."

In Scott's words, "Patient enthusiasm was the turning point—and it spread quickly throughout the hospital. Providers and staff were energized, and this was exactly the kind of buy-in needed to systematize the change." According to Scott, "the initial boost in consumer satisfaction with the change provided a catalyst for making quality improvements."

Conduct PDSA (Plan-Do-Study-Act) Cycles.

Because not all changes tested in pilots result in improvements, a project team identifies promising ideas for changes, tests them on a small-scale and assesses the impact on the aspect of HIV care under review. A helpful framework for facilities to implement pilot test changes is the Plan-Do-Study-Act (PDSA) cycle, developed by Walter A. Shewhart. In other words, the PDSA cycle is a "trial-and-learning" method to test changes before system-wide implementation.

Four steps are included in the PDSA cycle:

- Plan (Plan a change). At this point the team identifies a change and plans its implementation on a small-scale; including the number of records, timeframe, responsibilities and predictions of results.
- Do (Try it out on a small-scale). The project team members test the proposed change to see whether it results in an improvement. The goal is to keep the tests as small as possible. The shorter the test cycles, the more tests can be conducted and therefore, more opportunities for learning will emerge.
- Study (Observe the results). Once the results are analyzed and reviewed, the project team will need to find answers to the following questions: Did we meet our goal? What worked and what didn't? Do we need additional test cycles?
- Act (Refine the change as necessary). The project team maximizes the impact of successful changes by increasing the sample size involving providers and expanding the test cycles.

The following example should illustrate the process of the Plan-Do-Study-Act cycle:

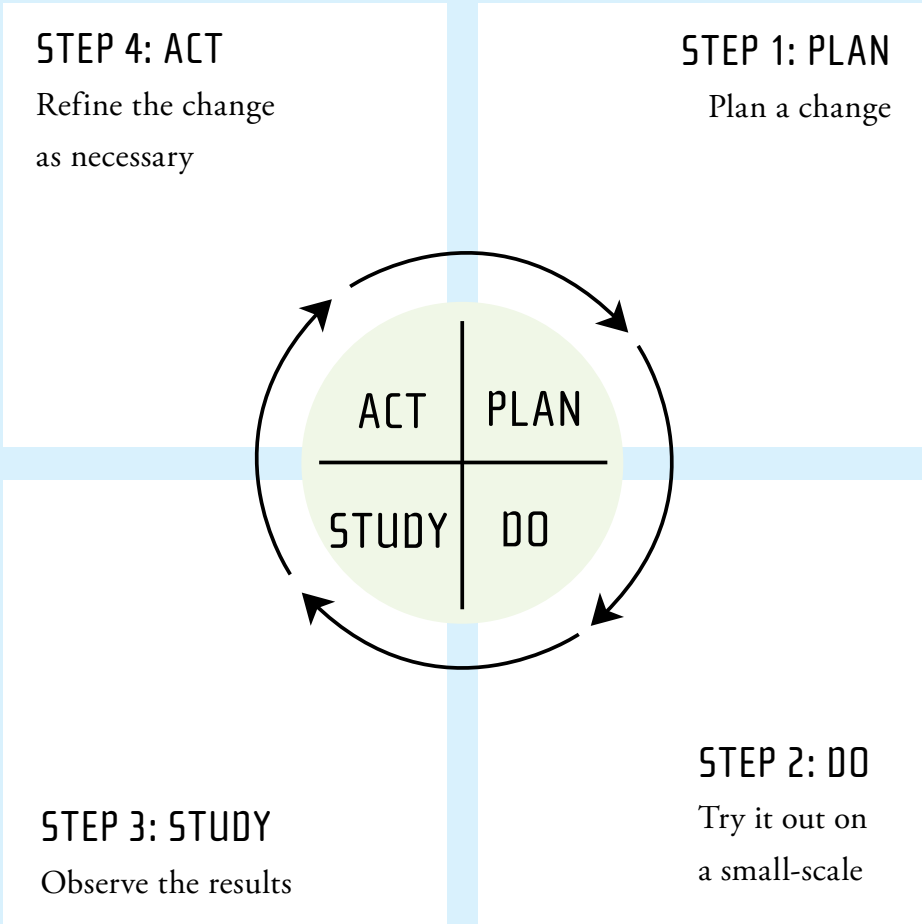
A project team that is charged to improve the performance on adherence assessments decides to pilot test a new flowchart that hopefully better documents the adherence discussions with patients. The team predicts a 20 percent increase. Initially, the team revises the clinical flowsheet and asks just one provider to test the revised flowsheet during one clinic session. Once feedback is received, the flowchart is revised and tested again with three providers over the course of the following week. The results are studied and more changes are made to the new flowsheet. After one more testing cycle, the revised flowsheet is implemented system-wide, ready for all providers for all clinic sessions.

The completion of each PDSA cycle leads directly into the start of the next cycle. A team learns from the test and uses the new knowledge to plan the next pilot tests. The team continues linking PDSA cycles. Often, a team will test more than one change at a time, each change aimed at achieving the ultimate goal of the entire quality improvement project.

Toolbox:

PDSA (Plan-Do-Study-Act) Cycle

The PDSA cycle provides a framework for facilities to plan and test changes before systemwide implementation.



Plan For Pilot Tests.

Pilot tests as PDSA cycles serve to try out potential solutions on a small-scale before system-wide implementation. The project team members initially select ideas for pilot tests that are most likely to succeed and plan their small-scale implementation.

Selecting Ideas For Pilot Tests

A list of potential pilot tests are identified, narrowed down to a manageable number and then prioritized by the project team. The more time a team knows about the process, the easier it is to identify practical solutions for pilot tests. The following criteria are helpful to make a quick determination with which pilot tests to start:

- Measurable: Can improvements be measured to track progress?
- Immediate: Will the pilot test produce short term visible results?
- Focused: Is the pilot test targeted to the underlying cause?
- Feasible: Is the pilot test feasible given available resources?
- Supportable: If the test is successful, will staff and facility leaders support successful changes?

The Toolbox on page 121 provides a selection grid that teams can use to score potential pilot tests and determine which are most likely to succeed.

A list of various strategies HIV care facilities have implemented to improve important quality of care aspects is provided in the Toolbox on page 123 and 124. It may be helpful to identify ideas for pilot tests in the following areas:

- Patient retention
- Annual GYN exam
- PPD screening
- Adherence to ARV therapy

Additional Resource

For guidance in teaching small groups about brainstorming potential pilot tests and the purpose of selection criteria in evaluating a potential pilot test, see the HIVQUAL Group Learning Guide "Selecting a Pilot Test" exercise. You can download this publication at www.hivqual.org.

Toolbox:

Pilot Test Selection Grid: Improving the percentage of women receiving HAART therapy.

List the top three pilot tests and score each pilot test from 1 (lowest) to 5 (highest).

CRITERIA	PILOT TEST 1: SPECIAL EDUCATION BY CLINICIAN ABOUT BENEFITS OF HAART THERAPY.	PILOT TEST 2: ESTABLISH PEER SUPPORT GROUP FOR WOMEN TO FOLLOW-UP.	PILOT TEST 3: PROVIDE INCENTIVES FOR WOMEN WHO CONTINUE REGIMEN DURING PREGNANCY.
MEASUREABLE	4	2	5
IMMEDIATE	2	4	2
FOCUSED	5	3	4
FEASIBLE	4	3	2
SUPPORTABLE	4	5	2
TOTAL	19	17	15

Planning Pilot Tests

Project teams plan the implementation of pilot tests to better orchestrate and guide their efforts. A planning approach increases the likelihood of task completion. Team members strategize the following areas:

- Scope of pilot test. What is the working hypothesis for the pilot test? For how long do you want to test your changes before implementation?
- Timetable for pilot test implementation. What are the necessary steps and when will they be completed?
- Accountability for pilot test. Who will measure and follow-up on pilot test results? Who reports?
- Pilot test measurement. How do you measure the pilot success? What indicators are identified?
- Sample Size. How many records will be measured?

The Toolbox on page 126 provides a written sample form for planning a pilot test.

Real-World Tip
Plan for Successful Tests.

Consider the following suggestions when planning for pilot testing:

- 'Steal shamelessly, share senselessly!' - contact other HIV programs, read best practices/success stories at www.hivqual.org and NationalQualityCenter.org.
- Keep individual pilot tests simple—plan to collect only as much data as necessary.
- Reduce the sample size and/or test intervals to a minimum.
- Use the power of '1': one clinic, one provider, one patient.
- Predict results of pilot test results.
- Routinely inform staff about pilot test progress.
- Ask consumers and stakeholders for their input.

