

# Managing Quality in Nine Community-Based Programs: The HIVQUAL Project



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Health Resources and Services Administration  
HIV/AIDS Bureau





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## Introduction

Over the past decade, the HIV/AIDS Bureau has funded the National HIVQUAL Project to sustain quality improvement in HIV ambulatory care. The National HIVQUAL Project has advanced the quality of care for people living with HIV through coaching and consultation to over 160 Title III and IV grantees under the Ryan White Comprehensive AIDS Resources Emergency Act (RWCA) funded through the Health Resources and Services Administration, HIV/AIDS Bureau. The HIVQUAL model for quality management emphasizes three basic concepts: performance measurement, quality improvement, and infrastructure to sustain these activities. Through a facilitated model of individual technical assistance, HIVQUAL consultants provide tailored guidance to each grantee that is adapted to their unique organizational culture and characteristics. This individualized approach is further enhanced through facilitated group networks of grantees dedicated to the exchange of information and best practices of quality management.

These case studies highlight nine HIV ambulatory care programs from across the United States and its territories which have participated in the National HIVQUAL Project to build or enhance their quality management activities. In an effort to provide a resource to RWCA grantees on quality, nine case studies are presented here highlighting the performance, innovations, and demonstrated successes of the RWCA grantees. Projects were selected on the basis of geographic distribution and diversity of program models.

We hope that these case studies will illustrate the process of building a quality management program in an HIV clinic. The format was designed to “tell the story” of the experience at each clinic and how it was facilitated by the National HIVQUAL Project. By highlighting different types of programs, we also intended to showcase different types of challenges and barriers that were faced and most often overcome by the grantees as they developed their quality management programs.

It is our hope that these case studies will be useful to health care providers as they engage in the process of building or expanding their quality programs.

## The HIVQUAL Project

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 (HAB). 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 in Title III programs nationally. This successful pilot project was undertaken in Pennsylvania among six grantees, each 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, provide over 160 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 and coaching services and resources materials produced through the HIVQUAL Project and the National Quality Center help participating HIVQUAL sites learn how to systematically plan, implement and evaluate a quality improvement program and conduct quality improvement projects. Benchmarking of key clinical issues is promoted.

## 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.

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.

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.

If your program is interested in fully participating in the HIVQUAL Project, please contact your HRSA Project Officer. For more information about the HIVQUAL Project, visit our Web site at [www.hivqual.org](http://www.hivqual.org) or you may call 212-417-4614.

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Finally, we would like to acknowledge the unflagging dedication of the service providers portrayed in these case studies that spend every day of their professional lives trying to improve care for people living with HIV.

## Resources

HIVQUAL GROUP LEARNING GUIDE: Interactive Quality Improvement Exercises for HIV Health Care Providers

HIVQUAL Workbook: Guide for Quality Improvement in HIV Care

Measuring Clinical Performance: A Guide for HIV Health Care Providers

## Networking Quality: Dallas Family Access Network & Youth Angle, Dallas, Texas

**In Brief:** Dallas Family Access Network and Youth Angle are two linked multi-partner, decentralized Title IV networks that have been working with HIVQUAL since 2001. Prior to HIVQUAL's involvement, neither networks had a network-wide mechanism for sharing data, measuring performance and improving quality. HIVQUAL has assisted in modifying the structure of the networks to allow collaborative data sharing, performance measurement and technical assistance, and in developing network data systems from scratch that will support reporting to HRSA and network-wide performance measurement. With HIVQUAL's support, the four medical providers in the Youth Angle network have implemented a collaborative clinical performance measurement and quality improvement effort, including several successful improvement projects. HIVQUAL has assisted the networks in obtaining internal resources to design and support collaborative network-wide



Betty Cabrera, far left, and Dr. Tess Barton, far right, with the ARMS clinic team at Children's Medical Center



QI programs which are just getting underway. (We aren't able to provide statistics on client numbers in this article, as the data for the network partners are not yet complete).

**About the Site:** The Dallas Family Access Network was founded in 1989 as the Pediatric AIDS Network of Dallas (PANDA), by Dr. Janet Squires, M.D., the then-Chairman

of General Pediatrics at Children's Medical Center of Dallas and Associate Professor at University

### Key Players

Betty Cabrera, M.Ed., Executive Director  
Theresa Barton, MD, ARMS Clinic, Children's Hospital  
Tony Butt, Data Manager  
Catheleen Jordan, Ph.D., LCSW, Evaluator  
Rick Hoefler, Ph.D., Evaluator

HIVQUAL Coach: Nancy Showers, DSW

of Texas Southwestern Medical Center (UTSWMC). The network was originally centered at the AIDS-Related Medical Services (ARMS) clinic at Children’s, to provide a supportive referral network for the HIV-infected mothers and children cared for at the clinic and their families. Core partners from the start were the main Dallas County hospital, Parkland Hospital, and the AIDS Arms case management agency. “The network created a spider web between different agencies that already existed,” said Lori Nolen, a manager in the pediatric clinic.

As the number of HIV-infected infants born in Dallas declined to zero, the network has changed in character to more of an equal partnership between the eight participant agencies,

with each referring its youth, women and family clients to the other, with the goal of achieving a continuum of care. Four years ago, many of the participants in the network founded another Title IV program, Youth Angle, with the goals of providing outreach to HIV positive youth, linking them to care and facilitating their transition into the adult care system.

A typical patient benefiting from the network is an HIV-positive woman, on her third pregnancy, receiving care at Parkland’s high-risk obstetrics clinic. The mother is well known to the clinic, because her first two children were monitored there. On her first pregnancy, the ARMS staff went over to Parkland to introduce themselves well before

### Dallas Family Access Network Partners

UTSWMC	<i>Administration, outreach, counseling/testing, mental health</i>
Parkland Health and Hospital System	<i>Adult and adolescent medical care, OB care</i>
Children’s Medical Center	<i>Pediatric care</i>
AIDS Arms	<i>Case management, adult, adolescent medical care</i>
AIDS Interfaith Network	<i>Transportation</i>
Bryan’s House	<i>Day care, nursing, social work</i>
Child and Family Guidance Centers	<i>Mental health</i>
Rainbow Days	<i>Life skills training</i>
Welcome House	<i>Outreach</i>

### Youth Angle Partners

UTSWMC	<i>Administration, outreach, prevention services, counseling/testing</i>
Parkland Health and Hospital System	<i>Adolescent Medical care</i>
Children’s Medical Center	<i>Adolescent Medical care</i>
AIDS Arms	<i>Case management, adolescent medical care</i>
AIDS Interfaith Network	<i>Peer counseling, education</i>
Coalition of Life	<i>HIV education through dramatization</i>
Friendship West Baptist Church	<i>Counseling/testing, peer support, abstinence education</i>
Greater Dallas Council on Alcohol and Drug Abuse	<i>Outreach, Testing/counseling, prevention counseling</i>
YMCA of Metropolitan Dallas	<i>Intervention, prevention</i>

delivery. They met the mother and baby in the post-partum area and ensured a smooth transition to the intensive, 18-month monitoring program at ARMS. The mother continued receiving care at the Parkland main HIV clinic at Amelia Court--Dallas' largest, with 4,000 patients in care -- which has a peer advocate program funded by DFAN to focus on the problems of women and families. At the pediatric clinic, the family was asked to sign a network participation agreement, including a privacy release for sharing of information among DFAN partners, presented with a menu of options for services it might need. The clinic referred the mother to a case manager from AIDS Arms, and the baby to Bryan's House, which provides medically-managed child care, for day care. The family had some housing problems, which AIDS Arms was able to address by referral to the HOPWA housing program. The AIDS Interfaith Network provided the family with transportation to medical appointments, and case managers from AIDS Arms accompany them there, to help the patient learn how to communicate with her physician.

The two networks fund 35 staff, most of them placed at the individual agencies to provide services targeted to women, families and youth. It is funded through the UTSWMC Pediatrics Department, coordinated by Executive Director Betty Cabrera and

governed by monthly partners meeting of the directors from each agency.

**First Contact with HIVQUAL:** Since 2001, the two Dallas networks have been working with HIVQUAL to establish what Ms. Cabrera views as a pioneering QI program for a community-based network, without a model or recipe. The process has been filled with high hopes, false starts, and frustrations, but Ms. Cabrera hopes that they are finally on the right track. The Dallas networks' relationship with HIVQUAL began when the HIVQUAL program sent out an email to all Title IV programs, inviting them to take part in a pilot project. Ms. Cabrera was enthusiastic about the opportunity to get in on the ground floor of any new activity. She joined the national HIVQUAL Project Title IV advisory committee, and invited HIVQUAL coach Nancy Showers to come tell them more about the HIVQUAL program.

**HIVQUAL Assistance with QI Program Development:** When she arrived for her first visit in February 2001, Dr. Showers recommended that the organization proceed along two tracks. First, that it conduct network-wide strategic planning to build the capacity for network-wide performance measurement and quality improvement to ensure both medical and social services are reaching its target populations of women, families and youth. Second, work to swiftly satisfy the Ryan White legislation's mandate for

monitoring of clinical indicators. Both Dr. Showers and Ms. Cabrera recognized that achieving the long-term vision would require delicate political negotiations among the network partners, as well as a significant investment in information technology, training and infrastructure. They thought that monitoring of clinical indicators might be quickly achieved, however, by asking the medical partners to conduct data collection using the HIVQUAL software. But their hopes proved unrealistic. Of the network partners, only the pediatric clinic participated, and only for a single year.

Ms. Cabrera decided to regroup. Based on Dr. Showers' advice, she set up an 8-member QI committee, which was integrated into the DFAN charter, a strategic plan that had been prepared by a HRSA-supported consultant. Also at the HIVQUAL consultant's urging, she renegotiated each of the network's subcontracts with its partner agencies to require every agency to participate in network-wide quality improvement efforts. She described this QI program in the organization's competitive renewal Title IV grant application, in 2003. While the application was approved, HRSA's evaluation of the QI program found significant weaknesses. The program needed measurable, network-wide objectives and outcomes, HRSA wrote, with specified indicators, time frames, meeting schedules, accountability and resources dedicated to QI.

Dr. Showers returned to help the network team strategize on a response to HRSA's critique. The team decided they needed to hire an individual, whom DFAN titled an "evaluator," to carry out the QI program. Ms. Cabrera contracted with a professor from Texas A&M University to be the networks' first evaluator. By February, 2004, the evaluator had developed a draft HIVQUAL plan for the network, including a HIVQUAL Committee with separate work groups on the quality of medical services, social services and research, and set out a process for developing a quality measurement tool that included the input from focus groups of consumers, community leaders and other stakeholders.

The social services agencies remained reluctant to collect or share their data, which made accurate CADR reporting to HRSA on numbers of clients receiving services, never mind in-depth performance monitoring, challenging. Dr. Showers recommended that the network renegotiate the subcontracts, yet again, to require this data sharing and use of Ryan White CAREWare. The network achieved this in mid-2004. She also suggested that Ms. Cabrera hire a network-wide data manager, based out of her office rather than the pediatric clinic - to work on development of a data system that would collect comparable indicators from all agencies for both performance measurement and reporting to HRSA. In early 2004, Tony Butt came aboard

in this role, and began to work closely with Dr. Showers on design of such a system. He was able to win the partners' confidence in large part because the network provided some of them with their first-ever computers, and all with a great deal of technical support, while designing a monthly reporting system that minimized the workload on the partners' part. (*See box for details*).

### **The QI Program Today:**

*Structure.* In early 2005, Ms. Cabrera decided that running a QI program required more attention and resources than an out-of-town evaluator could provide. She hired a firm run by two local professors from the University of Texas at Arlington School of Social Work, Cathleen Jordan and Rick Hoefler, who brought the added advantage of existing relationships with staff at the partner social service agencies, many of whom were their former students. Drs. Jordan and Hoefler developed a draft QI plan in which performance measurement would be based on two types of indicators: clinical indicators, and indicators of organizational performance. The latter are internal assessments of how the network is working, collected from each network partner's director in an interview using a survey tool called "the Annual Satisfaction Survey for Community Coalitions," and producing a quantitative measure: the Network Collaboration Satisfaction Scale. The two evaluators scheduled

introductory meetings with the director of each network partner, at which they introduced themselves, explained the purpose of the QI program, and administered the satisfaction survey.

In July, 2005, they presented the evaluation and QI plans to the directors as a group, at the monthly partners' meeting. "The key to both DFAN and YA is the 'network' itself," they explained. "The *network* is what makes the difference and the *network* is what Title IV funds. Thus, the most important variables to measure in terms of process are the perceptions and reality of the network itself." Performance measures would become the basis for specific quality improvement projects within a year, the two evaluators explained. The projects would be decided upon by a QI committee chaired by one of the evaluators and including the executive director, medical director, data manager, administrative assistant, a representative from the Consumer Advisory Board, and representatives from each of the partner agencies. According to Ms. Cabrera, none of the directors at the meeting disagreed with the general approach that the evaluators outlined. They are looking forward to receiving the feedback from the results of the satisfaction survey, and realize now that some other data collection is inevitable and necessary. However, at the time of a site visit for this article, the partners had not yet approved the new structure.

*Performance Measurement.* The network has recently made another attempt to implement Dr. Showers' short-term goal of a monitoring system for clinical indicators. The four medical partners of the Youth Angle network, - the Children's ARMS Clinic, Parkland's main clinic at Amelia Court, Parkland's de Haro-Saldivar Health Center and AIDS Arms' Peabody Clinic - led by Dr. Barton, decided to carry out a pilot performance measurement project specific to the medical care of their client youths. HIVQUAL was used as a starting point for development of the indicators, but they were tailored to reflect performance on national guidelines for adolescent care, through the inclusion of indicators such as retention in care, use of birth control, and mental health referrals. Mr. Butt designed a simple Microsoft Access program to be used as a chart review tool. For the past two months, three of the partner agencies have each reviewed three charts a month, with the eventual intent being that they will compile enough data to compare performance between clinics.

The new network-wide data system is almost ready to go. All the partners have agreed on a standard set of data elements on each patient that would be reported to the network, through the new data system, for CAREWare-based CADR reporting. In addition, Drs. Hoefler and Jordan suggested an initial set

of clinical indicators that would be collected from each partner and reported through the data network being developed by Mr. Butt:

**HRSA-mandated measures including:**

- Number of clients receiving primary medical care, support and social services through Title IV programs
- Number of women age 13-49 receiving OB/GYN through DFAN and Youth Angle
- Percent of women receiving annual Pap smears through Title IV programs
- Number of pediatric clients transitioning to adolescent primary care services.

**Other clinical indicators including:**

- Children/youth with CD4<sup>+</sup> or = 15%
- Number with VL<400, VL<10,000, VL>100,000
- Pneumococcal and influenza vaccination rates
- PPD status
- Involvement in clinic-sponsored camps and teen groups

The clinical indicators would be approved by the future QI committee.

*QI Processes.* Raeline Nobles, executive director of AIDS Arms, said that the performance measurement and QI efforts of the four organizations making up the Youth Angle medical group had already paid dividends in strengthened collaborations among medical providers at the major medical centers and those at the community clinics. The physicians have taken turns visiting each other's sites and have become more familiar with the issues faced by their clients within the community, strategies for solving problems, standards of clinical care and experts who are available for

referrals. “We’re creating an environment where the doctors are networking among themselves,” Ms. Nobles said. “They would never have spoken to each other before.” This peer learning is one of the most powerful of QI tools.

The problem-sharing and brainstorming at the medical meetings have led one notable success, which targeted the network’s priority objective of moving adolescents from Children’s Medical Center to a more appropriate care environment at Parkland’s HIV Clinic at Amelia Court. The youths were clearly reluctant to make the move. Through conversations with the young clients, the group learned that the adolescents were fearful of being harassed by older patients in Amelia Court’s crowded waiting room. They tested a strategy of establishing a youth-only waiting area in the underused, quiet HIV research clinic waiting area, one floor up from the main clinic, and gave the teenagers restaurant beepers to page them when an exam room was available. The youths felt safe, and more of them have clearly been willing to receive care at Amelia Court, although comparative data is not yet available.

### **Assessment and Future Directions:**

While the network does not yet have a complete QI program in place, Dr. Showers is highly satisfied with their progress. “In four years, to me, an extraordinary amount has been ac-

complished, given the complexity of Title IV,” she said. Ms. Cabrera, in turn, feels that a QI program is vital to her network at this point, and is hopeful that the current strategy, which has been developed with the guidance of Dr. Showers, will result in a stable and functional performance measurement and QI program. She gave a great deal of credit to the HIVQUAL program. “We’ve had many plans and many structures,” she said. “Every time we shifted Nancy was here to guide us...Nancy did not push or prod us but she held up a standard for us ...She was a catalyst.”