Notes

Toolbox:

Successful Improvement Strategies

Patient Retention:

- Update patient contact information at every visit.
- Ask for additional contacts to get in touch with patient ("Who knows where you are?").
- Create support systems for patients to keep appointments.
- Peer educators to introduce new patients to clinic.
- New patient luncheons and/or dinners to introduce clinics and staff.
- User-friendly orientation package.
- Providers to emphasize importance of making appointments.
- Combine services as much as possible into one visit ('max-packing').
- When scheduling appointments (sign-out, call), ask directly for barriers, responsive to patient ('what time works best for you?').
- Incentives for patients to come for appointment (transportation, etc.); patient can choose incentive.
- Phone script for staff to make appointments.
- Institute a reminder system, send letters, make reminder calls.
- Contact client within 1 week of missed appointment to reschedule.
- Set up a system to see walk-in patients who don't keep appointments as scheduled.
- Make a provider available with flexible time to accommodate walk-ins.
- Identify and track lost patients.
- Focus groups with patients who were lost to follow-up.
- Use pharmacy to help (patients fill prescriptions but may not keep appointments).
- Use drug treatment providers to help locate patients, especially MMTP.
- Use case managers to 'find' patients.

Annual GYN Exam:

- Have the GYN exam performed by an HIV primary care provider (MD, PA, NP, or midwife).
- Implement a specific campaign to "Get Your GYN Exam" (e.g., 2 times/year during 'low' times in January and June).
- Have multidisciplinary staff implement preventative health education messages (e.g., the importance of routine GYN exams).
- GYN exam right after primary care appointment.
- Better access to female GYN provider.
- Dedicated sessions for HIV patients within the GYN department.
- Evening clinic for GYN exams.
- Provide child care during clinic hours.
- Hold patient care quarterly meetings so that each HIV patient is reviewed at least once per year to identify needs.
- Include the GYN exam during comprehensive annual physical exam.
- Use information systems to identify the list of patients needing GYN exams.
- Flag charts (e.g., use a sticky note) to identify who needs a GYN exam on the day of appointments.
- Provide transportation (e.g., Go get them!).
- Follow up release of information forms by CMs, nurse, etc. with calls and tracking logs.
- Dedicated sessions for HIV patients within the GYN department .

Toolbox:

Successful Improvement Strategies...Continued

PPD Screening:

- Provide 24-hour access for reading (e.g., agreement with emergency room).
- Provide no waiting for PPD reading in clinics.
- Train medical assistants to plant and read PPDs.
- Use standing orders for PPDs.
- Improve coordination with external organizations that perform PPDs to get results.
- Make available self-read cards and telephone-read results.
- Do not plant on a Thursday unless the PPD can be read over the weekend.
- Implement vaccine campaigns for PPD twice per year (November and June).
- Make reminder calls 24 to 48 hours following planting.
- Use the PPD log for tracking.
- Schedule other services to coincide with the return for the PPD reading.
- Incorporate PPD into comprehensive annual physicals.
- Flag the chart in advance—use reminder stamp.
- Provide incentives (e.g., phone cards, gas cards, fast-food certificates) for patients who return for PPD reading.

Adherence to ARV Therapy:

- Designate a person to serve as an adherence counselor/educator.
- Hold multidisciplinary meetings between providers and CMs to review guidelines, develop messages, and decide who says what.
- Promote the use of adherence stamp to improve documentation.
- Increase the frequency of interaction between the patient and adherence counselor for non-adherent patients.
- Promote the use of adherence tools (e.g., pill boxes).
- Promote support group participation.
- Support peer advocacy.
- Provide peer outreach to deliver drugs.
- Ensure all staff involved with a patient delivers a consistent message reinforcing the importance of taking medication on time.
- Hold case conferences to share information.

Conduct Pilot Tests.

Pilot tests allow team members to assess the effectiveness of various solutions before system-wide implementation. A pilot test is intended to be a small-scale trial of a potential solution. The project team should consider the following strategies for successful pilot tests:

- Simplicity of pilot tests. Keep initial pilot tests simple and emphasize the following point: the more pilot tests can be conducted and more opportunities for learning will emerge.
- Series of pilot tests. Allow for multiple pilot tests and build on the success of previous pilot tests.
- Reduced sample size. Reduce the sample size to a minimum and collect as little data as necessary.
- Short-time approach. Reduce the test intervals to a minimum while increasing testing cycles.
- Clear accountability. Ensure that the responsibilities for conducting pilot tests are clearly defined and communicated.

Real-World Tip
Conduct Successful Tests.

Simple ideas to get started:

- Keep it simple and collect as little data as possible.
- Quick turnaround is key; conduct a series of pilot tests.
- Test initially with just one provider.
- Always plan two or three pilot tests ahead.
- React right away—if an improvement is very obvious, make a quick decision to implement. Do not wait for more data.
- Use original predictions to assess which solutions had impact and which needed additional follow-up.

Assess Impact

The improvement team evaluates the changes by answering the following questions:

- Did the changes help us reach our improvement project goal?
- Are additional pilot tests indicated?
- Are there other changes that can be implemented to exceed our goal?
- What prevented us from reaching our goal?

Team members compile data collected during the pilot tests. Based on these results, the team reaches an agreement on how to move forward. Once a decision is made, the improvement team shares the pilot test results with the HIV quality committee.

Additional Resource

Langley Gerald J. The Improvement Guide: A Practical Approach to Enhancing Organizational Performance. Jossey-Bass, 1996. For guidance in teaching small groups about the basic steps of pilot test design and implementation, see the HIVQUAL Group Learning Guide "Planning a Pilot Test" exercise. You can download this publication at www.hivqual.org.

Toolbox:

Pilot Test Planning Form

GOAL:

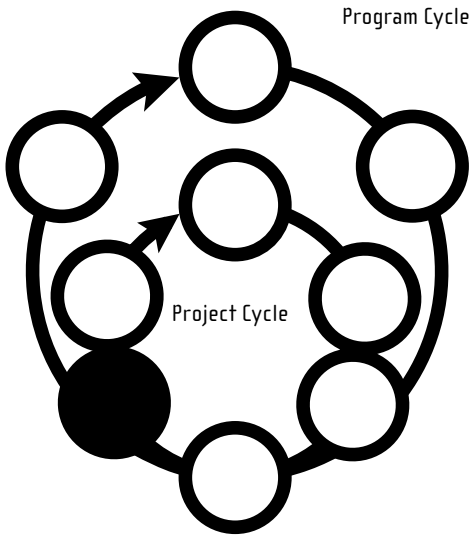
- Increase patient knowledge about oral health and its importance as part of care.
- Increase the number of patients receiving oral health care.

DEFINE THE PLOT TEST.

- Cause of problem: Although patients are screened for the dental exam and appropriate referrals are made, they do not follow upwith their dentists to receive the necessary services.
- Change to be tested: Oral Health Awareness Month.
- Evaluation method(s): Increase in dental appointments made by patients. Of the appointments made, how many are kept; Number of materials given out to patients; Survey to assess patients' understanding of the importance of oral health.

PLAN THE PLOT TEST IMPLEMENTATION.	WHO IS RESPONSIBLE?	WHEN COMPLETED BY? (WEEK)							
		1	2	3	4	5	6	7	8
a. Develop educational materials.	Fran	X	X						
b. Make a 20-minute presentation to providers during the next staff meeting to discuss what they should tell patients about oral health.			X	X					
c. Put posters in waiting room.		X							
REVIEW RESULTS OF THE PILOT TEST.		1	2	3	4	5	6	7	8
a. Count materials being given out to patients.	Michael				X				
b. Count how many educational sessions are conducted between providers and patients.					X				
c. Survey patients to assess their understanding of the importanceof oral health.						X			
d. Look at how many dental appointments are made.					X	X			
DECIDE WHETHER/HOW TO MOVE FORWARD.		1	2	3	4	5	6	7	8
a. Compile results in one report for final presentation.	Catherine					X			
b. Present results to quality committee.						X			
c. Present results to staff.						X	X		

Project Step 5: Evaluate Results with Key Stakeholders.



The Big Picture

The project team's next steps are to document the improvement project results and review them with the HIV quality committee. Once the quality committee determines that the improvement project has remained on track, decisions need to be made regarding how to effectively share the project's success with staff and other stakeholders, and how to implement those improvements system-wide.

What To Do

- Summarize improvement project results.
- Evaluate results with HIV quality committee.

Snapshot of HIV Care

Sharing Results Of Improvement Projects To Create Interest In Quality Improvement.

"Did it work? Who can we tell?" After conducting an improvement project, the team should be excited about their results and will want to share them. The team should use effective methods of communication—storyboards, newsletters, websites, paycheck inserts—to convey the story of the improvement project and to create excitement about implementing the change.