The two critical elements in allowing the network to move forward in development of a QI program, Ms. Cabrera said, have been the development of an information system, and convincing many of the partners that they needed to put in effort to justify the impact of their Title IV funding. “If you play one instrument, and then decide to be part of an orchestra, you give up some of your rights - not all of them, but some of them - to become a small part of a big thing,” Ms. Cabrera said. At the time of the site visit for this case study, in July 2005, she was fervently hopeful that the newly-developed program would satisfy HRSA representatives during their scheduled site visit in September, 2005.

From Dr. Showers’ perspective, the Dallas networks have been confronted with political, technical and struc-

tural issues common to many Title IV networks, which need to shift their focus away from HIV infected infants and their families to the more complex needs of infected teens and young adults, in parallel with the shifts in the HIV epidemic. The model that Dallas is adopting, under her guidance, would be equally applicable to many of these programs, she said. In Dr. Showers' vision, the overall network will have a QI

committee and program, each agency will have a QI committee and program, and Ms. Cabrera will be able to monitor trends and performance on a daily basis, using a powerful, CAREWare-based information infrastructure. "Once they have that in place, Betty can look at female, pregnant adolescents and the services they're receiving across the network," Dr. Showers said. "It's very powerful in terms of managing care."

### **Developing a Data Infrastructure for a Network**

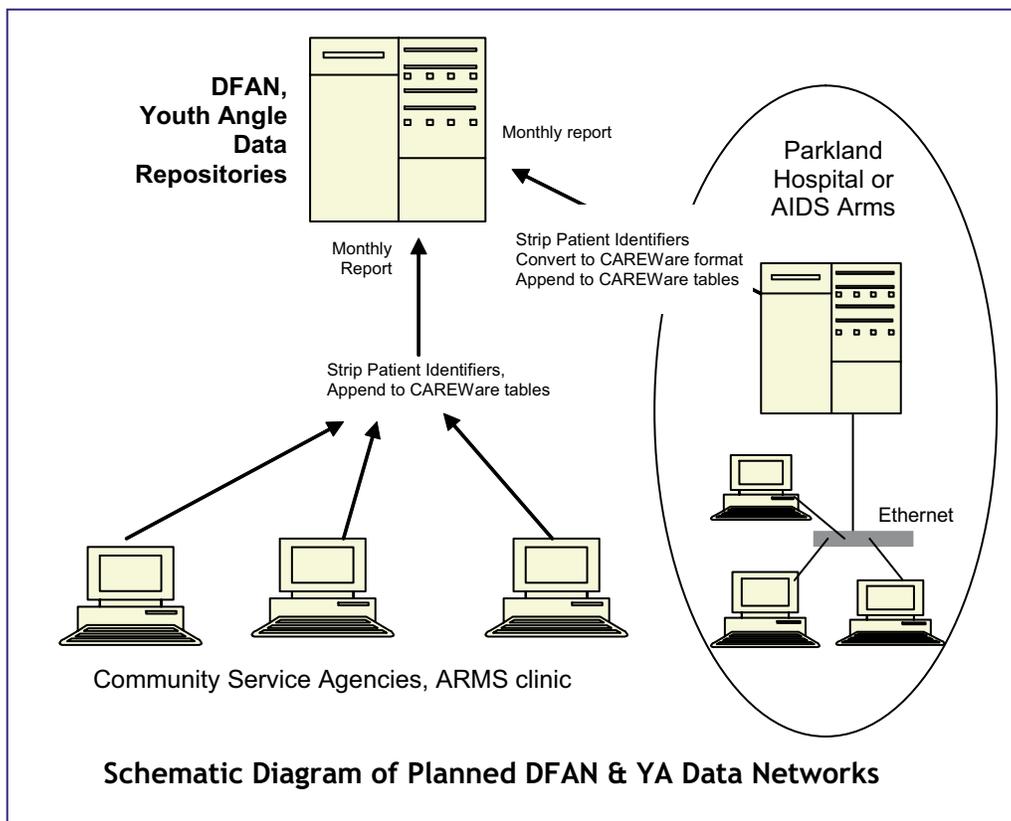
When data manager Tony Butt started work in early 2004, some of the community-based agencies making up the DFAN and Youth Angle networks had no computers at all. Others had idiosyncratic PC-based systems, which they used for reporting to their primary funders, but did not use for HRSA. None of the small agencies had any capacity to provide the network with patient-level data, and some couldn't even count the numbers of clients they were serving, using manual logs. Parkland Hospital and AIDS Arms, on the other hand, maintained complex data servers, operating Ethernet systems, and multiple databases complying with the Texas State Title I/II standard reporting system, COMPIS and ARIES.

Originally, Mr. Butt thought he would need to design a customized software program to handle this complexity. But HIVQUAL consultant Nancy Showers suggested that he use the data structure and source tables established by Ryan White CAREWare as the basis for his software system. That way, anyone trained on CAREWare - not just Mr. Butt - would be able to generate reports. He could set up a neutral database linked to the CAREWare tables, and import each of the site's data into it. The sites that Mr. Butt had set up to use CAREWare could send the data directly into it. Once the data from each site was converted into the CAREWare structure, the database could be used for the networks' regular reports to HRSA. Reports of quality indicators could also be generated from the CAREWare data tables.

Once the overall architecture had been determined, Mr. Butt's next task, in designing the data system, was to first assess the agencies' needs for hardware, software and human expertise. Ms. Cabrera obtained funding to purchase computers, and in 2004 all the agencies agreed to use CAREWare or provide compatible data as a condition of their contracts.

After three lengthy consultations and numerous phone conversations with Dr. Showers, as well as extensive technical support from CAREWare by phone, the network infrastructure (see graphic) is almost ready to go. Once it is operational, each of the PC-based network partner agencies will prepare a required monthly data report for the network. Prior to sending it, they will strip off the patient identifiers. The report will then be sent electronically to the central data repository,

(continued on next page)



at UTSWMC, where it will be appended to the network's CAREWare tables. The data from the Parkland and AIDS Arms systems will be run through an additional step, in which the COMPIS/ARIES format tables are converted to CAREWare format before they are appended.

Mr. Butt is already dreaming of his ideal network data system, in which each partner would enter data directly into a web-based interface, which would flow into network data server running the CAREWare software in newly-released version 4.0, which can be run on the internet. Under this system, the data would be collected and entered in a standardized manner and available right away. That seamless method, however, awaits the availability of funds and facilities at the University of Texas data center.



## Laying the Groundwork: Total Health Care, Baltimore, Maryland

**In Brief:** HIVQUAL is working with the rapidly expanding HIV program at this Baltimore community health center to establish a new HIV quality improvement program structure and information system to support performance measurement, as well as reporting to HRSA and Title I and II funders. At the time of the site visit for this case study HIVQUAL had been working with the site for only 18 months, and development of the program was still in process, but the site had already established a QI structure, staff have significantly enhanced their skills in HIV care, and the site is nearly ready to implement a data collection and performance measurement system.

**About the Site:** Total Health Care is a private, not-for-profit community health center (Federally-qualified health center-equivalent) with five clinics serving some of the most troubled neighborhoods in Baltimore, a city with one of the most severe HIV epidemics in the country. Total Health Care and its predecessor



The Total Health Care EIS Team.  
Jennifer Kunkel is in front.



community health center organizations have been in operation for 35 years, having emerged from a series of financial troubles in the late 1990s. HIV care is provided at its main inner city clinic, the Larry Young Division Health Center, located across the street from a housing project most notable for frequent police raids, and also at its substance abuse treatment center, the Saratoga Health Center, and at two full-service satellite locations, Mondawmin Health Center, located in an urban shopping mall, and Doris Johnson Medical

Center. Total Health Care has an active organizational QI program for the health center as a

### Key Players

Wendy Merrick, EIS Program Director  
Jennifer Kunkel, QI Coordinator and EIS Team Leader  
HIVQUAL Coach: Lori Delorenzo

whole, and has recently participated in two collaboratives by the Institute for Healthcare Improvement, on diabetes and hypertension. However, prior to its involvement in HIVQUAL, the QI program had not covered HIV services.

An integrated, 13-member Early Intervention Services (EIS) team, recently joined by two infectious disease specialists from Howard University Hospital, provides specialty HIV care in weekly half-day HIV clinics at each of the four locations. HIV patients are also seen by their primary medical care providers, integrated into the everyday adult medical care practice. The health center has been rapidly expanding its HIV care through the Ryan White program. It received a Title III planning grant in 1998 and its first EIS grant in 1999. Initial Title II funding arrived in 2001 and Title I in 2002. Funding levels have increased each year. The staff have been receiving assistance and training from the Baltimore-based Johns Hopkins University AIDS Education and Training Center (AETC) and have been “adopted” by the AETC. The health center expects a massive expansion of its HIV services by 2006, because it plans to open four new HIV testing and counseling centers and offer opt-in HIV testing to all patients. It is forecasting testing 18,000 patients in 2006. The patients will be referred directly to Total Health Care’s HIV clinic through

Health Linkage to CARE Project, part of the U.S. Centers for Disease Control and Prevention-funded Antiretroviral Treatment Access Study. “We stand a very good chance of getting inundated” with patients, said Jennifer Kunkel, the leader of the health center’s EIS team.

**First Contact with HIVQUAL:** HIV Program Director Wendy Merrick brought the no-nonsense, matter-of-fact Ms. Kunkel on board to both serve as day-to-day manager and QI coordinator of this rapidly expanding program in March, 2004. She selected Ms. Kunkel in part because of her familiarity with the HIVQUAL program of technical assistance. Ms. Merrick realized it was critical to improve the quality of HIV care and the knowledge level both of her team of HIV specialists and that of the primary care providers caring for the patients. In addition, she realized the clinic did not have a data system capable of carrying out HRSA’s reporting requirements, and could not carry out the required QI activities.

Ms. Kunkel’s first step was to conduct a complete baseline assessment of Total Health Care’s HIV services and support systems, including an attempt at reviewing charts. Within days, she had brought in the Hopkins AETC to plan and conduct “HIV 101” courses for the EIS team and other basic staff trainings on community standards of HIV care. She was dismayed at the need to conduct manual

Key Data Points (From 2004 CADR)	
Ryan White Funding:	Since 1999. Funded from Titles I, II and III
	HIV Primary Care for Adults HIV Specialty Care OB-GYN care Case Management Mental Health Assessment Substance abuse assessment and treatment
Services Provided	Nutrition counseling Peer outreach HIV Counseling and Testing Adherence counseling Dental care Pharmacy assistance Emergency Financial Assistance
Number of HIV+ Patients	288
Gender Breakdown:	F: 59.7% M: 39.9%
Ethnic background:	White: 0.7% Black 98.6%
Housing	Homeless: 12.2%
Risk Factors	Heterosexual: 44.1% IDU: 31.3% MSM: 5.3%

reviews as part of her assessment, because the organization’s data system, the Healthmatics Enterprise Medical Practice Management System, captured only encounter-based and demographic data, rather than organizing information on a patient-specific basis. By April, 2004, Ms. Kunkel knew she needed help. “It didn’t take me very long to figure out there was a big problem here,” she said. “I called up HRSA and said, ‘Listen, these people have some data management nightmares.’” Her HRSA project officer contacted the HIVQUAL project, which assigned her to coach Lori Delorenzo.

**HIVQUAL Assistance with QI Program Development:** Ms. Delorenzo conducted an organizational assessment and determined that the site needed first to work at the macro, program level and put in place the basic structures of a QI program. Ms. Delorenzo, who was based less than 90 minutes away in Virginia, initiated an intensive program of technical assistance, visiting the site every three weeks between April and November, 2004, working primarily one-on-one with Ms. Kunkel. The most fundamental need, she determined, was for an information system that

could be used to track quality indicators. “They did not have an information system that could give them accurate counts for anything,” she said.

Ms. Delorenzo recommended that the site seek technical assistance to develop a customized program to link the data from its in-house Enterprise system with Ryan White CAREWare, which it would use solely for the purpose of filing its CADR report, and eventually to track quality indicators, when the HIVQUAL indicators are added. She also introduced Ms. Kunkel to the HIVQUAL3 software, and showed her the reports it could generate. Ms. Kunkel fell in love with the reports, and decided to adapt the HIVQUAL software as a clinical tracking program for all patients in the clinic, at least until CAREWare integrates the quality measurement component. Immediately upon making this decision, Ms. Kunkel was once again on the phone to her HRSA project officer. “I said, this has to happen; we have to do this,” Ms. Kunkel said. HRSA agreed, and by July, 2004, funding for an IT consultant was forthcoming.

As her next step, Ms. Kunkel worked with Ms. Delorenzo to develop QI policies and structures, and to determine how to monitor performance within such a system. Ms. Delorenzo characterized her role during this period as one of mentoring, and supplying Ms. Kunkel with a variety of sample documents,

including quality management plans, meeting minute formats, policies and procedures and job descriptions, which she could adapt in designing her own quality program. Based partly on these, Ms. Kunkel prepared a quality policy for the organization, organized a QI committee, and rewrote all her staffs’ job descriptions to include responsibility for improving quality. Since Total Health Care felt that consumer involvement in its care program was critical, one of Ms. Kunkel’s first steps in developing the quality policy was to request some recommendations from a consumer consultant, Peter W. Byrd of the Howard University AETC, on how consumers could be involved in the QI program. The health center developed a Consumer Advisory Board (CAB), and trained its members to develop their own patient satisfaction survey, mail it to all the health center’s HIV patients in October, 2004, and compile the results. The CAB is extremely active, and has met at least monthly since December, 2004.

#### **The QI Program Today:**

*Structure:* Total Health Care has adopted a departmental policy and procedures governing EIS program quality assurance and evaluation. The policy is clear, concise and calls for extensive consumer involvement:

- 
1. All clients must be assured that the quality of care meets or exceeds DHHS Guidelines for HIV Care services

2. All clients must be given the opportunity to contribute to the QA/ evaluation processes/ reports of the HIV delivery organization.
  3. All clients have the right to know the current mission and goals of the program, changes or adjustment plans for the program, and how the EIS program is evaluated on the quality of its services
  4. All clients have the right to a clear understanding of the expected outcomes of the EIS program operations/ clinical procedures and have a format for informing the program when those outcomes are not being met.
  5. The community that the program serves must have the opportunity to contribute to the QA/evaluation processes/reports of the HIV delivery organization.
- 

The written procedures give responsibility to the QI coordinator for developing a 3-year, comprehensive QI plan for the organization, developing annual QI projects, performing randomized quarterly chart reviews at all the clinic sites, and develop annual staff development plans for EIS employees. Ms. Kunkel has developed two “QI plans,” for the 2004-5 and 2005-6 periods, although they resemble a typical management or strategic plan.

The EIS program has its own QI committee, which technically reports to the overall Total Health Care QI Committee. Ms. Kunkel sees the committee as providing her efforts with oversight and guidance. The committee, which held its first monthly meeting in February, 2005, is chaired by Total Health Care Medical Director Rama Shankar, MD,

and includes the administrator of the satellite health centers, the pharmacy administrator, and the overall health center’s Quality Assurance Manager, in addition to three members of the EIS team. Ms. Kunkel characterized the committee’s initial meetings as focusing on learning about their responsibilities and about being members of an *active* committee, as opposed to one that functioned only in name. But she envisions them as responsible for developing future QI plans. As of August, 2005, Ms. Delorenzo had attended one committee meeting to provide QI training.

*Performance Monitoring.* Development of the CAREWare based portion of the patient-level data collection system has been completed, but implementation was awaiting the availability of CAREWare version 4.0 - as of this writing, the new software had recently been released, but Ms. Delorenzo believed it still had too many bugs to install. Ms. Kunkel is training the EIS patient manager, Taishahwan Joyner, who also sits on the QI committee, on the HIVQUAL software, and is hopeful that she will be able to produce reports on the HIVQUAL indicators. Once data on 100 percent of patient visits is being automatically fed into the HIVQUAL software through the information system revision, she plans to generate HIVQUAL performance measurement reports on a random sample of 50 patients each quarter.

In the meantime, Ms. Kunkel has developed a manual chart review process. She worked with the medical director, EIS HIV primary care and infectious disease physicians, and consultants from the Hopkins AETC to compile a list of quality indicators. She came up with a medical record review checklist of nearly 100 items that should be documented in the chart, based on national, Maryland and Baltimore standards, ranging from documented dates of birth to quarterly monitoring of viral load to psycho-social assessments. Beginning in the first quarter of 2005, she reviewed over 20 charts per quarter from the four clinic sites, and compiled a lengthy narrative specifying the deficiencies found in each review. "I've found 1,000,002 needing immediate attention," she said. Ms. Delorenzo says she hopes to work with Ms. Kunkel to focus her performance monitoring more on clinical priorities - such as a rate of only 20 percent of women receiving annual Pap smears - to display data in a more useful manner, to focus on strengths as well as deficiencies, and to modify a tone that can be perceived as harsh.