The improvement team "should not be afraid to share information," counsels James Pratt of St. Joseph's and Family Care, Reading, PA, "and when you do, the simplest solutions work best." When reporting their improvement results, staff creates simple easy-to-read handouts to use during our discussions with stakeholders. "Using simple handouts makes the pilot test data user-friendly rather than intimidating," says Pratt. The handouts give the meeting a clear di-

Snapshot of HIV Care...Continued

rection and keep everyone focused on the same information. "The handouts also help to set the stage for a clear and open discussion about future tasks."

The method of presentation should be tailored to the audience and purpose. For example, a presentation to the quality committee may detail the entire process used by the project team, while presentation to the facility's board may use a graph to clearly display the results and provide a summary of what's needed to implement the change facility-wide.

Displaying the data and improvement efforts in the public spaces also creates opportunities for patient education. Saneese Stephen, of Kings County Hospital Center, Center for H.O.P.E., Brooklyn, NY recounts, "When patients look at the storyboards displaying our improvement data, they can be educated on clinic performance on indicators. For example, I had one patient ask me 'What does a PPD with 80 percent mean?' They learned that PPDs and vaccinations are important because we're displaying them on the walls and we're measuring them. Hopefully, they'll learn the importance of this care and will come in for this care. It lets them know that the clinic is dedicated to quality improvement and that we're looking to make patient care better."

The posters have also helped prompt staff to remind patients about screenings and exams. For example, Stephen reports, "if a social worker is seeing a patient and she sees that the patient hasn't had a GYN exam and know it is important since it's an indicator, they might ask the patient, 'Why haven't you kept your GYN appointment?' Hopefully, by displaying our quality information to patients and staff, everyone will get involved in improving quality."

The Center for H.O.P.E. takes an opposite approach when reporting the results of provider-specific data. "For each provider we look at their PPD, GYN and vaccination rates for the quarter. Then, we make a graphical representation showing how each provider does individually on each of the indicators and how they compare to the total," Stephens reports.

"At first, the providers were understandably hesitant about this approach, fearing that they would be micro-managed. However, now they are interested in how they're doing and want to see themselves do better." The provider-specific results are presented to each provider privately, but for public presentation, each provider is coded with a letter, with only Stephens and the facility's Medical Director knowing the code.

Summarize Improvement Project Results.

The purpose of documenting the improvement project results is to communicate with others how problems in current processes have been solved and what results have been achieved. The final project write-up succinctly describes the efforts of the quality improvement team and allows future teams to learn from past projects.

Documenting Results

The data presented typically include baseline data and pilot test results. Graphic displays of data, such as charts and tables, help to convey results at-a-glance and should be used whenever possible. Refer to the Project Step 1 'Review, collect and analyze project data' on page 90 for a more detailed discussion of the graphic presentation of data.

How the improvement team chooses to summarize project results—the choice of report format, length, and sophistication—may vary. Two potential formats are a written report or a storyboard (a poster display that includes a graphic display of data over time).

To effectively present project results in either format, the "Four Cs" of effective communication should be applied:

- Clear: Use terms that committee members and staff understand and relate to.
- Concise: Be short and to the point.
- Complete: Include all relevant information.
- Correct: Ensure that all data are accurate.

The Toolbox on page 130 shows an example of the type of information that should be included in either a written report or a storyboard.

Real-World Tip
Make Your Storyboard a Bill.

Storyboards can help teams communicate the highlights of an improvement project to others. If a project team opts to prepare a storyboard, the following tips can help to make it an effective format:

- Construct the storyboard as a logical progression of 'boxed information.'
- Lead the reader through the main points and steps of the improvement project.
- Communicate with descriptive pictures and graphics more than words.
- Use color and keep any text simple.
- Following the HIV quality committee's review of the storyboard, post it in a visible location to share the team's results with consumers and staff.
- Present storyboard to the Consumer Advisory Committee.

Toolbox:

Sample Improvement Project Data for Presentations

Site:	AIDS Hospital Center
Contact Person:	Phaedra Charman, AIDS Center Administrator
HIV Caseload:	700
Facility Type:	Teaching Hospital

IMPROVEMENT STEPS	PROGRESS TO DATE/RESULTS
Improvement Area	HIV PPD Improvement Project
Goal	Between January 15 and June 30, 2006, increase the percentage of PPD chart documentation (placed and read) from 66 percent to 85 percent
Team Membership	• Thomas Oddou, MD, Chief of Infectious Diseases • Phaedra Charman, AIDS Center Administrator • Elvira Flores, Director of Ambulatory Care • Gary Gross, Director of Quality Assurance • Cynthia Ferraro, Director of Nursing • Chris Feno, AIDS Center Nurse Practitioner • Jorge Carrillo, Clinic Coordinator for Case Management • Betsy Stelle, R.N., Senior Staff Nurse
Investigation of the Process	Analytic tools used: • Gantt chart • Pareto chart • Run chart • Cause-and-effect diagram • Brainstorming Underlying causal analysis: • No individual clearly assigned responsibility • As a teaching hospital, house staff rotate through the AIDS Hospital Center, are unaware of PPD requirement and unfamiliar with patients' history of care • Patients forget to return for PPD reading
Pilot Test Interventions and Results	Interventions on 1/06 and 2/06 • Beginning 1/06, clinic case managers were assigned responsibility for flagging charts of patients due for PPD • Develop a written reminder card for patients • Communicate with patients about the importance of PPD testing • Track of PPD performance rates over time • Beginning 2/06, senior staff nurse was assigned responsibility for planting PPD and giving patients a reminder card to return in 48 – 72 hours Results on 2/06 and 3/06 - percentage of PPDs placed and read increased from 66 percent to: • 75 percent by the end of 2/06 • 81 percent by the end of 3/06
Systematized Change	• Results were reported at the regularly scheduled quarterly HIV Quality Committee meeting Won 4/06. • A decision was made to make interventions permanent and system wide.

Toolbox:

Sample Improvement Project Data for Presentations...Continued

IMPROVEMENT STEPS	PROGRESS TO DATE/RESULTS
Next Steps	Additional interventions • To achieve further improvement, the senior staff nurse was assigned responsibility for calling patients on day two to remind them to return on day three for PPD reading. • Any patient not showing on day three for reading is called again by the senior staff nurse and urged to come in on day four. Data collection • Data were collected though focused survey on chart sample at the close of each month to monitor the impact of the interventions. • The two additional interventions (above) increased performance to 88 percent by the end of 4/06. Future planning • Assessment of PPDs planted/read is now an indicator in ongoing quarterly chart review cycle. • PPD and other performance data are reviewed quarterly by the center's HIV Quality Committee.
Program Infrastructure to Manage Ongoing Quality Improvement	Role of program leadership • The medical director, administrator and staff nurse took the lead and were involved throughout. Role of the improvement team • Team met bimonthly at the close of clinic to review sample survey data, assess progress and determine next steps. Communication mechanisms • Dr. Oddou, MD, Chief of Infectious Diseases, serves on the hospital HIV Quality Committee and kept the committee informed. • Phaedra Charman, AIDS Center Administrator, kept improvement team minutes and shared them with three quality hospital committees (HIV, internal medicine and ambulatory care). Ongoing mechanisms • PPDs placed/read now an ongoing indicator on chart review tool; applied to a random sample of 45 charts quarterly. • Data are reported at all HIV Quality Committee quarterly meetings.
Factors Influencing Improvement Projects	Factors which helped us • High degree of staff motivation and teamwork • Excellent patient-staff relationships Obstacles which hindered progress or needed to be overcome • Some patients (due to poverty and/or other psychosocial factors) lack telephones and are hard to reach for follow-up.
Lessons Learned from the Improvement Project	As a program • Patients appreciate high-quality comprehensive care and proactive staff who work in the interest of their health. As a team • Mutual support and teamwork • Developing and supporting new leadership

Evaluate Results With HIV Quality Committee.

Presenting the progress of the improvement project to the quality committee is important for several reasons. Sharing this information provides a feedback mechanism on the team's present work and lays the groundwork for getting "buy-in" on how best to spread and systematize changes. It also promotes public relations and helps build future support for improvement activities from the HIV quality program.

Making A Decision

Based on the evaluation of the project, a decision can be made whether the improvement project should be continued for future gains and/or implemented system-wide.

Quality improvement project results are evaluated against the following criteria:

- Effectiveness against goals. Did the project reach its promised goal(s)?
- Range of impact. Should the project be further expanded to increase its impact?

After reviewing the information with the HIV quality committee the final decision is made and the follow-up tasks required to pursue the chosen course of action are identified.

Implementing Programs System-Wide

Spreading improvements into the wider system means implementing effective solutions based on the results of the pilot tests, where appropriate, throughout the HIV program. Perhaps the larger organization, of which the HIV program is a part, could also be included. A decision to implement the improvement project changes system-wide requires additional discussion and planning.