*Quality Improvement.* Ms. Kunkel has implemented a number of successful efforts to improve the quality of HIV care at Total Health Care, most importantly, in Ms. Delorenzo's view, providing HIV-101 training for staff and physicians and bringing in the infectious disease

specialists from Howard University. However, to date, none of the efforts have taken the shape of a classical quality improvement project: being driven by performance data, directed by a team or the QI committee, and utilizing a PDSA cycle. Ms. Delorenzo said her next step in technical assistance will be to provide further training on QI methods to the QI committee, and to work with them to select and implement a small improvement project, and to coach Ms. Kunkel in ways to motivate the staff to work on quality.

**Assessment and Future Directions:** Ms. Delorenzo believes that Total Health Care provides an excellent illustration of the value of assessing the quality structures of an organization - the first step in any HIVQUAL technical assistance effort - in tailoring the technical assistance to meet the organization's needs. "With Total Health Care, the macro level needed to be taken care of first," she said. "They had so many problems." Ms. Delorenzo said her organizational assessment at the one-year point in the assistance effort showed just how much the health center had accomplished. "Sitting down and seeing how much they have grown in the last 12 months is very positive," she said. "They still have a long way to go." She projected that Total Health Care would require ongoing assistance from HIVQUAL for at least two more years, if not more.

Ms. Kunkel was highly complimen-

tary of HRSA's responsiveness to the health center's needs and its willingness to provide technical assistance, and recommends that other sites follow her example in requesting help. While she was familiar with QI processes on a regional level, from previous work in the Pennsylvania Title II program, she feels heavily reliant on Ms. Delorenzo's expertise in translating that to an operational level for clinical care delivery at a single clinic. At first, she said, there was a great lack of understanding of quality assurance within the organization, to the point where the medical records department refused to provide charts for review. But now there is a growing comprehension, and Ms. Kunkel already feels like QI is less of a lonely quest. QI planning has been extremely helpful, Ms. Kunkel said, "It gave us a formal method of being able to assess our current resources and current abilities and current inabilities or weaknesses and develop a list of definable gaps" to correct. Ms. Kunkel's ambitious QI plans include com-

paring her clinic's performance on both process indicators and outcomes, such as CD4 count, to those of other sites in the Baltimore region and nationally. She is hopeful that HRSA will compile the outcomes data it is collecting from Title III sites on a regional basis, and report the regional data publicly, and she hopes to obtain comparative HIVQUAL indicator information from other sites as well.

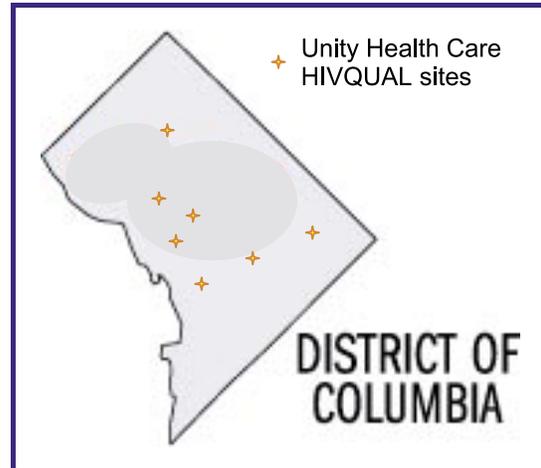
Ms. Merrick views HIVQUAL as a very advanced methodology for quality improvement, which she had previously viewed as beyond Total Health Care's ability to implement. She is glad to finally have the resources to implement it in her clinic, saying that "Jennifer has been instrumental in moving the program toward a real CQI plan." Ms. Merrick understands that the effort is just beginning. The main benefit the clinic has derived from the QI program to date is "a picture of our activity and our progress - a baseline. It was kind of hard before to know where we were."



## Getting to Graduation Day: Unity Health Care, Washington, D.C.

**In Brief:** This multi-site community health center in Washington DC has been working with HIVQUAL intensively over the past four years, and has developed an in-house HIV quality program based at six individual clinics that provide large volumes of HIV care. Through their work with HIVQUAL, the leaders of Unity’s HIV quality program have developed sufficient depth and expertise to run their own internal training of trainers on HIV QI, and consider themselves to have recently “graduated” from the HIVQUAL program.

**About the Site:** Unity Health Care is a Federally Qualified Health Center with 27 varied clinic locations throughout Washington, D.C. (pop. 560,000) and an outreach van, with a mission to provide a “citywide network of quality health and human services to the medically underserved regardless of race, ethnic background or ability to pay.” It serves the U.S. city most severely impacted by HIV, with an estimated prevalence of nearly 5 percent, a 2003 AIDS incidence rate of 170.6 per 100,000 population, and



a reported 9,375 people living with AIDS.

Unity was founded in 1985 by chief medical officer A. Janelle Goetcheus, M.D., as Health Care for the Homeless, providing care in 12 D.C. homeless shelters, and has expanded, after taking over a number of failing community health centers, to serve about one-third of the District of Columbia’s uninsured population. It is a partner in the D.C. Health Care Alliance, an innovative financing program that replaced the bankrupt D.C. General Hospital in 2001 with a program that guarantees payment

for health care services for the uninsured poor. Unity provides comprehensive HIV

### Key Players

Julie Ahlrich, RN HIVQUAL Program Coordinator  
 Sister Patricia Ann Carroll, RN, HIV Nurse-Case Manager  
 John Hogan, M.D., Upper Cardozo Health Center

HIVQUAL Coach: Nanette Brey Magnani, Ed.D.

care to over 2,000 patients in all but one of its clinic locations, through clinic-based generalist physicians and three rotating infectious disease specialists. The clinic locations caring for significant numbers of patients and participating in HIVQUAL include:

- The Federal City Shelter @ CCNV. This facility, a short four blocks from the U.S. Capitol, is the largest homeless shelter in the United States, with 1,350 beds. It was founded by the Community for Creative Non-Violence (CCNV), one of the nation's most prominent advocacy groups for the homeless. Unity's primary care clinic, in the shelter's basement, is one of six community agencies providing services to shelter residents. HIV care is integrated into other clinic services provided to shelter residents; there are 144 patients with HIV.
- The Phoenix Center. In July, 2001, Unity took over this main HIV clinic of D.C. General Hospital, which now serves a population of over 700 patients in southeast D.C., one of the city's poorest areas. It provides primary medical and nursing care, social work, nutritional counseling, mental health care, and case management for patients with HIV.

- First Street Health Center is a substance abuse treatment center and methadone clinic; many of its patients are also mentally ill, and a number are sex workers.
- Southwest, Walker-Jones, East of the River and Upper Cardozo Health Centers are full-service community health centers providing primary care to the low-income families in their neighborhoods. HIV care is integrated into primary care services. Each health center serves a distinctive population, with Upper Cardozo serving largely immigrant groups from Central America and Ethiopia, although its HIV-positive population, like those at the other centers, is mainly African-American.



The Federal City Shelter, the nation's largest, on a recent evening. Unity Health Care runs a clinic in the shelter basement.

**First Contact with HIVQUAL:** Unity requested a consultation with HIVQUAL in 2000, at the recommendation of its HRSA project officer. In December, 2000, HIVQUAL coach Nanette Brey Magnani made a formal presentation in the Unity board room to a group of 20 members of the organization's senior leadership and its HIV providers. After due consideration, in January 2001 the leadership decided that participation in HIVQUAL would be the best way to meet the Ryan White grant requirements for a structured QI program, because the organization's overall QI department seemed to be in a constant state of flux, and there had previously been no QI activities specific to HIV. The three clinic locations with the most HIV patients at that time: Upper Cardozo, CCNV and East of the River, were selected as pilot sites. (The Phoenix Center joined later, after its incorporation into Unity). Ms. Ahlrich, then the HIV nurse case manager at Upper Cardozo, and Sister Patricia, of CCNV, were selected to lead the effort.

**HIVQUAL Assistance with QI Program Development:** After conducting an organizational assessment, Ms. Brey Magnani diagnosed Unity's main problem as a decentralized leadership structure for quality management. She suggested that the team work toward a self-managing team-based approach to HIV QI, based on QI teams at each clinic site, because she felt this type of structure would be

the most sustainable for the long-term. The clinics themselves, she said, were "where we felt that change happened, and there was less staff turnover."

Ms. Brey Magnani charted a course for the pilot clinics that was to begin with HIVQUAL data collection analysis, followed by selection of an area for a pilot QI project, and move toward formalization of the HIV QI program and expansion to additional clinic sites. Unfortunately, the initial task began with a six-month struggle for the two coordinators to develop an unduplicated list of HIV patients seen by their clinics. The clinic's only electronic database was an often-incomplete and cumbersome central billing system, and the two nurse-coordinators had little technical support to help generate the list from that system. According to Ms. Brey Magnani, the medical charts were also frequently incomplete. Upper Cardozo had a log listing all HIV patients, but the other clinics did not.

Once the HIVQUAL review for July 2000-June 2001 had been conducted, the top Unity leadership, the nurse case managers and the clinic managers from all three clinics held a special meeting with Ms. Brey Magnani, in January 2002, to review the data and select an initial improvement project. They decided to select the same topic for all three sites, and Dr. Goetcheus made an executive decision to select Pap smears,

which she felt would help address a high risk area for morbidity. The group also designated members of a HIVQUAL core team with representatives from each of the participating clinics. They decided that each clinic would name its own GYN project team, which would meet monthly, analyze the problems and devise and test solutions at its own site and report to the monthly core team meetings. Ms. Brey Magnani was intensively involved. She came for frequent visits and often set the agendas and facilitated the monthly team meetings, walking the QI neophytes through each step of the process. The project proved a success, with HIVQUAL scores for annual GYN exams increasing from a range of 36-64 percent before the

project, and 76-82 percent afterwards (see box). The project was expanded to the non-HIV patients at the participating health centers, and to HIV patients at the Southwest and First Street sites.

“Once we had the projects under control we wanted to expand QI from a programmatic perspective,” Ms. Ahlrich said. “That was part of the process that Nanette had planned for us.” So in October, 2002, the Unity group formalized its HIVQUAL project structure into an HIV Quality Improvement Management Plan. The QI project core team became an HIV QI Subcommittee, reporting to Unity’s overall QI Committee, which in turn reports to the Board of Directors. Each clinic was to maintain its own QI Project Team. This system fit Unity’s

Key Data Points (From 2004 CADR)	
Ryan White Funding:	Funded from Titles I, II and III
Services Provided	HIV Primary Care for adults HIV specialty care OB/GYN care Dental care HIV nurse case management Social work Nutritional counseling Mental health care
Number of HIV+ Patients	3,151
Gender Breakdown:	39% Female 60% Male
Age	0.2% 2-12, 3% 13-24
Ethnic background:	White: 0.7% Black 98.6%
Housing	Homeless: 12.2%

structure, since responsibility for care and clinic operations were decentralized to each clinic site, and there were few resources, at the time, supporting the overall HIV or HIV QI program.

Ms. Brey-Magnani provided training for the QI Committee members, and in June, 2003 presented her first Training-of-Trainers session; the Committee members in turn were given responsibility for training the members of their teams. March 11, 2005, was a particularly notable date, on which Ms. Ahlrich, Sister Patricia and others ran their own Training-of-Trainers session for staff from each of the other sites, without a HIVQUAL consultant in the audience. “The consultant’s role has shifted,” Ms. Brey-Magnani wrote in an assessment of Unity’s QI program, “and now serves, in some instances, as a coach, but primarily as a resource person.”

### **Current Status of the QI Program:**

*Structure:* In 2004, for the first time, the HIV quality improvement program received some dedicated resources within the organization. Ms. Ahlrich decided to return to graduate school, and took a one-day-per-week position as the HIV QI coordinator. She serves as an internal consultant providing training and guidance to the clinic sites. She also has an intern serving an IT assistant who can generate the HIVQUAL patient list in a comparatively brief 2-3 week period.

Changes in the overall Unity organization served to strengthen the HIV QI effort. The organization’s Quality Improvement office gained a stable leader in Chief Clinical Officer Zerita Hadden-Hudson, and the HIV program has been unified under Angela Hollman, RN, Associate Director of HIV Services, who joined the HIV QI Subcommittee. Each clinic’s HIV QI team is more-or less autonomous, still reporting to the HIV QI subcommittee. The HIV program providers as a group are responsible for determining HIV care policy, and they must approve QI projects that involve policy changes.

*Performance Monitoring:* Information systems remain a continued frustration and limitation for the Unity QI program. While the clinic now uses a patient-centered data collection system – the Express system required by the city HIV/AIDS Administration – the information stored in that system is retrievable and reports can be generated only by the city, according to Ms. Ahlrich, and cannot be used by clinics for their own QI or management purposes. They continue to monitor performance only once annually, in the same manual, labor-intensive process, and to maintain manual logs and project-specific record review forms to assess the results of their quality projects. They hope eventually to obtain an electronic medical record system that would greatly support

their performance monitoring efforts.

**Quality Improvement:** Unity has developed QI projects that focus on dental care, PPD screening and filing of HIV consent forms. The HIVQUAL project has expanded to three new clinic sites: First Street, Southwest and Walker-Jones, with the now experienced team members training the others and walking them through the steps of conducting a HIVQUAL audit and a quality improvement project. As the clinic staffs gained expertise in QI, they expanded the reach of the projects to areas other than HIV care. For instance, in 2004 Sister Patricia conducted a project to improve PPD rates for all shelter patients, not just those who are HIV positive, since the homeless population as a whole is at risk for TB. When Ms. Ahlrich rotated to a job as clinic manager of the Woodridge Health Center, which has not been involved in HIVQUAL, she led a project to assess compliance with hypertension practice guidelines, which included development of a record review tool.

**Assessment and Future Directions:** Ms. Ahlrich and Sister Patricia now view themselves as having largely “graduated” from HIVQUAL technical assistance, and able to keep HIV QI efforts ongoing on a self-sustaining basis, at both the individual clinic and overall organizational level. They plan to continue to submit HIVQUAL data to the

program, and are hoping for continued phone consultation, updates on changes in the HIVQUAL program and software, and HIVQUAL data from other clinics to benchmark their performance.

In assessing how far they have come, Ms. Ahlrich and Sister Patricia recalled that at the beginning, without internal resources to support QI, carrying out HRSA’s requirements seemed almost overwhelming. “This is a very large undertaking,” Ms. Ahlrich said. “Nanette’s deep involvement was very important. She prods us along. She motivates us and she gives us goals and helps us to stay on track.” Ms. Brey Magnani in turn is impressed by the Unity staff’s “commitment to quality and to trying to establish the infrastructure for quality,” in an environment with very limited resources, a collapsing city health system, and enormous health problems to treat. “They’ve done an extraordinary job with what they have.”

Sister Patricia said the system-wide Unity QI program has benefited a great deal from the HIVQUAL effort. “The reason that we went with such an intensive model with Nanette is that when we started there was no in-house QI coordinator - that person had left. And as we continued new people came in and left, so this became the model for the corporate program,” she said.

Will Unity be able to sustain its

newly-independent HIV QI program? Ms. Brey-Magnani asked rhetorically. The answer, she said, depends in part on the consistency in the members of the QI teams, the continued presence of a part-time person to coordinate the effort,

and the overall accountability of the organization through its HIV program. The next step in growth of Unity's quality program, she recommended, should be increasing the involvement of the HIV medical leadership in the QI program.

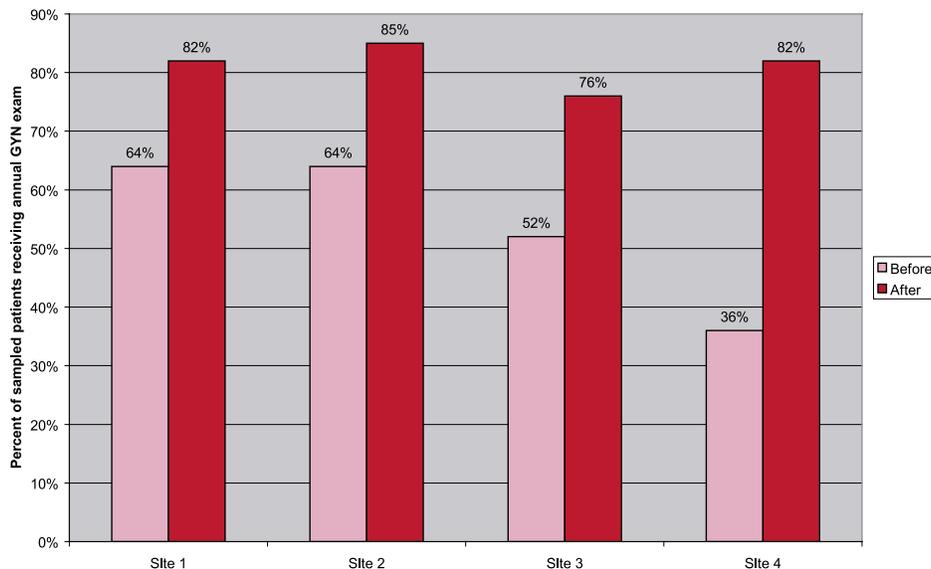
## GYN Care, Clinic by Clinic

Unity Health Care's first QI project addressed two critical health priorities for the District of Columbia: HIV and cervical cancer. According to the city Health Department, D.C. ranks highest of all states for breast and cervical cancer mortality. In response, the DC Breast and Cervical Cancer Early Detection Program, also known as Project WISH (for Women Into Staying Healthy), which provides a free annual pelvic exam and Pap smear to low-income District women with little or no health insurance. This program was one tool the clinics hoped to use in order to achieve their target of increasing the percentage of women receiving annual pelvic exams and Pap smears to 85 percent.

Each of the clinic sites implementing the project conducted its own analysis of the causes of low pelvic exam rates. These had in common the transient nature of the populations the clinics served, with high rates of missed appointments, and frequent changes in addresses and phone number making tracking and follow-up difficult. In addition, there was little tracking of pelvic exam due dates by the clinic staff. This was confounded at the Phoenix Center, which had the largest number of women clients, by difficulty in obtaining patient charts from the defunct D.C. General Hospital, and from the GYN providers to which patients had been referred. Phoenix Center began providing its own GYN exams in December, 2001. East of the River also had difficulty obtaining test results from outside labs in a timely fashion.

Each clinic created a flow chart of the way the annual GYN exam process should work, and implemented a variety of changes, including keeping a tracking log, educating patients on the importance of annual exams and Pap smears, rescheduling patients who missed appointments, and performing Pap smear at the time of the patient's regular visit, rather than making a follow-up appointment. A key component at several sites was immediate screening of patients by clinic staff for eligibility for Project WISH, and enrolling them in the project on the day of the visit, whether or not the Project WISH staffer was present at the clinic. The results of the initial four clinics are shown below. The project was expanded to the First Street Health Center in 2003, where they pilot-tested withholding methadone treatment for patients who did not obtain their scheduled Pap exam, but obtained success by treating the Pap as the "fifth vital sign." Now, Unity is working to sustain its improvement.

Results of Unity Health Care GYN QI Project



## Quality in the Face of Constraints: Comprehensive Health Care & Unconditional Love, Inc., Melbourne, Florida

**In Brief:** HIVQUAL provided this financially-stretched stand-alone HIV clinic with critical technical assistance to set up the structures and processes of a QI program, which has permitted the clinic to consistently raise its performance on clinical indicators across the board. The clinic team is relying on ongoing periodic visits from the HIVQUAL consultant to galvanize its QI activities and ensure a continued focus on QI and the “big picture” of HIV care as the clinic bounces from crisis to crisis.

**About the Site:** Comprehensive Health Care is a stand-alone HIV-only clinic, operating on a shoestring from a nondescript, one-floor brick building on the Indian River-front in Melbourne, Fla., 35 miles south of the Kennedy Space Center. It is the major HIV provider serving Brevard County (pop. 500,000), and it is one of the busiest HIV clinics in the state.

Clinical Director Joyce Goode and a half-time physician provide nearly all the medical care for their 653 mostly



The Comprehensive Health Care team.  
Top Ann Pelhaim, Bill Goode,  
Seated: Joyce Goode, Phyllis Johnson



indigent patients, over 200 of whom are also both severely mentally ill and substance abusers. The clinic team provides

care in Titusville one-half day per week. The clinic also has an active outreach program operating under the name Unconditional Love, which both conducts HIV counseling and testing and goes out to

locate clients who have missed their appointments, finding many under bridges

and sleeping in flower beds. Its case management program is very active linking patients with housing, social and supportive services.

### Key Players

Joyce Goode, ARNP, Clinical Director  
Bill Goode, Administrator  
Phyllis Johnson, RN, CQI Coordinator  
Ann Pelhaim, RN, CQI Coordinator

**HIVQUAL Coach:** Nancy Showers, DSW

The clinic wants to “pull out all the stops” in care and services for its clients, Ms. Goode said, but has been hard hit by cutbacks in the Florida Medicaid managed care program, Florida AIDS Care.

Ms. Goode, a nurse practitioner formerly of the Brevard County Health Department, and her brother Bill founded the clinic in 1991, because of the dearth of providers of clinical care in the face of an HIV epidemic that was relatively new to Florida. “I felt that a lot of people were not feeling very loved when they found out they had HIV,” Ms. Goode explained, “So we do Comprehensive Health Care because of God’s Unconditional Love for them.” The names of the two programs are kept separate, and the fact that the clinic provides HIV care low-profile, in order to preserve confidentiality and protect clients from the stigma still linked to HIV infection in this community.

**First Contact with HIVQUAL:** The Title III grant award, in October 2000, provided funding for the clinic to hire Ms. Johnson, a self-described “obsessive-compulsive” RN, who was experienced with QI from her previous work with a home health agency, as a half-time CQI and Referrals Coordinator. Ms. Johnson instituted regular medical record reviews to assess performance in HIV care, Title II case management standards and referral to specialty care and outside services, calculating a QI “score” that

summarized the number of indicators met, and initiated some improvement plans. Then, in May, 2001, a HRSA team came for the site’s initial PCAT visit. The visit team, which included both a branch chief and a project officer, wrote that the team found “a compassionate and knowledgeable clinic and support staff” with strong support from the community and patients who “demonstrated their commitment to providing state-of-the-art clinical services to people living with HIV.” However, the team wrote, “across all areas, i.e. institutional, clinical, administrative and fiscal, policies and procedures appeared to need strengthening.” HRSA offered the site a menu of technical assistance, including HIVQUAL, to assist it in meeting Title III standards. Ms. Goode said the clinic was very pleased with the review, the support from its project officer and offer of assistance, “We asked for some of everything,” she said. A parade of technical experts arrived and recommended changes in the Board of Directors, medical records, and financial management. For most, the assistance took the form of a one-time visit, recommendations, and written report. But for HIVQUAL coach Nancy Showers, DSW, the first visit in July, 2001, was the start of a long-term relationship.

**HIVQUAL Assistance with QI Program Development:** Dr. Showers introduced the team to the HIVQUAL software and

encouraged them to develop a formal QI plan, with a committee structure and a formal project with goal statement for each year. She has returned for a regular quarterly visit to monitor their progress. Most importantly for the site, she gave them a sense of the national benchmark for typical performance on the HIVQUAL indicators, and advance notice of new standards that were under consideration. She also suggested additional contacts and resources the site could access for technical assistance in other areas, and supplemental grants they could apply for, and encouraged them to adopt CAREWare for patient recordkeeping.

The site established small executive, management and quality improvement committees, which were intended to meet monthly. The site revised its audit form and clinic flow sheet to include the HIVQUAL indicators and CAREWare reports, working with Dr. Showers to develop a process for following up on problems found following reviews of individual charts. The QI committee continued to monitor the QI score on a quarterly basis and to set quarterly goals for overall improvements in compliance. At Dr. Showers' suggestion, they also selected an annual HIVQUAL project: the first one, for 2002, was to increase PPD screening from 33 percent of patients to 80 percent of patients and to increase the percent of PPDs placed that were read - PPD placement peaked

at 64 percent in July 2002. The site developed a quality improvement plan describing its QI process, and wrote up a number of its QI projects in response to encouragement by HIVQUAL. In early 2004, Dr. Showers worked intensively with the site to develop ways they could use CAREWare software to support their performance monitoring and QI.

### **The QI Program Today:**

*Structure.* The QI planning documents have not been active or vital documents. "I wrote them two years ago and haven't looked at them since," Ms. Johnson said. The clinic's staff is so small that they do not need to rely on formal meetings. Problems are dealt with on a day-to-day basis among the key 4-5 players: Joyce and Bill Goode, the head of nursing and/or case management, Ms. Johnson and Ann Pelhaim, a second half-time QI Coordinator who was brought on board primarily to manage QI of case management services. Ms. Johnson prepares a quarterly QI report for review at the quarterly meetings of the Board of Directors, which consists of representatives of the County Health Department, a variety of community HIV/AIDS advocacy and service organizations, and four consumers, and is always actively interested in the QI data, the causes of any problems and the clinic's efforts to solve them. The QI committee meets at about the same time to address any problems raised by the report. Key

brainstorming, problem solving and planning meetings occur at the time of Dr. Showers' regular visits every 3-6 months.

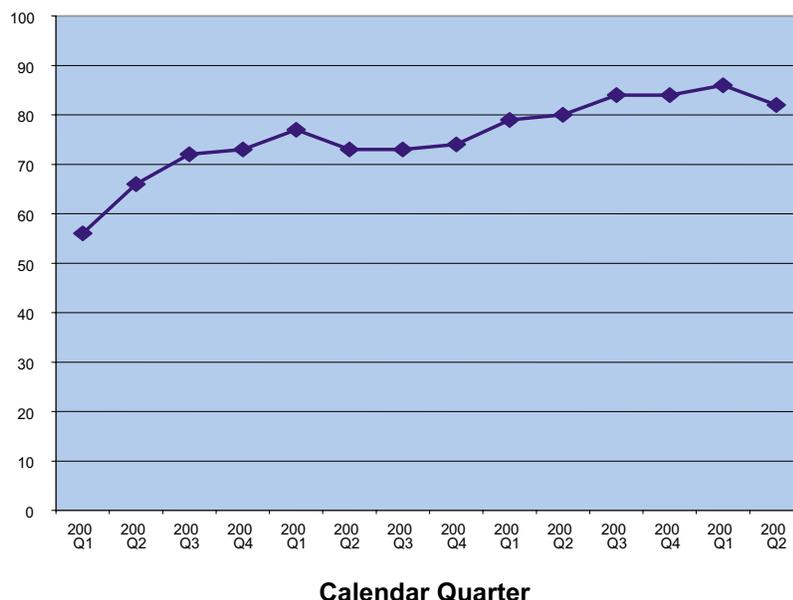
*Performance Monitoring.* The core of the Comprehensive Health Care QI program is the monthly review of 10-25 medical records. Clinical care and case management criteria covering documentation in the file and timeliness and frequency of client contacts and assessments are monitored. Timely referrals and follow-up of referrals have high priority. The clinical indicators include nearly all the HIVQUAL

indicators and annual mammograms, PSA and testosterone screenings have recently been added to the list.

Clinic nurses assist with the reviews periodically so they are reminded of the need to manage the patient's overall care. The nurse or QI Coordinator can complete an order form for a missing Pap smear or Hepatitis B vaccine at the time of the review, and it is the nurses who are responsible for making sure that deficiencies are addressed at the time of the visit. Ms. Johnson or Pelhaim attaches an orange slip to the front of each chart

<b>Key Data Points (From 2004 CADR)</b>	
Ryan White Funding:	Title II since 1993, Title III since 2000, Client Data Demonstration Project
Services Provided	Adult clinical care Case management PMTCT HIV Counseling and Testing Prevention services Housing Opportunities for Persons with HIV/AIDS (HOPWA) Psychiatric counseling Drug counseling Mental health Nutrition counseling and meals Transportation Outreach services, including to prisons Emergency financial assistance Dental Care (through a contract)
Number of HIV+ Patients	653
Gender Breakdown:	F: 40.4% M: 59.6%
Age	0-12: 0.8% 13-24: 4.0%
Ethnic background:	White: 56.8% Black 41.2% Hispanic: 10.0%
Housing	Homeless: 9.8% Institutionalized: 0.9%

**Improvement in Comprehensive Health Care QI “Score”**  
Percent of indicators met in medical record reviews.



to alert the nurse and provider to address the problem at the patient’s next visit. The nurse is required to return the orange slip to the CQI Coordinator’s desk following the patient visit, including the nurse or provider’s notation of completed or intended actions. The statistics for each indicator and the overall QI score are tracked monthly and compiled quarterly and annually. The site conducts an annual sample-based HIVQUAL review as well to identify any problems, but on the whole these have been picked up earlier by the monthly tracking data. Overall, the data have shown steady improvement (*see graph*).

The clinic is eagerly anticipating receiving the new version of CAREWare that integrates the HIVQUAL standards and is planning to conduct its monthly performance reviews through

CAREWare instead of manually, building on what it has learned through the Client Data Demonstration Project. This could also enable the clinic to look more at outcomes of care, data analyses that Mr. Goode has been conducting, but which have not, to date, been integrated into the QI program.

*QI Processes.* If rates for any indicator drop below 75 percent, or below the national median reported by Dr. Showers (whichever is higher) the QI team develops an improvement goal and plan to achieve it. Dr. Showers is generally intimately involved in the brainstorming, planning and review of results, which are monitored through the monthly reviews. Ms. Goode has maintained her contacts at the Brevard County Health Department over the years and collaboration with the health department

has been integral to many projects; for example the health department has supplied vaccine for vaccination drives carried out by Comprehensive Health Care nurses, and clients have been referred there for PPD screening. The clinic's major technique for quality improvement projects is fondly referred to as "the blitz." Ms. Goode explained: "You take everything else off the table and all resources are directed to this project." For example, at the end of January, 2005, the clinic received \$35,000 in Ryan White funds earmarked for dental care that were scheduled to expire by March 31, 2005. A "blitz" was scheduled, patients who needed dental care identified and the QI coordinators arranged for 118 referrals in a short two-month period. They worked with the dental offices to make sure appointment slots were available, and the case managers arranged for transportation and made sure the patients got to their appointments.

**Assessment and Future Directions:** The Comprehensive Health Care teams are enthusiastic supporters of QI and of the technical assistance provided by HIVQUAL. QI "is a safety net for our high-wire act, the necessary overextending that we do," Ms. Goode said. "Our main goal is to have a really state-of-the-art program, a steak program

on a bologna budget. Sometimes you have so many things that are competing for your attention - particularly if the patient is in crisis -- that you can neglect others. CQI brings your priorities back into focus."

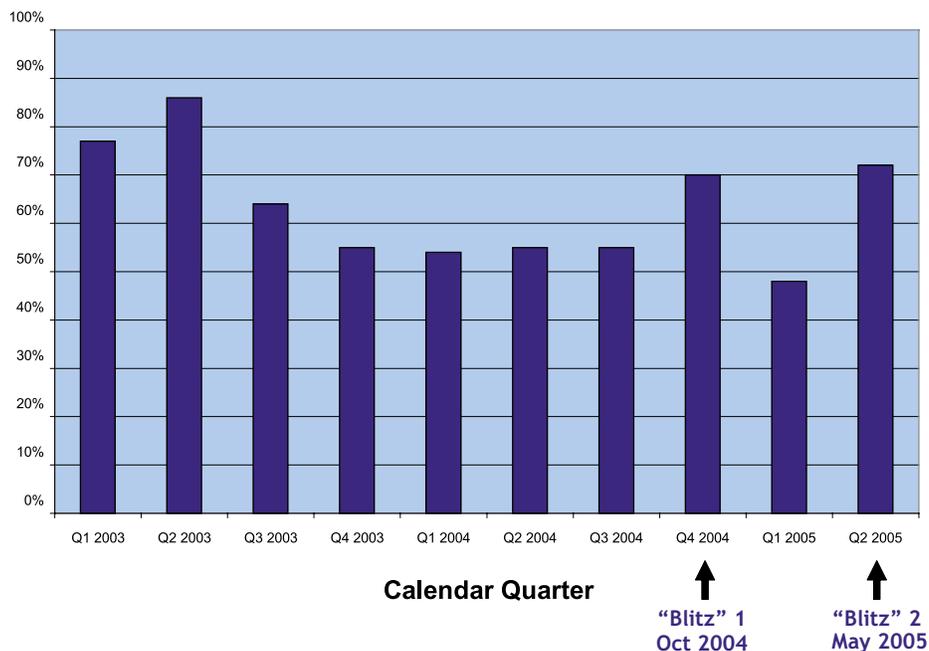
The regular consultations with Dr. Showers are helpful in part because they pull the busy clinic staff together to do some QI-related critical thinking and planning, Ms. Goode said. Her quarterly visits provide useful deadlines for the work products that the clinic QI team has promised. Her feedback on data and plans is useful. Most importantly, Ms. Johnson said, Ms. Showers is "an excellent resource and a good contact with the rest of the world.... In Brevard County you can feel pretty isolated from everywhere else."

Ms. Goode added that "HIVQUAL is great because you've got this whole team of people who aren't bogged down in providing the patient care...They're focused on raising the standards of care. It helps us prioritize...let us know when we're up to standard, when the standards are changing." The site would welcome the occasional opportunity to lessen their isolation through regional conference calls with other providers, which at the time of the interview Dr. Showers was planning to begin very soon.