Different system-wide implementation scenarios are:

- Expansion to the entire HIV program. A successful project could be implemented at the entire clinic or all clinics in the HIV program's network.
- Expansion to non-HIV programs in a facility. A successful project in the HIV program of a hospital could be shared with other departments.

Sharing The Report

Sharing improvement project progress with the entire program has the additional benefit of educating other staff members on how changes were made and what quality improvement really means. Staff members can learn a great deal about planning resource allocation and prioritizing pilots for implementation. The report should also be shared with the HIV program's leadership, board members, con-

Additional Resource

For guidance in teaching team members about the purpose of presenting project data to specific audiences, see the HIVQUAL Group Learning Guide "Data Presentation" exercise. You can download this publication at www.hivqual.org.

sumers and advisory groups to create buy-in for upcoming steps to sustain the project's improvements.

An improvement team may deliver two types of reports:

- An oral report to the quality committee and key stakeholders including the information shown in the Toolbox on page 130.
- An written report using descriptive pictures and graphics as noted in the real-world tip on storyboards.

Real-World Tip
Be User-Friendly.

The following actions can help in presenting improvement project results:

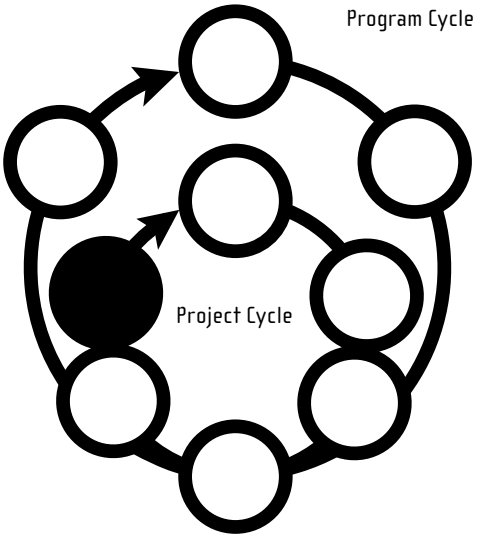
- Use different communication methods and channels.
- Tailor a presentation to the audience (e.g., formal or informal).
- Always include graphic displays that show data over time.
- Present results to consumers (e.g., the consumer advisory board) and use their input in systematizing gains.

Notes

Additional Resource

For guidance in teaching small groups about the basic criteria for evaluating pilot test results, see the HIVQUAL Group Learning Guide "Evaluating a Pilot Test" exercise. You can download this publication at www.hivqual.org.

Project Step 6: Systematize Changes.



The Big Picture

Without a concerted effort to incorporate project changes into daily work procedures, the gains for which team members have invested significant time and resources are likely to recede over time. During this step, team members plan how to integrate their project improvements in daily routines and how to best sustain those improvements. They also evaluate how effectively the team performed in achieving the project goals.

What To Do

- Sustain improvements.
- Assess team effectiveness.

Snapshot of HIV Care

Creating Quality By Spreading And Integrating Change

Creating quality by implementing the successful changes is challenging. Resistance to change, no matter how small, should be anticipated by the quality committee. The quality committee can mitigate this resistance through a variety of techniques—from providing staff training and education about the change, providing continuous feedback and support to staff, standardizing the practice, to providing incentives to best performers or "champions of the change."

Spreading Quality Improvement Throughout The Facility

Quality improvement activities have been sustained at SUNY Downstate in Brooklyn, NY according to Kristina Brown, Quality Improvement Coordinator, because quality management is incorporated into the staff's routine schedule. At the monthly, regularly scheduled committee meetings, "everyone has to be prepared to discuss whether they've worked on PDSA cycles, what's worked and what hasn't worked."

Snapshot of HIV Care...Continued

Deadlines also help keep staff focused—"everyone knows that by the 15th of the month, data have to go to the data collection person." Quality management is also on the agenda of every staff meeting and there's a scheduled quarterly presentation of the performance measurement data so everyone knows "how we're doing, where we need to improve, and what we need to focus on in the next quarter."

Brown believes that having this structure has been the key to successfully sustaining change. "There's no month when quality improvement isn't being addressed, even during those times when too many other things are going on. There's no let up."

Quality improvement has to be incorporated into facility's routines, with leadership support. "If you let it go and consistency and accountability is not there, then all of the work you've done will quickly go by the wayside," concludes Brown.

Don't Rely On One Person To Sustain The Quality Program

One of the challenges facing quality programs, according to quality consultants, is the over-reliance of a facility's efforts on one person. All too often, facility's success with quality management has been do to hard and sustained work of one or a small group of committed staff. "If these driving forces leave the facility, or take on new duties, then the quality management program can fall apart. Leadership need to continuously ensure that the quality management program can be sustained through routine staff changes," cautions a quality consultant.

"Quality, like other services and functions, can't be the responsibility of only one person. The institution must support quality by integrating it into all staff functions such as training, communications, job descriptions, and employee evaluations."

While leadership is crucial to establishing, implementing and maintaining quality efforts at a facility, leaders also need to recognize their appropriate role. A quality manager reports that the founding physician at her facility, while expressing support for the quality management program, was undermining its impact because he continued to make changes at the agency on his own and ignored the stated role of the quality committee.

"It was difficult for the staff to challenge him because he was the boss. Finally, during our annual quality management plan review that we were able to reach an agreement with him that he would use the quality committee to test and make changes. Unfortunately, had lost time and spent valuable resources because we spent a lot of time focusing on this problem, rather than on quality issues."

Sustain Improvements.

Every improvement project reaches an end point. Before the team completes its project work it is important to take the time to systematize the changes the team has meticulously tested and implemented. The goal is to institutionalize successful improvements so that they become the new 'status quo' and that the gains are sustained over time.

The project team members who are most familiar with the processes and the facilities quality committee plan should work together on identifying how to sustain the new level of performance. Have a written action plan for systematizing and sustaining the improvements. The identified strategies are integrated into the overall quality management plan and annual workplan.

The following elements are helpful to maintain long-term effects of implemented gains:

- Re-measure performance level
- Educate staff to support improvements
- Identify a champion of change
- Ensure ownership of change
- Institutionalize changes

The Toolbox on page 137 shows a template for an action plan that may be used to document steps and timelines.

Re-measure Performance Level

The process that has been improved by the quality improvement team should be re-measured routinely to ensure that gains have been kept on time. A timetable for the re-collection of data (quarterly or bi-annually) should be created including a designating staff responsible for data collection and to whom the findings will be reported. The re-measurement of data should be integrated into the facility's quality program and become part of the routine performance measurement process. The team should also decide on any necessary thresholds to trigger the attention of the quality committee or to reconvene the improvement team.

Additional Resource

For guidance in teaching small groups about the tasks required to sustain quality gains, see the HIVQUAL Group Learning Guide "Systematize Improvements" exercise. You can download this publication at www.hivqual.org.

Toolbox:

Action Plan for Systematizing Improvements

Improvement Goal: Increase Annual Mental Health (MH) Screening for all HIV-infected Patients to 65 percent and Sustain Performance Level.

STRATEGY	TASK	NEXT STEPS	TIMELINE
Re-measure performance level	Re-measure existing indicator	• Decide at next meeting on frequency of review • Work with MIS department to automate MH report	April '06
Educate staff to support improvements	Educate providers using the new MH screening form	• Invite outside speaker on this topic • Arrange routine case conferences on specific cases • Provide orientation to staff	May '06
Identify a champion of change	Identify staff person to lead MH screening efforts	• Formalize John as lead to sustain gains • Send John to conference on this topic	April '06
Ensure ownership of change	Inform staff about the MH screening tool	• Explain the role of staff in the new process • Showcase new tool and process on poster	May '06
Institutionalize change	Systematize MH screening tool into the fabric of the clinic	• Review and revise all policies to integrate MH screening in job descriptions • Provide training on MH screening process during new employee orientation	April '06

Educate Staff To Support Improvements

Some level of training will be necessary to ensure that staff understands new tools and process changes, as well as their new roles and responsibilities in implementing the planned improvements. The specific nature of the quality improvement will dictate the type of training that is appropriate. For example, a printed worksheet of instructions or a laminated checklist hung near a workstation may suffice. Improvements that require more critical knowledge-based tasks or complex skills may require training incorporating some degree of problem-solving and decision-making. At a fundamental level, all staff involved in the improvement should receive consistent information.

Identify A Champion Of Change

A staff person who has intimate knowledge of the improvements is identified to become the internal champion of change. Staff or consumers can contact the person to ask follow-up questions or clarify certain details. This champion becomes the 'human face' of the new status quo and a visual reminder to sustain changes.

Real-World Tip
Plan To Promote Quality Gains.

Concerted efforts are required to ensure gains achieved during quality improvement projects are sustained. The following tips can help sustain quality improvement gains:

- Assign one member of the improvement project team to monitor progress and routinely report back to the quality committee.
- Assign specific performance thresholds to trigger follow-up activities.
- Decide on a simple format that can be used to generate an on-going status report for the quality committee, staff and consumers.
- Provide simple incentives such as letters of recognition or small monetary incentives (e.g., gift cards or movie passes) to staff that support improvements.
- Highlight the advantages of the new process whenever possible.

Ensure Ownership Of Changes

Steps taken to ensure the ownership of changes help make the improvement 'part of the fabric' of the HIV facility. Every opportunity is used to promote the new status quo to the entire staff either at staff meetings, through storyboards in hallways or in mini-presentations. Changes are also clearly communicated to new staff members to integrate these improvements in their daily work. These activities send a clear message that quality activities are everyone's responsibility to keep the momentum of change going.

Institutionalization Of Changes

Finally, the project team reviews and revises, if necessary, the HIV program's policies and procedures to ensure that new processes are documented. The team may also consider screening involved job descriptions and making appropriate changes. The process of sustaining the project gains is clearly communicated to the facility's leaders and key stakeholders. System-wide buy-in also helps to overcome staff resistance and barriers in the implementation process. For more information on sustaining the quality program momentum, please see Program Step III on page 69.

Assess Team Effectiveness.

A team self-evaluation is the team's final task. A team looks at lessons learned throughout the improvement project and identifies how future team efforts could be more effective and efficient in their efforts.

Evaluating team performance

Taking time to evaluate the improvement team's performance will identify key learnings from the project. Team members can discuss the positive aspects of their group interactions along with the areas that need improvement. In this way, current project teams 'sow the seeds' for the success of future improvement teams. Evaluation also signals the end of an improvement project and provides a sense of closure for team members.

The Toolbox on page 141 provides two approaches to self-evaluation. Results of the team evaluation should be written up and shared with the overall quality committee and future project teams. How the quality committee should proceed and evaluate the project team performance is described in Program Step III on page 69.

Celebrate success

At this point it is important to celebrate the accomplishment of the project team. It stresses the significance of quality to the facility and creates some tangible excitement about successful changes. The quality committee can use this opportunity for staff recognition and announcements of future quality projects.

Real-World Tip
End Well.

Every improvement project reaches an end point. Here are some suggestions to promote closure:

- Celebrate successes with a 'lunch party.'
- Get leaders to acknowledge the hard work by the team.
- Identify a spokesperson for the team who will present on the behalf of the team.
- Summarize and archive the team's efforts before the memories fade.
- Promote the successes of this team to future team members.

Additional Resource

For guidance in teaching small groups about the importance of post-improvement project team evaluation, see the HIVQUAL Group Learning Guide "Team Self Evaluation" exercise. You can download this publication at www.hivqual.org.

Toolbox:
Team Self-Evaluation Approaches

Method One

Write the following three questions about team effectiveness on flip chart paper and ask each team members to answer them from their own perspective:

- What worked well in the team?
- What needed to be improved?
- What do you suggest to improve future quality improvement teams?

Method Two

Add categories to brainstorm under each of the above questions to ensure that feedback is given on certain categories of experience, such as:

- Team composition and roles
- Project improvement process (e.g., goals, understanding of the process and problems, pilot tests)
- Length of time and resource allocation
- Program/organizational support
- Teamwork and distribution of tasks

Sampling and Data Collection

This additional resource is intended to supplement any documentation about performance measurement in this Workbook, including Project Step 1: Review, Collect and Analyze Project Data on page 82, and Program Step II: Establishing Performance Measurement Systems on page 57.

Information and Toolbox examples in this section explain how to:

- Construct a population sample
- Design a data collection tool
- Assign and train abstractors
- Validate results

Construct A Population Sample.

In many situations it is unrealistic and inefficient to collect data from every patient file. Data sampling allows teams 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. Most facilities utilize random sampling, wherein medical records are drawn from the total population in such a way that each time a record is selected every record in the population has an equal opportunity to appear in the sample.

The goal of sampling is to reduce the amount of work involved in chart reviews for data collection, analysis and reporting. However, if the facility's information system can access all the data that are needed for the indicators, a project team can skip ahead to the task: "Design a data collection tool," on page 147.

Defining Selection Criteria

Criteria determine who will be included in the sample. Examples of selection criteria include:

- Location. What facilities within the HIV care system will be included?
- Gender. Does the indicator apply to men, women, or both?
- Age. Does the indicator have particular age limits?
- Patient conditions. Does the indicator apply to all HIV-infected patients or is a specific diagnosis required? Is a confirmation of the diagnosis required, or is an empiric diagnosis acceptable? Do certain conditions make the patient ineligible?
- Treatment status. How many visits are required for eligibility? Must the patient currently be in treatment? Must the treatment have occurred within a specific time frame?

In the National HIVQUAL Project, the sample population includes male and female HIV patients who were active during a calendar year (for example, 1/1/2005 to 12/31/2005). Active cases are defined as those with at least two medical visits during the study period, with at least one visit during the last six months during the review period. Patients who expired before the end of the review period, but meet the visit criteria, are eligible for inclusion.

Additional Resource

For guidance in teaching small groups about how to define selection criteria, identify eligible cases and randomly select cases, see the HIVQUAL Group Learning Guide "Constructing a Sample" exercise. You can download this publication at www.hivqual.org. Other resource: Carey, R.G., and Lloyd, R.C. Measuring Quality Improvement in Healthcare. New York: Quality Resources, 1995.

Identifying Eligible Cases

Project teams will need to separate out the medical records that are eligible for measurement based on the selection criteria. The reporting capabilities of the facility's computer system will determine how much work will need to be done by hand. When querying the facility management information system, the answers written for "defining your population focus" will need to be completed. For example, a system might specify all male and female HIV-infected patients over the age of 17 who made at least two visits between 1/1/2005 and 12/31/2005, with one of those visits in the last six months of the study period from 7/1/2005 to 12/31/2005. If the system will provide only a list of names for at least two visits within the year, but not specify within the last six months of the study period, then the list is reviewed and those names that did not have a visit within the last six months crossed off. Likewise, if the system will provide only a list of patients seen during the study period, then the list is carefully reviewed to identify the eligible cases.

To calculate the total number of eligible patients, you need to first divide the entire case list into male and female lists to ensure sufficient numbers for the GYN indicator. These lists will now provide you with two numbers, the total number of eligible males and the total number of eligible females. (The total eligible population is the sum of the two.)

Identifying Sample Size

The minimum sample size for an accurate measurement is based on the number of eligible cases. Some facilities use pre-existing sample tables to determine a project's minimum sample size based on their own requirements.

The Toolbox on page 145 shows the HIVQUAL Sample Size Chart. It indicates the minimum number of records to be pulled for chart review for men and women based on the total number of eligible cases. The maximum number of records to be reviewed is 107 though it depends on the facility's caseload. To ensure that women are properly represented in the GYN portion of the review, this table oversamples women. For example, if an agency has 55 eligible female patients and 90 eligible male patients (145 total eligible patients), then the minimum number of female records to be reviewed is 39. The number of male records to be reviewed is determined by subtracting the number of female records to be reviewed from the total number of records: 64 total records-39 female records=25 male records.

Toolbox:

HIVQUAL Sample Size Chart

This chart is based on a 90 percent confidence interval with an error width of 16 percent when using the minimum number of records.

TOTAL SAMPLE TABLE		
TOTAL ELIGIBLE POPULATION	MINIMUM TOTAL RECORDS	CHARTS TO PULL
Up to 20	All	All
21 - 30	24	31
31 - 40	30	39
41 - 50	35	46
51 - 60	39	51
61 - 70	43	56
71 - 80	46	60
81 - 90	49	64
91 - 100	52	68
101 - 119	57	74
120 - 139	61	79
140 - 159	64	83
160 - 179	67	87
180 - 199	70	91
200 - 249	75	98
250 - 299	79	103
300 - 349	82	107
350 - 399	85	111
400 - 449	87	113
450 - 499	88	114
500 - 749	94	122
750 - 999	97	126
1000 - 4999	105	137
5000 or more	107	139

FEMALE SAMPLE TABLE		
TOTAL ELIGIBLE FEMALES	MINIMUM FEMALE RECORDS	CHARTS TO PULL
Up to 20	All	All
21 - 30	24	31
31 - 40	30	39
41 - 50	35	46
51 - 60	39	51
61 - 70	43	56
71 - 80	46	60
81 - 90	49	64
91 - 100	52	68
101 - 119	57	74
120 - 139	61	79
140 - 159	64	83
160 - 179	67	87
180 - 199	70	91
200 - 249	75	98
250 - 299	79	103
300 - 349	82	107
350 - 399	85	111
400 - 449	87	113
450 - 499	88	114
500 - 749	94	122
750 - 999	97	126
1000 - 4999	105	137
5000 or more	107	139

Constructing The Sample

Using the number of eligible female patients, determine the minimum number of female records needed from the HIVQUAL Sample Size Chart (page 145). To determine the number of male records you need, subtract the minimum number of female records from the total minimum number of records.