### A “Blitz” for Women’s Health

Comprehensive Health Care’s typical approach to a QI project is illustrated by their 2004 project to increase the annual Pap test rate. In January-May 2004, for example, the Pap smear rate had fallen to only 49 percent from the prior year’s high level. When the team conducted their quarterly HIVQUAL meeting with Dr. Showers, she informed them that the national median performance on the HIVQUAL Pap smear indicator, by comparison, was 72 percent. The team immediately developed a Pap test improvement project plan. They examined the major reasons why Paps had not been performed. The providers were asked to document why patients had not scheduled or come for Pap appointments. They tried several techniques for getting women to come in for Paps, including scheduling at the time of their regular HIV visit, offering Pap smears on particular days, and referring them to the county health department clinic nearest their home. Success came after the clinic scheduled a “women’s health blitz” for the first week of October, during which a nurse practitioner did Pap smears full time. Clients without Pap smears were identified through CAREWare, contacted – by street-based outreach workers if necessary – and scheduled for Paps during the blitz week. In 4th quarter 2004, the Pap smear rate was up to 70 percent. Through its regular follow-up, however, the clinic found it had been unable to maintain that rate after the blitz was over – mainly because the nurse practitioner who could do Paps was overstretched, and couldn’t keep up, Dr. Showers said. In May, 2005, the team decided to track Pap status of every woman scheduled for a visit or selected for chart review, and work with them intensively to solve whatever problems were blocking the exam. By the next month, 9 of the 10 women whose charts were reviewed had been screened for cervical cancer.

Percent of Women Receiving Annual Pap Smears





## Coping with Change: Interfaith Community Health Center, Bellingham, Washington

**In Brief:** After receiving orientation and training from HIVQUAL, this small, but rapidly expanding northwestern community health center put in place a clinic-wide quality improvement program, covering the full range of services it provides. By implementing quality control procedures for its HIV caseload, including a flow sheet, pre-visit chart check and 100% quarterly performance monitoring, it has raised the quality of its HIV care across the board. It is beginning to carry out specific improvement projects on both HIV care issues and non-HIV issues such as childhood immunizations.

**About the site:** Interfaith Community Health Center is a private, nonprofit full-service community health center, set in the mountains of northern Puget Sound, and serving the primarily rural areas of Whatcom and Skagit Counties (pop. 280,000). It is a brightly painted, 4-year-old facility with a picturesque setting; on a clear day, the white peak of Mount Baker can be clearly seen in the background. However, the circumstances of many of its clients



are far from pretty. The clientele reflects a pervasive rural poverty, and has been growing rapidly, according to Ms. Johnson, as private physicians in the region refuse to accept both Medicaid and

Medicare. The clinic has been undergoing rapid change during this time, with a tripling in the number of staff, a change in organizational status – from a clinic run by 24 religious

groups to an independent 501(c)3 corporation – a shift from volunteer to professional providers, a number of temporary medical directors, and introduction of

a more professional board of directors.

Interfaith was urged to apply for a Ryan White planning grant in 2000 by a



Whatcom County, Wash.

### Key Players

Rebecca Johnson, Operations Director  
Carol Kumekawa, RN, QI Coordinator  
Sam Curd, RN, Care Coordinator

HIVQUAL Coach: Barbara Rosa, RN

local Title II-funded case management agency, Evergreen AIDS Foundation, located just a block away. Evergreen was interested particularly in locating a source of dental care for its clients. “Finding adult dental care is impossible for low-income people here,” Ms. Johnson said. HIV dentistry is a large part of the clinic’s Ryan White program; Interfaith has a full-time HIV dentist, Dr. Mel Agan, who sees each HIV-positive patient an average of five times per year, since many have long neglected their oral health. Otherwise, for medical care and counseling, HIV patients are completely integrated into the general clinic population. Interfaith subcontracts with Skagit Valley Medical Center, a private for-profit clinic, to see 10-15 HIV patients living in Skagit County. For referrals to other services, Interfaith continues to work closely with Evergreen.

#### **First Contact with HIVQUAL:**

Interfaith received its first Title III grant in October, 2001. A mere six months later - and only four months after Ms. Johnson was hired as operations director - the clinic received its first site visit from HRSA using the Primary Care Assessment Tool (PCAT). At the review, HRSA informed the clinic of the requirement for a quality improvement program. “In the [HRSA] materials we saw this HIVQUAL, this canned QI program. So we said in the PCAT review our intention was to use HIVQUAL,” recounted

Ms. Johnson. The clinic staff asked their HRSA project officer to arrange for a HIVQUAL consultant to visit, but specifically requested that they be allowed to create a QI program that would benefit the entire clinic, not specifically the Ryan White population. HRSA agreed.

#### **HIVQUAL Assistance with QI Program**

**Development:** HIVQUAL coach Barbara Rosa made her first visit to Interfaith in the summer of 2002 and met with the senior clinic management. She found that the organization had no quality improvement structure at all, but that they were very receptive to QI, in part because they were applying for a grant as a Federally Qualified Health Center, which requires that the organization have a QI program. The clinic administrator requested that she train the entire clinic staff in quality improvement philosophy, structure and methods. In October, 2002, she conducted workshops on QI for all the clinic staff and for the Board of Directors; she also met with the HIV staff to present the HIVQUAL program, and visited the Skagit Valley Medical Center. She conducted an organizational assessment and recommended that the clinic develop a QI plan and monitoring system. The clinic immediately named a QI coordinator, Ann Donkersloot, (who was later replaced by Ms. Kumekawa in the half-time position) and a CQI Committee, and started tracking the HIVQUAL indicators

in 2002. “They adopted the HIVQUAL material wholesale,” Ms. Rosa recalled.

The clinic was not pleased with its initial performance on the HIVQUAL indicators. (see table)

Indicator	2002	2003
CD4 Test	26.4%	47.3%
Viral load	39.5%	58.2%
HIV education	13.2%	74.5%
Wellness education	5.3%	72.7%
Pneumovax	63.0%	76.4%
Lipid screen	30.8%	50.0%
Pelvic exam/PAP smear	71.0%	75.0%
PPD	39.5%	67.3%
Discussion of substance abuse	34.0%	76.0%
Mental health assessment	25.7%	40.0%
Adherence assessment	19.3%	90.9%
Quantitative documentation of adherence	0.0%	28.4%
MAC prophylaxis	20.0%	63.0%
PCP prophylaxis	70.0%	92.6%
Ophthalmology referrals	20.0%	50.0%

They started to critically evaluate their system of care. They turned to Ms. Rosa for assistance. Ms. Rosa advised them -- as is her standard practice in cases of across the board poor

performance -- that the initial step was to develop systems for recording, and easily verifying, patient-by-patient compliance with clinical guidelines. In response, the clinic introduced an HIV clinical care flow sheet for providers to track ART regimens, required laboratory tests, monitoring visits, vaccinations and health maintenance procedures. On the reverse side of the flow sheet are listed the HIVQUAL and DHHS guidelines for frequency of monitoring, vaccinations, screening and counseling. In 2003, after consultation with Ms. Rosa, they added a reminder system, in which Mr. Curd reviews each HIV patient’s chart prior to the visit and attaches a “queue sheet” for the provider as a reminder of the lab tests or other procedures that need to be performed. As a result of these two initiatives, the indicators Interfaith was monitoring improved across the board, as the table shows.

The site soon discovered that Washington State law provides legal protections for those “coordinated quality improvement programs” that receive approval from the State Department of Health. With Ms. Rosa’s ongoing consultation support via phone and email, the site worked to draft a QI plan that met the State requirements - which differed substantially from the HIVQUAL model, and did not require the listing of specific indicators or goals for improvement. The QI plan went through

several drafts; state comments were received and considered, and it had not received final approval by the second HRSA Office of Performance Review site visit in July 2004. The site visit “didn’t go well,” Ms. Johnson recalled, to the site staff’s shock and dismay, given their project’s success. HRSA called for more frequent monitoring of quality indicators, and for the clinic to identify a single indicator to focus on in a quality improvement project. HIVQUAL worked with HRSA to ensure that its final recommendations made sense in light of the site’s progressive development of QI processes and structures.

In response to the performance review, Interfaith worked to integrate specific targets and more frequent per-

formance measurement into its developing QI program. Ms. Rosa said that Interfaith was now ready for such a step, having established the basic structures and systems it needed to carry out quality improvement. The clinic finalized its QI plan, obtained Washington State approval, established a schedule for tracking each of the HIVQUAL indicators to obtain more rapid feedback of the results of improvement efforts, and included a workplan with 22 separate measurable performance goals in the area of primary medical care, a timeline and action steps for achieving them into its 2005-10 Title III competitive renewal grant application. The goals included, for example, providing 80 percent of HIV patients with an annual

<b>Key Data Points (From 2004 CADR)</b>	
Ryan White Funding:	Since 2001; Funded from Title III Services Provided
Services Provided	Adult clinical care Behavioral health counseling PMTCT Prevention services Mental health Nutrition counseling Adherence counseling Dental Care
Number of HIV+ Patients	137
Gender Breakdown:	F: 21.9% M: 78.1%
Age	0-12: 0% 13-24: 0.7%
Ethnic background:	White: 82.5% Black 5.1% American Indian 5.1% Hispanic: 2.2%
Housing	Homeless: 15.3% Institutionalized: 5.1%

physical exam. It selected nutritional assessments for its focused improvement project, and set a target that 95 percent of HIV patients were to be provided with a nutritional assessment by March 2006. Progress on the goals was to be reviewed quarterly by the QI committee.

### **The QI Program Today:**

*Structure:* Ms. Kumekawa is focusing on putting into place the framework for an organized, clinic-wide quality improvement program. In May 2005, the health center adopted a number of formal procedures governing the quality improvement/risk management program, reporting of causes for concern and sentinel events, and patient comments and grievances and other means of improving communication within the clinic. The procedures include an annual review and revision of the QI plan. The QI Committee, which meets monthly, includes all department heads. The Board of Directors also has a 2-member QI Committee, which receives a biannual summary of QI indicators and other activities. HIV quality improvement is directed largely by the multidisciplinary HIV team, which meets twice a month and holds quarterly planning meetings. In addition to Ms. Johnson, Mr. Curd and Dr. Agan, the team consists of the clinic's three providers, an outside infectious disease specialist, a nutritionist, a behavioral health specialist, and three case managers from Evergreen. Ms. Johnson

presents the HIVQUAL data to an HIV team planning meeting once a year.

*Performance Monitoring:* The medical director, dental director and Ms. Kumekawa are responsible for carrying out medical record reviews on a regular basis. There are 3 standing categories of reviews: a system to monitor follow-up testing and treatment for all patients with abnormal PAP smears and mammograms, a monthly review of a sample of 5 charts from each provider to determine general competence and compliance with clinical protocols standards (such as for diabetes care), and a review to monitor standards of care for Ryan White patients. For the HIV review, Mr. Curd reviews 100 percent of HIV patient charts each quarter for 33 standards and enters the data into CAREWare, in addition to carrying out the HIVQUAL data collection on 100 percent of the patients annually. Other quality indicators, such as childhood immunization rates, are suggested on an annual basis. The committee also receives input and ideas for improvement from the results of a consumer satisfaction survey, and from the results of a review of HEDIS managed care indicators carried out by Community Health Plan of Washington (CHPW), a Medicaid managed care plan owned by all the community health centers in Washington State. CHPW provides incentive payments for centers that meet the plan's quality standards.

*Quality Improvement:* Based on the input from all these sources, the committee selects quality improvement projects. At any one time, three new projects are underway and three projects are in the follow-up stage. Ideally, said Scott Blaker, M.D., one of the center's former medical directors, one-third of the improvement projects should be HIV-related, given the importance of the Ryan White grant in inspiring, mandating and funding their QI activities.

The major ongoing HIV QI project in the summer of 2005 was the one to improve nutritional assessments that the clinic listed in its Title III workplan. Initially, the clinic's registered dietitian attended a HRSA workshop on HIV and nutrition and developed a screening tool to identify patients who needed nutrition counseling. However, she had received only a handful of referrals. The clinic has developed an intervention plan in which the HIV nurse, Mr. Curd, will briefly screen all patients for nutrition needs at their regular visits, by assessing, for example, sudden changes in weight, and make appointments for them with the nutritionist as indicated. Three months of data on nutrition referrals and appointments were to be reviewed by the HIV team at its quarterly meeting in September, 2005, and the team was to refine the strategy from there. The health center also carries out clinic-wide projects that affect both HIV and other patients, such as an ongoing

project to reduce average wait times in the exam room and to reduce the frequency of busy signals on the clinic phone system to improve patient access.

**Assessment and Future Directions:** Now that Interfaith has a QI system in place, Ms. Johnson said she sees QI as extremely important in the overall operations of an HIV treatment site. "It's such a cool concept," she said. "What I love about it is that it takes away the finger-pointing and looks at the system rather than the individual." The physicians also say they are enthusiastic about QI. "I think QI is very valuable," said Dr. Verni Jogaratnam, MD, who had been brought on as clinic medical director eight months before. "We need to bring in the best practices from HIVQUAL and learn from them in the rest of the clinic."

Ms. Kumekawa said she hopes to receive further training in developing surveys, conducting data analysis, using reports software, and in CAREWare. Ms. Rosa said that her next visit, in the fall of 2005, would focus on ensuring that the site was truly working on quality improvement projects in the area of HIV care, and is using the PDSA cycle to test that the changes they implement truly make a difference. "To the extent that the HIV program has assisted them in raising the bar of care for their entire patient population, that's a very good thing," she said.

## A Cauldron for Innovation: Brooklyn Hospital Center Program for AIDS Treatment and Health (PATH), Brooklyn, New York

**In Brief:** The executive director of this hospital-based HIV clinic worked with HIVQUAL to pilot its HIV QI program in the mid-1990s, and has continued his active collaboration with HIVQUAL at the PATH clinic. PATH has integrated QI completely into its operations and used performance monitoring and quality improvement methods across all areas of management, care and social work, as well as to assist in developing new, innovative service programs. The clinic was a pioneer in integrating consumers into quality improvement efforts, and served as an example for the entire hospital when it reorganized its QI program.

**About the Site:** Brooklyn Hospital Center is a private, not-for-profit hospital that serves as a New York State Designated AIDS Center for the New York City borough of Brooklyn (pop. 2.5 million). Its PATH program provides HIV care in three sites: the downtown Brooklyn hospital campus, the Caledonian Hospital campus and the La Providencia Family



PATH executive director Dan Sendzik poses in the dental clinic he started as a QI project, attended by hygienist Irina Katrikh

Health Center. It also provides HIV counseling and testing at two additional community health centers. The main downtown hospital campus serves a broad segment of the Brooklyn HIV-positive community, and also has inpatient and obstetric wards. The largest clinic, serving 60 percent of the patients seen by PATH's 42 staff, takes up the entire 5th Floor of the former Caledonian Hospital, across from the leafy expanse of Brooklyn's Prospect Park. It serves the multi-ethnic Flatbush neighborhood

where immigrants, many of them from the Caribbean and Africa, and speak in a pano-

### Key Players

Leonard Berkowitz, MD, Chief of Infectious Diseases  
Dan Sendzik, Executive Director  
Edwin Romero, Operations Manager (currently on leave)

**HIVQUAL Coach:** Johanna Buck, Clemens Steinböck

ply of tongues. “Working in this neighborhood is very much like working in an international setting,” remarks executive director Dan Sendzik, who seems surrounded by a whirlwind of activity as he moves through the clinic. The AIDS epidemic here involves primarily families, largely through heterosexual transmission, prompting the clinic to add innovative services reflecting that. Its PATH Family Program, established in October 2003 as the result of a special contract from the New York AIDS Institute, offers a warm, spacious atmosphere complete with bright murals and toys that seems distant from the crowded linoleum hallway of the main HIV clinic. The family program provides comprehensive coordinated HIV primary care, psychosocial services and prenatal care to HIV-positive parents and their infected and affected children, including case management services at every visit. The 5th Floor also includes a separate wing that houses four community support organizations for people living with HIV/AIDS, including the Haitian Women’s Program and the Caribbean Women’s Health Association. PATH runs a special outreach effort to the Haitian community.

**First Contact with HIVQUAL:** In the mid-1990s, Mr. Sendzik directed the HIV clinic at North General Hospital in Harlem, which served as a pilot site in developing the HIVQUAL software and

QI program. He collaborated and received in-depth training from HIVQUAL consultants there. The use of HIVQUAL was one of his first recommendations to Dr. Berkowitz when the two arrived to start the PATH Center in the fall of 1997. The beginning of PATH’s full participation was sparked by three statewide communications from HIVQUAL received in early 1998 letters requesting the clinic to make improvements in dental referrals and pelvic exams, and an invitation to participate in the pilot for facilities to collect and report their own HIVQUAL data, rather than have it collected by external auditors.