Select the required number of records required from the total eligible records using a random process. Be aware that each medical record should have an equal change of being included in the sample. Most spread sheet programs offer random number tables.

The Tool box on page 148 provides a sample random number table and calculation instructions.

Notes

Design A Data Collection Tool.

Data collection consists of the tools and techniques used to collect baseline and follow-up data, typically from patient medical records. For example, a project team may collect data on how many patients received PCP prophylaxis in the previous year. The final percentage is a starting point for process improvement and a baseline for future measurements.

The goal of a data collection tool is to help obtain the most current, complete and accurate information possible. If data are collected with little regard for accuracy, project results are jeopardized.

Developing The Tool

To ensure that data are collected as intended, detailed instructions to guide abstractors through the data collection process needs to be written. Agreement needs to be found on what data are needed and why. Tools such as data entry forms and procedure checklists help lower the margin for collection error.

Those responsible for the review process should first create a paper or electronic document listing the review criteria. The form should include eligibility criteria, and question/response parameters that define the 'yes' and 'no' responses, and N/A conditions. The form should be straightforward and concise to facilitate accurate data collection as well as any future re-measurement of data.

The following guidelines are useful when developing a data collection tool:

- Decide on the evaluation questions and information needed to answer those questions.
- Choose a format for collecting data such as questionnaire, discussion guide, interview, etc. consistent with the types of questions to be asked on the tool. For example, "Was a Pap smear performed on this female patient between 12/31/2005 and 1/1/2005?"
- Agree on the interpretation of what the responses mean ('yes', 'no', 'NA').
- Create results for each question. This will provide feedback on whether the results are meaningful. If not, revise the questions or responses or consider eliminating it.
- Develop and field test a data collection sheet.

The Toolbox on page 152 illustrates a detailed example of a data collection tool.

Additional Resource

You can download a software program, called HIVQUAL3, at www.hivqual.org at no cost. The software that includes indicators based on clinical practice guidelines provides an efficient means of measuring and reporting clinical performance.

Toolbox:

Random Number Table

To use random numbers for case selection, imagine that the list of eligible patients either male or female, not both, has been numbered sequentially, starting with one. Based on your sample size, select those cases whose assigned numbers correspond with the random numbers listed in the appropriate random number calculation. If a random number exceeds the final number on the list, continue counting sequentially from the top of the list, including only those cases that have not yet been chosen. An example follows on page 150.

RANDOM NUMBER TABLE

Eligible Cases=21-30; Minimum Total Records=24
1, 4, 5, 6, 7, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29

Eligible Cases=31-40; Minimum Total Records=30
1, 2, 3, 4, 5, 6, 9, 11, 12, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 33, 34, 35, 37, 39, 40

Eligible Cases=41-50; Minimum Total Records=35
1, 2, 3, 4, 5, 6, 7, 9, 11, 12, 13, 14, 15, 17, 20, 22, 23, 24, 28, 30, 31, 32, 34, 35, 37, 38, 39, 40, 42, 43, 45, 46, 47, 48, 50

Eligible Cases=51-60; Minimum Total Records=39
1, 3, 4, 5, 6, 8, 9, 12, 14, 16, 17, 19, 21, 26, 27, 28, 29, 30, 31, 32, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 45, 47, 48, 52, 54, 55, 56, 57, 60

Eligible Cases=61-70; Minimum Total Records=43
1, 2, 4, 7, 9, 10, 12, 13, 14, 16, 19, 22, 24, 25, 26, 27, 29, 31, 32, 33, 34, 35, 36, 37, 40, 41, 42, 44, 46, 48, 49, 51, 52, 54, 56, 57, 60, 62, 64, 65, 66, 69, 70

Eligible Cases=71-80; Minimum Total Records=46
2, 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 21, 22, 24, 27, 30, 32, 33, 36, 37, 41, 44, 48, 49, 50, 53, 54, 55, 56, 57, 59, 60, 62, 63, 66, 69, 70, 72, 76, 77, 79, 80

Eligible Cases=81-90; Minimum Total Records=49
1, 2, 3, 5, 6, 9, 10, 11, 12, 13, 16, 17, 19, 20, 23, 26, 29, 34, 35, 38, 42, 43, 44, 46, 48, 50, 52, 54, 56, 57, 58, 59, 60, 61, 63, 64, 65, 66, 68, 69, 70, 71, 73, 76, 77, 80, 81, 84, 86

Eligible Cases=91-100; Minimum Total Records=52
1, 2, 6, 9, 10, 13, 14, 15, 19, 22, 26, 28, 30, 32, 33, 34, 35, 37, 38, 40, 42, 43, 44, 45, 46, 47, 48, 51, 54, 55, 56, 58, 59, 60, 61, 70, 71, 74, 75, 79, 80, 81, 85, 86, 88, 92, 93, 94, 96, 97, 98, 99

RANDOM NUMBER TABLE

Eligible Cases=101-119; Minimum Total Records=57
1, 2, 5, 6, 8, 11, 12, 13, 16, 18, 19, 20, 21, 22, 26, 35, 36, 39, 41, 43, 45, 47, 48, 49, 50, 51, 52, 57, 60, 62, 65, 72, 74, 76, 77, 78, 80, 81, 82, 83, 84, 85, 86, 88, 89, 92, 93, 94, 97, 102, 103, 104, 106, 111, 114, 118, 119

Eligible Cases=120-139; Minimum Total Records=61
3, 4, 5, 7, 16, 17, 19, 23, 24, 27, 29, 30, 36, 38, 39, 45, 48, 50, 53, 54, 59, 61, 62, 64, 65, 66, 67, 69, 71, 76, 77, 79, 82, 83, 85, 86, 87, 88, 91, 92, 96, 100, 101, 103, 105, 106, 108, 112, 113, 114, 116, 124, 125, 126, 128, 129, 130, 133, 134, 135, 138

Eligible Cases=140-159; Minimum Total Records=64
2, 5, 14, 16, 18, 21, 25, 26, 27, 28, 30, 31, 32, 33, 37, 40, 41, 42, 43, 44, 48, 49, 51, 55, 56, 59, 61, 63, 67, 74, 75, 81, 82, 85, 86, 87, 88, 89, 90, 91, 93, 98, 102, 105, 107, 114, 118, 121, 122, 129, 130, 131, 136, 140, 145, 146, 147, 149, 151, 152, 155, 157, 158, 159

Eligible Cases=160-179; Minimum Total Records=67
2, 5, 9, 11, 14, 16, 18, 27, 29, 30, 34, 38, 39, 41, 42, 48, 52, 53, 57, 59, 60, 72, 73, 77, 83, 88, 93, 96, 99, 100, 102, 104, 105, 107, 108, 109, 110, 111, 114, 116, 118, 119, 120, 121, 124, 126, 131, 134, 138, 141, 147, 149, 150, 152, 153, 154, 155, 156, 157, 163, 170, 171, 172, 173, 177, 178, 179

Eligible Cases=180-199; Minimum Total Records=70
2, 4, 5, 7, 12, 20, 21, 26, 29, 32, 37, 40, 41, 44, 45, 50, 51, 53, 55, 60, 61, 62, 65, 74, 76, 78, 80, 86, 88, 90, 91, 92, 95, 101, 103, 104, 110, 116, 122, 123, 124, 125, 128, 130, 131, 136, 140, 141, 143, 144, 149, 155, 159, 162, 163, 168, 169, 170, 173, 177, 180, 182, 185, 186, 190, 193, 194, 195, 197, 198

Eligible Cases=200-249; Minimum Total Records=75
1, 3, 5, 6, 10, 13, 16, 18, 20, 26, 30, 31, 35, 36, 44, 48, 51, 52, 53, 55, 60, 72, 73, 76, 77, 81, 85, 87, 89, 99, 109, 112, 118, 122, 123, 124, 127, 130, 134, 139, 142, 143, 150, 151, 155, 160, 165, 172, 177, 180, 181, 192, 195, 196, 199, 200, 203, 205, 208, 210, 211, 212, 218, 219, 220, 226, 227, 228, 230, 231, 232, 237, 239, 244, 249

Toolbox:

Random Number Table...Continued

RANDOM NUMBER TABLE

Eligible Cases=250-299; Minimum Total Records=79
4, 5, 6, 7, 17, 20, 28, 29, 34, 38, 39, 46, 47, 49, 51, 52, 53, 56, 58, 67, 72, 75, 79, 81, 82, 87, 99, 106, 112, 125, 134, 136, 137, 138, 147, 153, 155, 165, 166, 167, 169, 170, 171, 172, 175, 182, 184, 189, 190, 191, 193, 195, 200, 203, 204, 211, 216, 220, 223, 226, 231, 234, 242, 243, 251, 255, 256, 262, 263, 266, 269, 270, 272, 274, 281, 290, 293, 294, 296

Eligible Cases=300-349; Minimum Total Records=82
8, 16, 17, 26, 39, 47, 49, 52, 54, 55, 57, 61, 66, 70, 80, 81, 84, 86, 93, 95, 96, 110, 113, 116, 123, 124, 132, 139, 140, 141, 142, 154, 167, 171, 173, 176, 177, 178, 179, 180, 182, 183, 195, 197, 203, 207, 208, 211, 213, 219, 223, 229, 233, 237, 238, 248, 251, 253, 258, 260, 266, 272, 278, 283, 284, 289, 292, 296, 297, 305, 308, 309, 314, 316, 318, 319, 323, 325, 327, 335, 343, 347

Eligible Cases=350-399; Minimum Total Records=85
2, 4, 6, 9, 13, 14, 34, 41, 44, 54, 57, 58, 66, 85, 87, 90, 92, 94, 96, 100, 103, 107, 115, 118, 124, 125, 129, 137, 139, 154, 155, 159, 162, 165, 172, 175, 178, 184, 195, 203, 211, 217, 220, 225, 226, 228, 230, 241, 242, 250, 251, 252, 257, 262, 265, 270, 277, 279, 284, 293, 296, 298, 300, 302, 304, 311, 312, 315, 323, 332, 336, 337, 338, 343, 345, 363, 364, 368, 372, 373, 375, 376, 390, 393, 398

Eligible Cases=400-449; Minimum Total Records=87
6, 29, 31, 33, 37, 41, 43, 49, 61, 67, 71, 74, 75, 86, 94, 102, 105, 111, 112, 118, 120, 124, 128, 133, 137, 139, 141, 152, 159, 163, 171, 185, 187, 191, 193, 195, 196, 200, 214, 220, 221, 223, 225, 227, 228, 230, 237, 239, 242, 245, 255, 259, 261, 272, 276, 279, 282, 294, 297, 299, 300, 302, 306, 318, 319, 320, 324, 347, 352, 362, 366, 373, 374, 380, 381, 387, 393, 395, 399, 404, 407, 408, 421, 426, 436, 442, 446

Eligible Cases=450-499; Minimum Total Records=88
15, 21, 25, 29, 45, 46, 50, 51, 60, 64, 69, 73, 83, 102, 105, 109, 115, 118, 127, 137, 142, 145, 149, 157, 160, 162, 169, 171, 172, 178, 187, 190, 194, 206, 218, 229, 236, 249, 252, 253, 256, 263, 291, 310, 319, 321, 326, 329, 332, 344, 349, 355, 374, 377, 378, 381, 382, 384, 385, 389, 393, 394, 395, 399, 403, 412, 421, 425, 426, 434, 440, 441, 453, 454, 459, 462, 464, 465, 469, 475, 476, 480, 481, 484, 486, 487, 497, 498

RANDOM NUMBER TABLE

Eligible Cases=500-749; Minimum Total Records=94
1, 15, 20, 30, 47, 64, 77, 81, 93, 99, 125, 127, 171, 182, 190, 221, 233, 235, 247, 253, 264, 267, 273, 281, 284, 293, 298, 306, 310, 319, 325, 329, 335, 341, 345, 357, 359, 366, 370, 377, 385, 393, 395, 401, 408, 409, 412, 416, 421, 426, 430, 440, 468, 472, 475, 496, 497, 501, 504, 505, 510, 518, 528, 536, 540, 552, 574, 576, 580, 581, 582, 587, 588, 598, 602, 611, 618, 628, 640, 665, 667, 674, 675, 676, 687, 691, 717, 730, 732, 737, 738, 742, 744, 747

Eligible Cases=750-999; Minimum Total Records=97
21, 22, 46, 49, 53, 54, 57, 59, 61, 84, 91, 100, 109, 140, 176, 180, 204, 229, 234, 240, 249, 275, 277, 287, 297, 311, 313, 324, 330, 346, 354, 355, 358, 380, 385, 399, 401, 407, 414, 434, 443, 449, 461, 466, 479, 491, 499, 512, 530, 542, 543, 557, 562, 580, 595, 616, 653, 666, 676, 687, 694, 701, 702, 708, 711, 719, 721, 746, 756, 778, 781, 791, 795, 802, 813, 817, 824, 834, 843, 844, 864, 877, 878, 884, 897, 898, 901, 913, 915, 933, 957, 973, 980, 986, 993, 994, 997

Eligible Cases=1000-4999; Minimum Total Records=105
40, 100, 300, 322, 349, 406, 489, 496, 541, 581, 649, 656, 660, 707, 745, 778, 779, 800, 902, 917, 955, 1030, 1083, 1105, 1173, 1179, 1202, 1214, 1296, 1344, 1373, 1442, 1501, 1527, 1570, 1578, 1608, 1705, 1742, 1757, 1771, 1774, 1778, 1800, 1843, 1872, 1880, 2040, 2112, 2426, 2494, 2530, 2558, 2611, 2790, 2960, 3048, 3076, 3117, 3159, 3225, 3235, 3324, 3331, 3351, 3403, 3450, 3463, 3525, 3529, 3555, 3605, 3685, 3752, 3758, 3835, 3916, 3919, 3920, 3934, 3935, 3941, 4045, 4093, 4125, 4145, 4170, 4240, 4396, 4436, 4467, 4522, 4537, 4560, 4590, 4642, 4668, 4670, 4747, 4811, 4830, 4868, 4903, 4937, 4986

Eligible Cases=5000 or more; Minimum Total Records=107
(visit www.randomizer.org)

Toolbox:

Random Number Table Calculations

A team pulls a sample out of a total of 46 eligible records (20 male and 26 female patients).
The random number calculation for females is based on the random number table as follows:
Total eligible female records=26; Minimum female records=24
Random number calculations: 1, 4, 5, 6, 7, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29

To begin, the team numbers the list of eligible female records from 1 to 26 and selects the first round of records as indicated by the random number table calculations: 1, 4, 5, 6, 7, 9, 10, 11, 13, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, and 26. Since the next random number is 27, the team continues counting from the top of the record list—but this time excludes those records that have already been selected.

FIRST ROUND
1. Record 1
2. Record 2
3. Record 3
4. Record 4
5. Record 5
6. Record 6
7. Record 7
8. Record 8
9. Record 9
10. Record 10
11. Record 11
12. Record 12
13. Record 13
14. Record 14
15. Record 15
16. Record 16
17. Record 17
18. Record 18
19. Record 19
20. Record 20
21. Record 21
22. Record 22
23. Record 23
24. Record 24
25. Record 25
26. Record 26

SECOND ROUND
27. Record 2
28. Record 3
29. Record 8

Assign And Train Abstractors.

Data abstractors are those HIV staff that collect measurement data from the sample.

Assigning Abstractors

At a minimum, staff members chosen to be abstractors should be familiar with medical records and relevant terminology. If possible, providers should be engaged in a peer-review process to broaden the sense of ownership and learn from each other. Other factors to consider are availability and comfort level working with data.

The collection process should have clearly defined roles. A single staff member might oversee the data collection process while others remain available to answer questions that arise.

Since data extraction from charts can be tedious for one person, many HIV facilities find it helpful to assign a few HIV clinical staff do this activity together for a few hours at a time. The benefits of this approach are:

- Completing the task in a timely manner.
- Applying the same interpretation to answering the questions.
- Expanding understanding of both the process of data extraction and identification of issues involved.

Training Abstractors

Whether the project team collects the data or other staff is involved, some time for an informal training session should be scheduled as close to the actual time of data collection as possible. A designated staff member should begin by reviewing the basic purpose of performance measurement and the specific clinical aspects of the subject under review. Abstractors should be given a 'walk through' of the data collection process. Patient eligibility criteria and where to find required information in patient charts should be clearly indicated.

Additional Resource

For guidance in teaching small groups about the characteristics of a well-designed data collection system, see the HIVQUAL Group Learning Guide "Data Collection" exercise. The exercise could also be used to assess the strengths and weaknesses of an existing data collection system. You can download this publication at www.hivqual.org.

Toolbox:
Data Collection Tool

ARV Management (Eligibility: All Patients on ARV Therapy)

For each trimester (every 4 months), how do you assess the patient's stability?

- ☐ Stable: Was a viral load performed within each trimester? ☐ Yes ☐ No
- ☐ Unstable:
  - If ARV medication was changed, was a viral load performed within 8 weeks? ☐ Yes ☐ No
  - If ARV medication was stopped, were decision and clinical follow up documented within three months? ☐ Yes ☐ No
  - If ARV medication unchanged, was justification documented? ☐ Yes ☐ No

If medication was started or changed in this trimester, did the patient get treatment education? ☐ Yes ☐ No

Adherence to ARV Therapy (Eligibility: All Patients on ARV Therapy)

Was adherence discussed with the patient each trimester (every 4 months)?

- ☐ Yes: Adherence discussion documented
  Was an adherence problem identified? ☐Yes (Was the adherence problem addressed? ☐ Yes ☐ No)
  ☐No
- ☐ No: No documentation of adherence discussion

HIV Specialist Care

Was the patient seen by an HIV Specialist at minimum every 4 months?

- ☐ Yes: Patient was seen at least every 4 months by an HIV Specialist.
- ☐ No: Patient was not seen by an HIV Specialist.

CD4 Cell Count

Was a CD4 count performed within each trimester (at minimum 3 times/12 months)?

- ☐ Yes: A CD4 count was documented in each trimester.
- ☐ No: A CD4 count was not documented in each trimester.

Viral Load

Was a viral load performed within each trimester (at minimum 3 times/12 months)?

- ☐ Yes: A viral load was documented in each trimester.
- ☐ No: A viral load was not documented in each trimester.

Lipid Screening (Eligibility: All Patients on ARV Therapy)

Was a Lipid Profile Done?

- ☐ Yes: Lipid profile was done within the last 12 months.
- ☐ No: Lipid profile was not done within the last 12 months.

PCP Prophylaxis

Did the patient with fewer than 200 CD4 cells and no sustained CD4 cell increase > 200 during the last 6 months of the review period receive PCP prophylaxis?

- ☐ Yes: The patient received PCP prophylaxis.
- ☐ No: The patient did not receive PCP prophylaxis.

MAC Prophylaxis (Eligibility: CD4 cells <_50 and no sustained CD4 cell increase to >_50 during the last 3 months of review period)

Did the patient receive MAC prophylaxis?

- ☐ Yes: The patient received MAC prophylaxis. (CBC done within 6 months? ☐ Yes ☐ No)
- ☐ No: The patient did not receive MAC prophylaxis.

Toolbox:

Data Collection Tool...Continued

TB Screening (Eligibility: HIV- infected patients without a history of previous TB treatment or a history of a positive PPD)

Was PPD testing performed (placed and read within 72 hours) in the past 12 months?

- ☐ Yes: PPD screening was performed (placed and read).
- ☐ No: PPD screening was not performed (or it was placed but results not documented).

Hepatitis C (HCV) Screening

Was the patient's hepatitis C status known?

- ☐ Yes: HCV screening positive
  - Was patient's hepatitis A status known?
    - ☐ Yes, seropositive
    - ☐ Yes, seronegative (Was patient offered hepatitis A vaccination? ☐ Yes ☐ No)
    - ☐ No
  - Was alcohol counseling documented within the last 12 months? ☐ Yes ☐ No
  - Was hepatitis C education documented within the last 12 months? ☐ Yes ☐ No
- ☐ Yes: HCV screening negative
- ☐ No: No screening performed

Ophthalmology Exam (Eligibility: CD4 cells < 50)

Was an ophthalmology exam documented within the last 12 months?

- ☐ Yes: An exam was done within the last 12 months. ☐ No: An exam was not done within the last 12 months.

Annual Pelvic Exam

Was a pelvic exam performed within the past 12 months?

- ☐ Yes: A pelvic exam was recorded.
  - ☐ Pap done (Abnormal? ☐ Yes ☐ No If abnormal, 2nd Pap or GYN referral? ☐ Yes ☐ No)
  - ☐ Gonorrhea culture done?
  - ☐ Chlamydia screening done?
- ☐ No: A pelvic exam was not recorded within the past 12 months.

Annual Syphilis Serology

Was a syphilis serology performed within the past 12 months?

- ☐ Yes: A syphilis serology was performed. (If yes, was a confirmation test performed? ☐ Yes ☐ No)
- ☐ No: A syphilis serology was not performed within the past 12 months.

Annual Discussion of Substance Use

Was substance use discussed with the patient during the past 12 months?

- ☐ Yes: Substance use was discussed.
- ☐ Current user (within 6 months)
  - If a substance was injected, was safer injection/needle exchange addressed? ☐ Yes ☐ No
  - Patient in treatment during review period? ☐ Yes ☐ No If no:
    - ☐ Treatment discussed; no referral made
    - ☐ Treatment discussed; referral made
    - ☐ Treatment not discussed
- ☐ Past user only (last use over 6 months); Prevention/ongoing treatment discussed? ☐ Yes ☐ No ☐ No current use (within 6 months) or past use (over 6 months) identified
- ☐ No: Substance use was not discussed with the patient during the past 12 months.

Appendix

Toolbox:

Data Collection Tool...Continued

Mental Health Screening

Was a mental health screening performed within the last 12 months? ☐ Yes ☐ No

Was a need for mental health referral identified? ☐ Yes ☐ No

Was referral to a mental health provider made? ☐ Yes ☐ No

Annual Discussion of Tobacco Use

Was tobacco use discussed with the patient during the past 12 months?

☐ Yes: Tobacco use was discussed. ☐ No: Tobacco use was not discussed.

Annual Dental Exam

Was a dental exam performed within the last 12 months?

☐ Yes: A dental exam was performed on __ /__ /__.

☐ No: A dental exam was not performed.

Comprehensive Case Management Assessment

Was a comprehensive case management assessment of client needs performed within 30 days of initial client contact? ☐ Yes ☐ No

Case Management Service Plan Development

Was a case management service plan developed within 45 days of initial client contact?

☐ Yes: Service plan developed within 45 days of initial client contact.

Was service plan developed with client participation (i.e., did client sign service plan)? ☐ Yes ☐ No

☐ No: No documentation that service plan was developed within 45 days of initial client contact.

Case Management Follow-Up on Service Plan Goals and Referrals

For each identified client need area, is there follow-up regarding service plan goals every 120 days until achieved? ☐ Yes ☐ No

For each identified client need area, is there follow-up regarding service plan referrals every 120 days until achieved? ☐ Yes ☐ No

Case Management Coordination of Services

Is coordination of services documented (i.e., case conference or progress notes, other activities involving coordination of services) on at least a quarterly basis? ☐ Yes ☐ No

Abstractors should be allowed to do a "dry run" using a sample medical record at the end of the training session. This may help reveal any points of confusion and surface general questions about the process. In addition, the importance of flagging problem charts and forwarding them to the appropriate providers immediately for further review and follow-up should be emphasized. Deficient patient care always takes precedence over data collection. If reviewers discover negligent care in a medical record, they have an obligation to immediately alert a person who can investigate the issue further. The data from this medical record should still be included in the collected data.

Conducting A Dry Run

If possible, a dry run of the measurement process should be conducted to assess its efficiency and to ensure that the abstractors are able to get the information they need from the sample before starting the full-scale measurement. Using two to three records from the total sample, abstractors should collect the required information as explained during the training session. The project team or quality committee should meet with the abstractors to review the results and collect feedback about the process. Based on this debriefing, the measurement can be tweaked as needed. An additional dry run of the revised process may be conducted depending on the changes made.

Notes

Validate Results.

It is good practice to validate the data collection results to ensure the results are correct. An inter-rater reliability testing procedure can accomplish this.

Reliability is defined as the consistency of an instrument's measurements when used under the same conditions with the same subjects. The reliability of a measure is important for ensuring comparability of results over time. Frequently used in medical record abstraction, inter-rater reliability is defined as the reliability between two or more abstractors reviewing the same records.

Consider the following simple examples of inter-rater reliability testing. If one person is responsible for chart review, identify another person to look at approximately 8-10 charts to assess the chart abstraction process using consistent project data collection tools. If multiple people are responsible for chart review, then each can check a small sample (2-4) of the others' charts. Apply the same process for the data entry task.

Based on abstractor feedback and reliability data, the quality management committee and/or improvement project team should make any necessary changes to the data collection process before the next measurement effort. This may require that team members modify the process and its related forms, retrain abstractors, and/or reconsider the chosen indicator as a critical aspect of care.

Notes

Additional Resource

The following resource will provide you additional information on reliability testing and statistical analysis beyond the scope of this document: Agresti, Alan. An Introduction to Categorical Data Analysis, Wiley Series in Probability and Statistics. Applied Probability and Statistics.

Notes

Notes

Notes