By July, 1998, when it held its first Performance Improvement Committee meeting, PATH had designated a Quality Assessment director, prepared a Performance Improvement Plan, discussed integrating into the hospital’s ambulatory care performance improvement committee structure, and set up a schedule of collecting and reviewing HIVQUAL data on a random sample of 45 patients on a quarterly basis. The committee elected to join the HIVQUAL demonstration project. “We wanted to be able to meet the standards that were generally accepted and were state requirements. We felt that was central to good quality care. We wanted to do that in an organized way and we felt that HIVQUAL did that,” Dr. Berkowitz explained. The first “ac-

Key Data Points (From 2004 CADR)	
Ryan White Funding:	Since 1997. Currently funded from Titles I, III, IV and Client Level Data Demonstration Project
Services Provided	Adult clinical care Pediatric clinical care OB-GYN care PMTCT Family Program Case Management Psychiatric care Social work services Nutrition counseling Dental Care On-site community education, support and outreach HIV Counseling and Testing Treatment Adherence Initiative
Number of HIV+ Patients	815
Gender Breakdown:	F: 46.9% M: 53.0%
Age	0-12: 5.1% 13-24: 5.9%
Ethnic background:	White: 26.4% Black 72.9% Hispanic: 23.2%
Housing	Homeless: 2.3% Institutionalized: 0.7%

celerated performance improvement” project PATH conducted as part of that demonstration focused on PPD screening, leading to an improvement from 61 percent in the IPRO review covering May 1997-May 1998, to 89 percent by the 3rd quarter of 1999.

**HIVQUAL Assistance with QI Program Development:** In 2001, HIVQUAL founded the independent sites program, with the goal, according to Clemens Steinböck of the AIDS Institute, of assembling the most advanced sites working on HIV QI, keeping them engaged

in HIVQUAL and working to spearhead development of the program to the next stage. “We wanted to let them work as one team, let them work in areas that are advanced - not just Pap smears and PPD screens - but housing and hunger. It’s very exciting,” Mr. Steinböck said. Brooklyn Hospital was a core member of the group, which began with five sites and has since grown to eight members. Mr. Sendzik called the group, which has alternating monthly workshops and conference calls, “a cauldron for generating ideas.”

In December, 2001, Mr. Steinböck called on the independent sites group to brainstorm ideas for how consumers could be involved in the quality improvement program: “How can they be integrated into your quality committee structure...be involved in specific quality improvement activities...How can consumer feedback be integrated into the quality program?” This brainstorming exercise sparked a flurry of activity at Brooklyn Hospital. Mr. Sendzik decided to involve consumers more intensively by, first, adding three consumer members to the site’s PI Committee. Two of the consumer members are also employed part-time at the clinic as peer educators, but one is only a client. “They are really at the table when we are reviewing data on a quarterly basis,” he said. “They help us to translate it programmatically.” For instance, monitoring data recently showed a downturn in the number of visits to nutritionists. The consumer PI Committee members contributed ideas on how to engage patients in thinking about nutrition in the waiting room, through brochures, and videos, he said. The results of patient satisfaction surveys are also attentively monitored and swiftly responded to; for instance a recent survey finding that consumers did not always understand why they had to wait for service led to a decision to communicate better the reason for delays, Mr. Sendzik said.

Brooklyn also involved consumers actively in designing new service programs, an idea Mr. Sendzik brought in from his background in social marketing and field testing HIV prevention messages, in a prior job at the New York City Health Department. “From a business perspective too it’s very smart,” he said, “You design services in ways that people will use them.” The new program that gives Mr. Sendzik the greatest pride is the 3-year-old dental clinic he built down the hallway from PATH’s Caledonian campus facility (see box).

Another project at Brooklyn that stemmed from a focused independent sites group activity was an improvement project on patient retention, conducted in fall 2002 and presented as an abstract at the 2004 International AIDS Conference. Staff had noticed that a group of patients was not showing for appointments, could not be reached, and would “disappear” - and then show up months later. They were particularly concerned that patients on antiretroviral therapy (ART) were not getting proper follow-up. PATH created a QI team with medical representatives, case management and administrative staff and two patients. The action plan included phoning patients the day before each appointment, making up to 3 attempts to reach them, updating patients’ phone numbers and addresses at each visit, and attempting to reach patients who did not

show for appointments through emergency contacts and affiliated community agencies. The information systems staff were asked for an end-of-month report on patients who missed two or more appointments; peer outreach staff tried to contact patients by phone. These intensive efforts resulted in monthly medical visits increasing from 335 (71 percent) to 402 (86 percent) of a potential 470 appointment slots at the Caledonian campus; the percentage of stable ARV patients receiving proper monitoring reached 97 percent by June 2003.

### **The QI Program Today:**

*Structure:* The PATH Center Performance Improvement Program is described in detail in the PATH Center's policy and procedure manual. The PI program is governed by the PI committee, which is chaired by Dr. Berkowitz, and meets quarterly. Its 16 members include Mr. Sendzik, the director of clinical services, director of operations, and representatives of each of the clinic's programs, including three representatives of the family program, the physician from the Haitian initiative, a nutritionist and the three consumers. The hospital's director of Performance Improvement, Anthony Lisske, is also a member of the committee. The PI Committee is integrated into the hospital's PI structure and reports up through the Departments of Internal Medicine and Ambulatory Care

PI Committees to the Hospital's Clinical Services Committee and its Board. The Hospital PI organization conducts regular reviews of each department's PI programs, including PATH's. Performance monitoring information and QI priorities are also discussed at quarterly full meetings of PATH Center staff and to the Consumer Advisory Board, and findings are posted throughout the department. Performance improvement is written into all staff job descriptions, and QI priorities are reinforced at all meetings and management sessions at the Center. In 2004, the Center added strategic planning to its PI system, establishing 11 specific, measurable goals for the year, in the areas of medical care, psychosocial services, space, and development - the two development goals being completion of the Brooklyn Family Program and establishment of the co-located Brooklyn HIV Center housing the four community-based HIV/AIDS support organizations.

*Performance Monitoring:* PATH monitors 18 of the 19 core and optional HIVQUAL indicators for ambulatory clinical care, two HIVQUAL case management indicators and a few indicators of its own - such as a prevention with positives indicator that stemmed from some independent sites group discussions - and the HIVQUAL software forms the core of its monitoring system. It conducts medical record reviews on a random sample of patients quarterly from the

PATH adult and pediatric clinics and for HIV counseling and testing carried out throughout the hospital. The last two years of quarterly data are reported to the PI committee on a tracking form for consideration at each quarterly meeting.

**Quality Improvement:** When the PI Committee identifies a QI project it wants to carry out, it carries out a modified PDSA process it calls FOCUS, for Find opportunity for improvement, Organize CQI team, Clarify existing process, Understand process variations and Select improvement measures. The multidisciplinary QI team may include patients and representatives from other hospital departments in addition to PATH Center staff. The team looks at data available beyond the HIVQUAL indicators - for instance, for the patient retention project, they tracked the number of medical appointments per month, the percentage of patients reached for reminders, the show rate, the number of visits and the percentage of patients reached to reschedule. They prepare flow charts of existing and desired processes and identify a list of interventions to test.

**Assessment and Future Directions:** Staff in all parts of the PATH organization, including the family and dental programs, accept the performance improvement program as a normal part of management, integrated into clinic operations, and it is popular. "I had staff people who wanted to be on the

[PI] Committee and I had to tell them no," Mr. Sendzik said. "People feel it's a place where important decisions are made and that leadership are there. They want to be at the table." Mr. Steinböck agreed, "They've really made [quality] part of their program. It's not just a meeting that they have."

Mr. Sendzik carries a list of QI ideas in his pocket, and jots new ones down frequently, with the latest area of focus being mental health. Dr. Berkowitz views the state requirements and performance measures very seriously. "On every patient that I see, I focus: did he get his Hepatitis A vaccine, did he get his PPD - You're thinking about getting those numbers up," he said. The current QI projects and three top priorities for improvement are stressed to staff at all times and all meetings.

Brooklyn Hospital used the PATH program as an example for other departments when it was restructuring the hospital-wide PI program a few years ago, Mr. Sendzik said. "The PATH committee should be lauded for the multiple and varied methods they used to maintain ongoing Performance Improvement in the clinics. The attention paid to monitoring of initiatives is worthy of praise," wrote Brooklyn Hospital medical board reviewer Kim Guishard, MD, in the board's review of PATH's PI program in June, 2001. Dr. Berkowitz feels the high level of CQI performance at the

PATH clinic has “raised the bar” for the performance improvement work in other hospital departments. CQI at PATH is “better done and more sophisticated,” than in the rest of the hospital, he said, due in large part to the require-

ments for HIV programs to carry out QI.

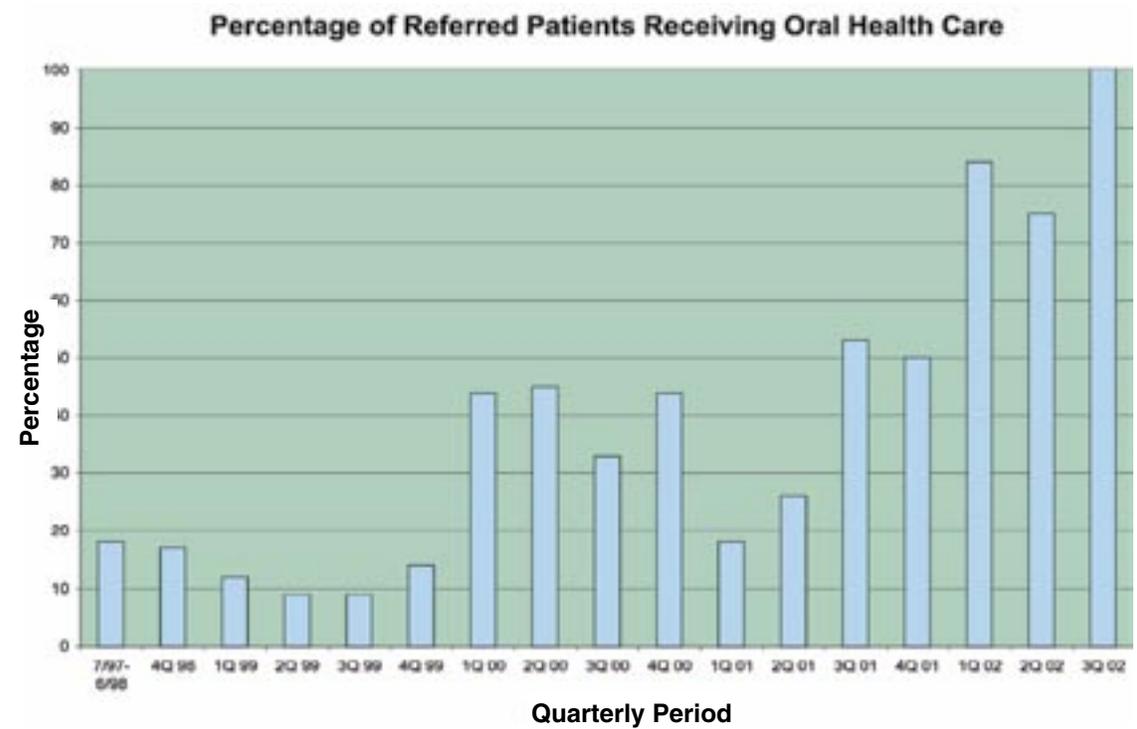
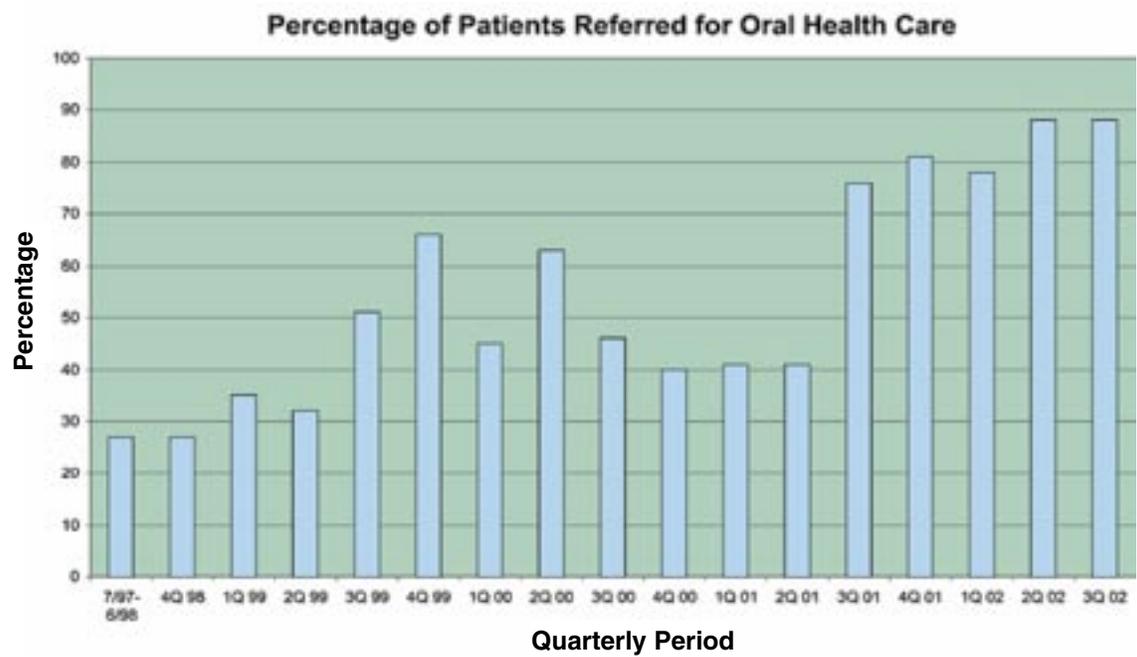
The PATH program is “taking quality to the next level,” Mr. Steinböck said. “They’re looking across the spectrum of interventions.”

### The PATH dental clinic

The impetus for the Caledonian Campus dental program was a January, 1998, letter from the AIDS Institute, announcing its new standard for annual dental exams for HIV patients, and encouraging PATH to improve its performance on dental referrals. This was quickly followed by IPRO data from May, 1998, showing that only 4 percent of PATH patients reviewed had received a referral to dental care, and none had received an exam, compared to 27 percent and 22 percent, respectively, of patients reviewed statewide. At the time, Brooklyn Hospital had a dental clinic only at its downtown location.

In April, 1999, the performance improvement committee met with Dr. Harry Dym, DDS, the hospital’s chief of oral and maxillofacial surgery, to discuss ways to improve referrals. He suggested encouraging the hospital to establish a dental clinic at the Caledonian facility. In the meantime, the downtown campus dental clinic would set aside designated appointment slots for PATH patients. In December, 2000, PATH set up a formal QI team, including Dr. Dym, dental residents, and eventually, two consumers. They piloted increasing access to dental care and educating patients on its importance by bringing a dental hygienist to the downtown PATH clinic weekly to perform triage and education. By first quarter, 2001, performance measurement data showed that 40 percent of the patients were receiving dental referrals, and 44 percent of those were keeping their appointments. On the basis of this data, they received supplemental Ryan White (Title I) funding to make the hygienist available downtown four days a week, and applied for a Ryan White Title III capacity building grant to equip a dental clinic on the 5th floor of the former Caledonian hospital - where, fortuitously, service consolidation had just opened up some vacant clinic space, sufficient for two well-equipped dental exam rooms, as shown in the photo on the first page.

PATH deeply involved consumers in planning the new clinic. Consumer focus groups were convened to consider where the clinic should be located, what kind of staff should be hired, and how the clinic should be decorated. The day in October, 2001, that the first shipment of equipment funded by the \$144,000 grant arrived, the entire QI team, including the two consumers, came to the site to help unpack. The new clinic proved popular among the entire Flatbush community, both HIV-positive and negative, Mr. Sendzik said. “When it came time to open the clinic people were just standing in line to use it, because they felt it was theirs.” The importance of the clinic’s co-location to HIV care can be seen by the performance monitoring graphs, below; in third quarter 2002, 88 percent of patients were referred for dental care and 100 percent of those kept their appointments.



Source: Promoting Oral Health Care for Patients with HIV Infection, AIDS Institute

## Staying the Course: Albany Medical Center AIDS Program, Albany, New York

**In Brief:** HIVQUAL trained this academic medical center HIV clinic in Quality Improvement 101 and staff from the New York AIDS Institute served as partners, a daily resource and sounding board while it was developing its quality improvement program. The clinic has become a stalwart member of the HIVQUAL New York State independent sites group, where it has shared its successful quality improvement projects, particularly those in establishing an annual comprehensive exam for HIV patients, with others, has trained its satellite rural HIV clinic in QI and established a separate, functioning QI program there, and is beginning an innovative program to extend its HIV QI efforts into the Hudson-area community through its Title IV network.

**About the Site:** Albany Medical Center has been providing HIV care since 1988. It is responsible for serving 21 Hudson River-area counties (pop. 2.6 million), many of which are quite remote from the city of Albany, and for meeting specific



standards for quality and service. Institutionally, the HIV clinic is integrated within the Division of HIV Medicine of this large independent academic medical center. Physically, its main clinic at 66 Hackett Blvd, is a stand-alone building dedicated to HIV care about a mile from the main medical center campus in a quiet residential neighborhood. While the facility seems crowded, with desk space for the 80 providers and staff jammed in between exam rooms, medical director Douglas Fish, MD says the separate building gives him the critical

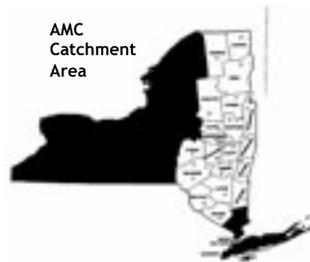
level of control he needs to maintain a positive atmosphere and improve quality of care. Albany Medical College also operates a rural HIV clinic

### Key Players

Douglas Fish, MD, Medical Director  
George Clifford, Administrator  
Chuck Eigenbrodt, Operations Manager  
Sheila Boyle, RN, Process Improvement Coordinator  
Stacy Agnello, HIV External Relations Manager  
Debbie Walters, RN, PI Coordinator, Kingston clinic

HIVQUAL Coach: Johanna Buck, Clemens Steinböck

ic, the Mid-Hudson HIV Care Center, in Kingston, NY, about 1 hour away. They are the grantee for a Title IV network covering a 22-county catchment area, which includes a community health center in Albany, a family health center in Poughkeepsie, NY, two case management providers, Catholic Charities and AIDS-Related Community Services, Hispanic and African-American minority service agencies doing case-finding, and a drop in center for people living with HIV/AIDS, the Albany Damien Center.



**First Contact with HIVQUAL:** As an HIV provider in New York State, Albany Medical Center is routinely audited by the New York AIDS Institute’s quality of care program. The Albany staff viewed their annual external audit of care provided in 1998 as a wake-up call. “There were some deficiencies identified in that review which need to be corrected asap,” David Herman, MD, wrote in an email memo to staff in May, 1999. The clinic promptly formed an outpatient QA committee -- a novelty at a time when hospital QI activities were still focused on inpatient care -- with Dr. Herman as chair, and joined the HIVQUAL program.

**HIVQUAL Assistance with Development of the QI Program:** Albany staff participated in a monthly workshop series that provided basic training in HIV QI processes and struc-

ture; HIVQUAL coach Johanna Buck visited the site on a quarterly basis. In July, 1999, the site established a QA committee, which met monthly, and began collecting data for its first HIVQUAL data collection audit in June, 1999, and undertook improvement efforts, including an effort to identify and target patients who had not had annual PPD screens. In April, 2000, performance rates were significantly higher.

The site’s commitment to QI was cemented in June 2000-Dec. 2001, when it was among 80 Title III and IV sites participating in an Institute for Healthcare Improvement (IHI) Breakthrough Series HIV/AIDS Collaborative. HIVQUAL staff participated in the collaborative and attended its workshops as resources for the sites they were mentoring. Ms Buck soon found her in-box filled to the brim with messages from Albany participant Sheila Boyle, RN, asking for feedback and advice on all the site’s quality improvement ideas. Her coaching, which complemented the work of the Collaborative, helped specifically tailor improvement to the Albany site’s organizational structure and culture.

The site restructured its QI program on the IHI model, dubbing its full QI committees “home teams” and subcommittees “core teams.” They conducted performance monitoring by establishing

a registry of all patients cared for by a sample of four providers, and measuring a handful of key indicators on a monthly basis. Specific aims and improvement efforts toward those goals were focused on that group of providers and their patients. The clinic implemented a variety of systems changes, checks and reminders. Not all improvement efforts were successful, but a dramatic change was seen in one key indicator: the percent of patients on HAART with viral load <50 rose from 10.5 percent in August, 2000, to 36.1 percent by the end of 2001.

Once the site saw how valuable and time-consuming HIV QI activities were,

it allowed Ms. Boyle to move out of clinical care and to become the clinic’s process improvement coordinator on a full-time basis. After HRSA’s initial seed funding for the position expired, Dr. Fish found a series of other grants to support it. “She got invested in it; she got the fire,” Dr. Fish said. “Now we feel like we couldn’t live without her.”

In 2002, the site elected to join the New York “Independent HIVQUAL Sites” group, designed to facilitate brainstorming and generation of QI ideas for those sites who are the most advanced in their quality improvement efforts, led by Clemens Steinböck. Ms. Boyle

Key Data Points (From 2004 CADR)	
Ryan White Funding:	Since 1991. Currently funded from Titles II, III, IV, Client Data Demonstration Project and OPTIONS Prevention for Positives project
Services Provided	Adult clinical care Maternal/Child Coordinated Care Program Case Management Women’s Health Nutrition counseling, grocery shopping and meals Mental Health Substance Abuse Counseling Dental Care HIV Counseling and Testing Prevention services Treatment Adherence Initiative Massage Therapy HIV correctional health care program
Number of HIV+ Patients	1,584 (not including corrections program - over 4,000 HIV+ inmates)
Gender Breakdown:	F: 36.2% M: 63.3%
Age	0-12: 1.8% 13-24: 4.4%
Ethnic background:	White: 54.7% Black 37.6% Hispanic: 11.7%
Housing	Homeless: 3.4% Institutionalized: 5.3%

religiously attends the group's alternating monthly workshops and conference calls. She has adopted a number of the suggestions and techniques she learns in the workshops. Following a discussion on quality improvement plan development in 2002, for example, Ms. Boyle began documenting the mission, structure and goals in an annual Process Improvement Management Plan, and tracking detailed progress toward each benchmark in the home team minutes. One of the topics the group has discussed is methods for increasing the number of Annual Comprehensive Exams, and the Albany clinic's project on the topic (see box) was presented to the group as a prime example. Stacey Agnello, who runs the QI program for Albany's Title IV network, was on the committee that developed the new HIVQUAL indicators for case management services and is piloting an assessment of her network's case management services using both the HIVQUAL clinical and case management indicators.

In September, 2002, Ms. Boyle, Mr. Clifford and Mr. Eigenbrodt trained the Kingston clinic staff in quality improvement methodology they had learned in the IHI Collaborative, and the 10-member staff serving the 225 HIV patients in Kingston set up their own core and home team structure, led by Ms. Walters, and set improvement goals in the same areas as the Albany clinic. Ms. Boyle has acted as a consultant to the Kingston

team, with progressively less involvement as Ms. Walters has gained more experience and received her own training by attending HIVQUAL workshops. Kingston's performance indicators are improving as a result, noted Dr. Fish.

### **Current Status of the QI Program**

*Structure.* The Albany AIDS Clinic's Process Improvement Team is chaired by Clinical Director Cynthia Miller MD and composed of a small "core team," consisting of Dr. Miller, Ms. Boyle, Mr. Clifford and Mr. Eigenbrodt, which meets biweekly and a larger "home team," consisting of the four core team members and five additional members who are the managers of client services, clerical, information systems, nursing, network relations and primary care providers, which meets monthly. Ms. Boyle documents the mission, structure and goals in an annual Process Improvement Management Plan, and tracks detailed progress toward each benchmark in the home team minutes. The process improvement team is supposed to act as a "catalyst" for improvement, train staff on QI principles and "serve as a resource for staff initiating change." Specific quality improvement projects are selected informally by individual department heads, rather than project teams, but coordinated through the regular "home team" meetings.

The Kingston clinic has its own Process Improvement Team with a

similar annual plan and structure: the core team comprised of Ms. Walters, the operations manager, and the case manager, which meets monthly, and the home team, which includes all the core team members plus the primary care providers, and meets quarterly. Ms. Boyle acts as a consultant to the rural clinic's QI program.

Dr. Fish is working to integrate the outpatient and inpatient quality improvement efforts of the Division of HIV Medicine by bringing them into the combined hospital AIDS Quality Improvement Team, which he chairs, and which meets monthly, with the participation of Mr. Clifford and Ms. Boyle. He has elected to chair the overall QI Team rather than the outpatient team so that the clinic staff gains more ownership and experience in QI, and so that he alone is not driving the process. The AIDS QI Team reports up through the Department of Medicine and Medical Center QI structure.

*Performance Measurement.* The site had initially established a registry of patients for performance measurement based on the model proposed in the IHI collaborative; this represented all patients seen by a panel of four providers who were then the target of pilot improvement efforts. Mr. Eigenbrodt has worked to expand the number of patients on which registry data is maintained to nearly all the patients in the

clinic. He maintains the registry using the Uniform Reporting System (URS), an HIV data system required by New York State. The Albany clinic has a dedicated data entry staffer who enters the data into the URS database from the encounter form included in the patient chart. The clinic uses this system to produce a monthly tracking report on the indicators that the clinic is interested in tracking in a given monitoring period, which have included no-show rates, annual comprehensive exams, PPD screening and Pap smears, among others. In addition, both the Albany and Kingston clinics conduct a separate chart abstraction to generate the annual HIVQUAL indicators. The Albany clinic can also generate monitoring reports upon request for the Kingston clinic, and has done so for patients who have not come for their quarterly visit and for dental referrals.

*Quality Improvement.* Rather than set large numbers of short-term improvement goals, the clinic has maintained a long-term focus on three indicators: Annual Comprehensive Exams (see box), quarterly visits, and annual PPD screens. Annual Pap smears were an additional focus in the past, and remain in the annual improvement plan for the Kingston Clinic. Albany has also integrated a focused project to improve treatment adherence, funded separately by New York State, into its QI goals and projects. The clinic typically tries a vari-

ety of different techniques to follow-up patients, educate them, and keep staff motivated and enthusiastic. Humor is a key element in keeping motivation up (see box). All efforts are benchmarked, tracked, logged and progress charted on an annual plan. “Most of our goals” -- such as 60 percent of patients with annual comprehensive exams -- “have not been met and don’t get met but we still continue to improve,” Ms. Boyle said.

At the instigation of Ms. Agnello, the clinic is extending its quality improvement efforts into the community, working with the case management agencies in Albany’s Title IV network to improve clinical care indicators, beginning with annual PPD screens. The most intensive collaboration effort has been with Catholic Charities, a Medicaid-funded agency providing intensive case management, which is the largest HIV case management agency in the area. The Albany site conducts a monthly data match to identify all of the Catholic Charities clients who come to the 66 Hackett clinic for care and are due for a PPD test. The case managers work to get their clients into the clinic, by coordinating with other services, such as trips to the food pantry, and arranging for transportation in advance. The case managers receive feedback on the PPD screening rates of their clients, through which they can judge the success of their efforts. The Kingston clinic, as well, is working with the community on outreach to

increase HIV counseling and testing.

#### **Assessment and Future Directions.**

Dr. Fish views himself as a true champion for QI methodology within a hospital environment that values it. “We buy into process improvement in a big way,” he said. The training and start-up funding that HRSA provided was essential in gaining that buy-in, he said, “You can improve quality; it’s not all about resources, but you do have to be shown the way.” Now that the clinic understands the value of QI, it actively seeks resources to fund Ms. Boyle’s position, and uses QI methods as part of other projects, such as a recently funded HRSA OPTIONS project on prevention for positives. Persistence is a critical factor when improvement -- such as achieving the 60 percent target for patients receiving annual comprehensive exams (*see box*) -- seems slow. The clinic needs to continually raise the bar in order to improve care, he said.

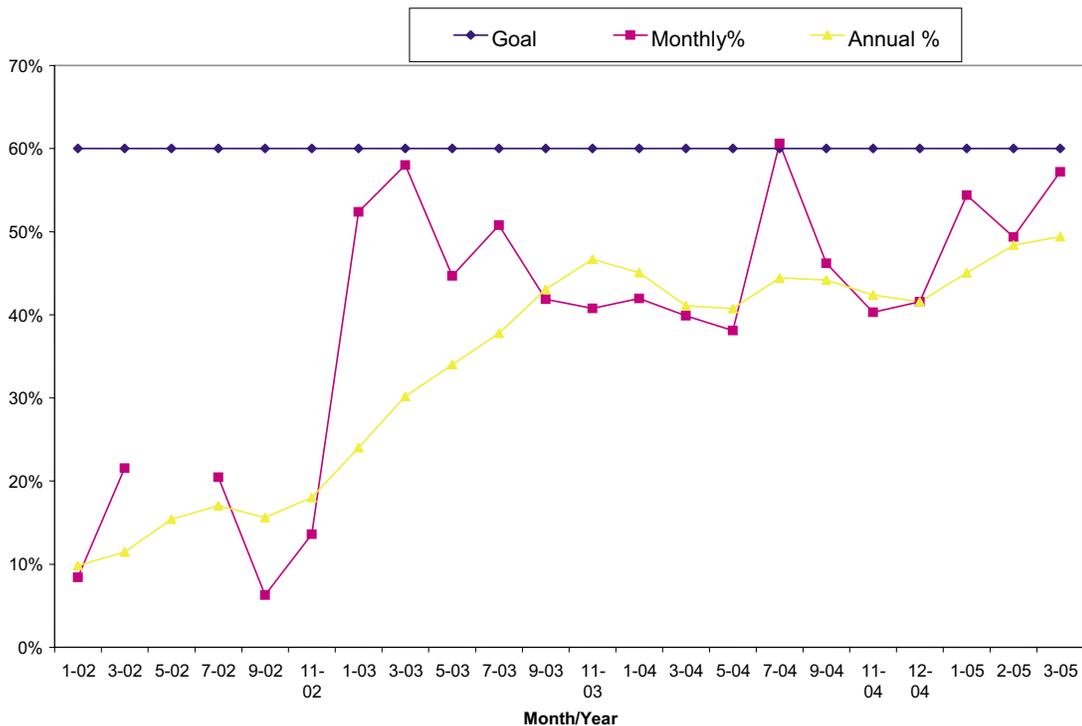
The Albany team views the importance of the HIVQUAL project as the leadership, inspiration and ideas it contributes. “We’re [not just] filling out a quality review form and looking at the outcome numbers,” said Ms. Agnello, “We’re using the concepts behind HIVQUAL in a much broader way.” Dr. Fish also uses the New York HIVQUAL data, which is publicly reported, to benchmark the clinic’s performance against the best performers in the state.

### The Annual Comprehensive Exam

In order to raise its performance on a number of quality indicators simultaneously, Albany has focused its QI efforts on increasing the number of patients receiving an annual comprehensive physical exam, or ACE, and has sustained that focus for the past four years. At Albany, the ACE includes a complete history and physical, assessment of the HIV treatment plan, HIV monitoring tests including CD4 count and viral load test, assessment of health maintenance services such as PPD, syphilis screen, dental, ophthalmology and GYN care referrals, vaccinations, counseling on nutrition, alcohol, substance abuse, and safe sex. Albany’s goal has long been to raise the percent of patients with ACEs to 60 percent, which allows it to target the goals for use of all these preventive services simultaneously. Since New York’s Medicaid program pays well for ACE exams, an ancillary benefit of the project is to increase revenue to the clinic.

Over the years, the clinic has tried a number of techniques to raise rates of ACEs. These include tickler reminders to staff and providers when a patient is due for an ACE, humorous post-card mailers to clients, stating, “Get your ACE. Holy Cow...Get your ACE. Get it NOW!” a highly promoted competition between two staff “teams” complete with United Way-style thermometers (in which the “mercury” level in each team’s thermometer showed the percent of the target reached), to see which could do the best in increasing the number of ACE exams, giving providers individualized report cards with the ACE statistics for their panels of patients, and the latest technique - suggested by the Community Advisory Board - providing patients with a printed certificate following their ACE exams. With each push, the ACE rate has risen slowly but surely, as can be seen in the run chart below. “We’re just getting there,” Dr. Fish said. “This should be easy, but it’s taken us three years.”

Percent of patients having annual comprehensive exam in last 12 months





## A Model Program: The Pittsburgh AIDS Center for Treatment (PACT), University of Pittsburgh, Pennsylvania

**In Brief:** This academic medical center HIV clinic is steeped in HIVQUAL expertise, having served as a national HIVQUAL pilot site and having an administrator who is a former HIVQUAL consultant. The site reinvigorated its quality program three years ago by hiring a full-time quality management coordinator, who has enabled the clinic to conduct multiple QI projects simultaneously, with rigorous analyses of process data. The clinic is also leading QI projects within its local area through its Title IV network, and the administrator has organized a regional HIVQUAL collaborative project on patient retention with other Title III sites.

**About the Site:** The Pittsburgh AIDS Center for Treatment is part of the University of Pittsburgh Medical Center (UPMC), a large, urban academic medical center serving western Pennsylvania and neighboring areas in West Virginia and Ohio, and is affiliated with UPMC's Presbyterian Hospital. The main PACT clinic is located in a subdued, calm, carpeted area on the 7th floor of the Falk building on bustling 5th

Avenue in the center of the University of Pittsburgh's medical campus. As with most university HIV clinics, organizationally it is part of the Infectious Disease Division of the Department of Medicine, which also runs an AIDS clinical research clinic, on the other side of a glass door from the registration desk. PACT also operates a smaller rural HIV clinic in Johnstown, Pennsylvania, about an hour away. Under its Title IV program, it provides HIV care at Pittsburgh's Children's Hospital and Magee Women's Hospital, both of which operate under the UPMC umbrella. The Title IV program also involves the Family Health Council, which conducts HIV counseling and testing throughout western Pennsylvania and also conducts youth outreach activities. The clinic has been providing HIV care since 1989.

### **First Contact with HIVQUAL:**

PACT was one of the pilot sites for the National HIVQUAL Program. Susan Hunt, MD, the PACT medical director at the time, decided to participate in the pilot

despite concerns about the HIVQUAL data would be used, in order

### **Key Players**

Deborah McMahon, MD, Clinical Director,  
Margaret Palumbo, MPH, Administrative Director  
Linda Despines, RN, Quality Management Coordinator

to showcase participation on the clinic’s Ryan White grant applications. Five other organizations from across the state also participated in the pilot project, which focused on development of the HIVQUAL software and on adapting it for the national program. With assistance from consultant Margaret Palumbo, the sites were expected to pilot data collection using the HIVQUAL software at baseline, to conduct at least one follow-up data collection, and to create a quality structure within their organizations. As a result of the pilot, PACT implemented a quality management program and conducted improvement projects to raise PPD rates and improve gynecology care.

**HIVQUAL Assistance with QI Program Development:** Following the conclusion of the Pennsylvania HIVQUAL pilot in 1997, PACT hired Ms. Palumbo as the clinic administrator. “So quality stayed on the forefront at some level,” she said, “We had teams, we kept doing HIVQUAL [data submissions]. We’ve been good HIVQUAL citizens ever since.” PACT now has the status of an independent clinic participating in the HIVQUAL program. Ms. Palumbo and other staff members participate in a wide variety of HIVQUAL committees, meetings, workshops and conference presentations, and Ms. Palumbo serves as HIVQUAL consultant for the region (*see box 2, below*).

<b>Key Data Points (From 2004 CADR)</b>	
Ryan White Funding:	Since 1994. Current funding from Titles II, III, IV and the Client Data Demonstration Project
Services Provided	Adult clinical care Pediatric clinical care (subcontracted) PMTCT Prevention services Case management Social work Transportation assistance Specialty clinics: coinfection, GYN, psychiatry
Number of HIV+ Patients	1,097
Gender Breakdown:	F: 24.8% M: 74.6%
Age	2-12 2%; 13-24 3%
Ethnic background:	White: 62.5% Black 33.5% Hispanic: 1.5%
Housing	Homeless: 6.2% Institutionalized 3.6%

Ms. Palumbo was not satisfied with the level of attention she was able to give quality activities while fulfilling the other responsibilities of administrator. So about three years ago, she brought on an RN experienced with JCAHO accreditation audits, Linda Despines, as a full-time quality management coordinator, and restructured the quality improvement program with a formal plan and committee structure. The 2005 QM plan is unusual in its focus in planning for quality management, which reflects the outer circle in the HIVQUAL quality model. Its goals include using all available data to plan clinical, operational and programmatic aspects of patient care, in order to improve performance, to emphasize service design needs, and to establish collaborative relationships with various community agencies “for the purpose of collectively promoting the general health and welfare of the community served.”

Ms. Despines keeps plan implementation on track, prepares data for discussion, and assures that projects adhere to their prescribed reporting calendar. She maintains a 4-inch-thick notebook of projects (described below) at various stages of implementation.

“Hiring a full-time person was the pivotal point in our program,” Ms. Palumbo said. “How do you get a program from just being OK to being just great? You need a person who really un-

derstands quality in a hospital setting.”

### **Current Status of the QI Program:**

*Structure:* PACT’s quality management plan, adopted in 2002, is designed to put in place the outer cycle of the two-cycle HIVQUAL quality model, setting up an infrastructure for developing, facilitating and evaluating a QI program. It ensures the commitment and involvement of leadership by making the department’s leadership group accountable for quality improvement; that group then delegates responsibility to the Quality Management Committee. The QM committee, which is chaired by Dr. McMahon and Ms. Palumbo, has representation from each unit within the HIV program, including a peer advocate, and meets 10 times a year. The QI processes are integrated into the hospital’s operational structures; the QM committee reports upward through the institution through the hospital’s Medicine Service Line Program Team to its Total Quality Council, and within the university through the Division of Medicine to the Division Chiefs Meeting within the Department of Medicine. The Peer Advisory Board is also briefed on the QM program, and has suggested new QI projects. The departmental QM program provides an assessment of the HIV QM program. The quality management plan includes all components of the HIV program, including both clinics, support services, education, the

Title IV collaborative programs at Magee and at Children's, and also integrates operations of the research clinic. The committee reviews and evaluates the plan (using the HIVQUAL organizational assessment instrument) sets annual goals, and renews the plan on an annual basis. Each individual QI initiative is proposed informally by a QM Committee member, then written up as a formal project proposal and managed (as called for in HIVQUAL guidance documents) by a multidisciplinary clinic team, with one or two leaders. Detailed data and PowerPoint presentations are prepared to summarize interim results and next steps for the QM Committee. QI activities also come up at unit meetings and physician staff meetings; Title IV quality activities are planned through the Network Partner meetings. Ms. Despines is responsible for supporting the QM Committee and the quality improvement project teams.

*Performance Monitoring:* PACT monitors care using a variety of performance measures. The program measures the HIVQUAL adult and pediatric indicators annually, based on a sample of 45 patients, at the main clinic, by manually abstracting data from the UPMC electronic medical record, EPICARE, and from the paper chart. It is conducting a health maintenance record review including six preventive care indicators following up on those from HIVQUAL.

It also measures the HIVQUAL indicators on 100 percent of patients seen at the Johnstown satellite clinic, although it does not report that data centrally. "Outliers" – cases selected for review that did not meet the HIVQUAL criteria – are reviewed in detail to "drill down" into the data and identify any quality problems. Indicators are also used to track progress toward goals specified in the clinic's Title III and Title IV work plans. The research program has its own specific indicators derived from databases and a sample of research records. The adequacy of medical documentation is reviewed using 19 JCAHO indicators for all Presbyterian Hospital-based clinics. Administrative data from the hospital's appointment system is used to generate show rates and other indicators of clinic operations. The clinic uses an HIV-specific patient satisfaction survey, adapted from the survey instrument developed for the HIVQUAL program, in addition to the hospital-wide satisfaction survey program. And some QI projects carried out by the clinic develop their own databases that then can be kept up to date and used to monitor care on an ongoing basis. For instance, Kate Codd-Palmer, the team leader of the Women's Annual Health Visit QI project, developed a database containing information on all gynecological care provided by the clinic, which can be used to generate a variety of performance indicators.

*Quality Improvement:* The clinic has ten ongoing QI projects in various stages of development, including the regional retention project. Initiatives may con-

tinue in existence for several years, as did the pharmacy QI team (see Box 1) in order to address new problems that were identified while implementing

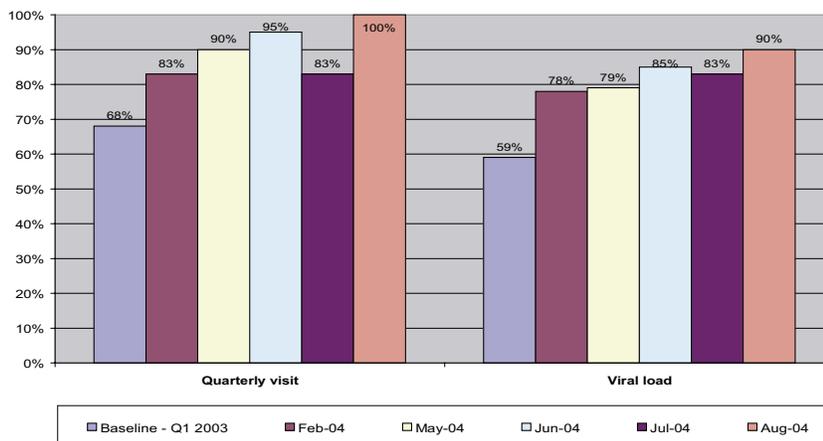
**Box 1: Linking Prescription Refills with Medical Monitoring**

The spark for this quality project came in 2001, when the clinic noted that its Ryan White costs for ART medications were skyrocketing, and formed a QI project team under the leadership of pharmacist Lori Mezevitch. Through implementing a formulary and requiring all patients to check out with the pharmacist as part of the normal visit flow, they succeeded in dramatically reducing medication costs, from \$161,270 in 2001 to \$66,761 the following year, and maintaining the lower level in 2003.

While implementing that project, the team identified several other issues related to prescription medications. Most notably, they speculated that the clinic’s chronic problem in raising its performance on the quarterly visit, CD4 testing and viral load indicators might be related to patients being able to obtain prescription refills too easily. Often, they managed to obtain refills over the phone, and simply skipped their monitoring visits. They organized another QI team, jointly chaired by Ms. Mezevitch and then-clinical director Susan Hunt, MD, to address the problem. The team developed a new policy and procedures on prescription refills, which stated that ART patients who had not had a follow-up visit in the past three months needed to make a new appointment before obtaining a new refill, and would only be given enough medication to last until that visit. They produced a new patient education brochure on medication refills, which stated, “If you have not been seen by a PACT physician or have not had labs drawn within the last 3-4 months, you will only be given enough medication to last until your next medical appointment. If you do not have an appointment scheduled, let the pharmacist know.” The new policy was implemented for Ryan White patients in January, 2004, and after initial success was demonstrated (see graph), rolled out to insured patients as well in May, 2004.

The team monitored not only the percent of patients receiving quarterly visits and viral loads, but also the prescription costs, to ensure that they did not rise above the improved levels. In fact, prescription costs stayed essentially flat, at an estimated \$65,812 for 2004, and rates of both quarterly medical visits and viral load tests improved.

Percent of Clinic Patients Receiving Quarterly Visits and Viral Loads



initial changes. Two projects are being conducted in collaboration with the Title IV network. The first, the Counseling and Testing QI project, was designed to increase HIV counseling and testing rates at the Family Health Council's clinic sites and the juvenile detention center. The second, the AIM at HIV QI project, is working with Magee Women's Hospital, its outpatient clinics and neighborhood centers, to improve the process of prevention of mother-to-child HIV transmission. PACT provides staff support for the QI project as part of its Title IV grant, but the project is conducted within Magee Hospital's formal quality improvement framework. PACT is now hoping to add rural providers to this project, since there have recently been some HIV-positive children born in rural western Pennsylvania.

Two projects are pharmacy related: one, which first dramatically cut medication costs and then improved performance on quarterly visit and viral load indicators, won first place at the hospital's annual quality fair (see Box 1). The quality program has also designed a QI project for the University's special circumstances in operating both a treatment and clinical research program, which focused on raising referrals to research studies. There are also projects on women's annual health visits, formalizing the process of new patient visits, PPD testing and billing.

In general, the project teams use a QI process known by the acronym FOCUS-PDCA. Under the first step, **F**ind a Problem to Improve, they develop problem statements, and set goals for improvement. Then, in step 2 they **O**rganize a (multidisciplinary) Team, which will include relevant clinic staff, providers, and, frequently, patients. Step 3, **C**larification of the Current Problem, may include flowcharting processes, clarifying current practice standards based on HRSA and other national guidelines, and identifying the expectations of patients and other internal and external customers. In Step 4, **U**nderstand the Process, they identify the key indicator(s) targeted for improvement, and chart baseline data on each indicator. Step 5, **S**elect the Process to Change, involves detailed root cause analysis by flowcharts and fishbone diagrams.

Step 6, the "**P**" of the familiar Plan-Do-Check-Act cycle, involves identifying improvement strategies based on the findings of the process analysis. This almost always involves developing a flowchart of a new and improved process, but may also involve other strategies. For instance, among the many interventions for the project on developing a Women's Annual Health Visit were development of two detailed flow charts, one for scheduling appointments, and one for reporting laboratory test

results. In addition, gynecology care guidelines were revised, the content of the visit was defined, a new electronic health record template was developed to record information on the visit, and an educational binder on women's issues was developed for providers. Step 7, Do the Change, involves pilot implementation of all the planned steps, the impact of which is checked through updating and charting of the indicator data in step 8, Check the Change. In Step 9, Act, the interventions are refined and made part of standard practice in the PACT clinic. After completion of all the steps, the Quality Management Committee continues to monitor the key indicators for the project, and to identify any additional opportunities for improvement in that area.

For each project, Ms. Despines keeps an organized notebook with meticulous records, facilitates project-specific data collection efforts, and generates data analyses with detailed bar charts that break down performance on each process to be improved, step by step.

**Assessment and Future Directions:** PACT's QI program demonstrates a mature and fully fleshed out quality program that reflects its genesis in the two-cycle HIVQUAL model. The clinic not only selects, conducts and refines quality projects using repeated rapid PDSA cycles, but also plans, assesses and revises its quality program using iterative

processes. The program's substantive staff, systematic analysis of processes and use and display of data, and consistent support of the clinic and hospital leadership has led to consistently successful results of quality improvement projects, and energetic participation by staff. "People don't balk at QI projects," Ms. Palumbo said, "They seem to really enjoy doing them." The program is expanding its successes throughout the region and its Title IV network, and hopes to involve increasing numbers of providers. The program prepares excellent presentations and summaries of its work but could do a better job of communicating its results to staff, providers and patients in the clinic who are not directly involved in quality efforts, and has made that a priority for the coming year.

Ms. Palumbo wants to further develop PACT's performance monitoring program by developing a system that brings in 100% of patient-level data from available electronic databases. She said that this would better reflect the overall quality of care at the clinic than does a sample-based medical record review, and would also allow staff to analyze why performance rates are low, patient by patient. The team hopes that a cluster of electronic systems, including Ryan White CAREWare, the hospital electronic patient record and administrative systems, and the databases developed for specific QI initiatives and

the data collected through HRSA’s client data demonstration project will allow it to meet its own performance measurement needs, as well as those of its external customers. The staff are looking forward to the inclusion of the

HIVQUAL indicators in CAREWare in 2006.

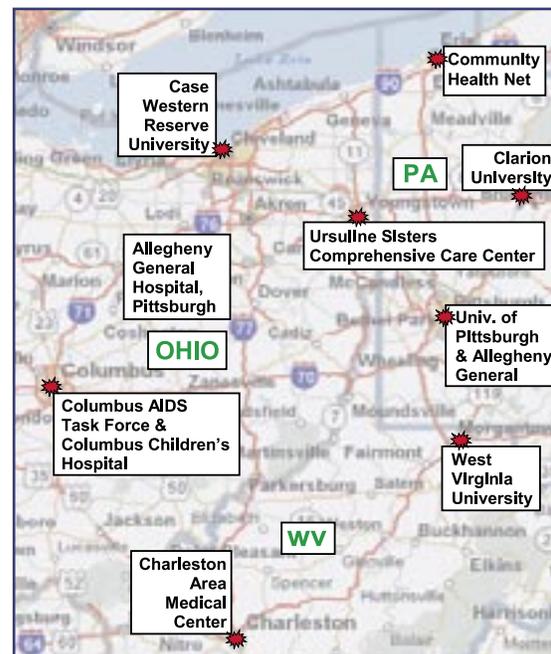
The clinic and its administrator remain completely engaged in the HIVQUAL project and in sharing experiences, serving as a model, and training other HIV QI programs.

### Box 2: The Tri-State Regional Quality Group

Since June, 2003, Ms. Palumbo has rejoined the HIVQUAL program part-time as a consultant for the western Pennsylvania region and nearby areas of Ohio and West Virginia. To match the widespread and expanding interest in HIVQUAL among area Title III and IV sites to her limited available time, she organized 10 sites into a multi-site discussion group. The group’s goals are to aid grantees in understanding and meeting HRSA’s quality management requirements, to provide technical assistance and share quality management tools and techniques, to provide a forum for experience sharing, and to focus on specific joint projects. For instance, group members have been working together to formalize each site’s quality management plan to meet HRSA requirements, and the Case Western and Cleveland sites have shared their techniques for collecting and managing data for use in quality improvement. The group holds periodic face-to-face sessions, supplemented by monthly conference calls.

In fall 2004, sparked by HRSA’s focus on measuring and addressing unmet need, the group agreed to address the issue together. Ms. Palumbo is using the group QI project as a teaching tool, stepping the grantees through each step of the FOCUS-PDCA QI model as the project was underway at their sites. The goal of the project “Connecting to care: Retention of HIV+ individuals in care,” is to improve the number of patients who come for care at least once in 4 months. Ms. Palumbo worked with the sites to define indicator definitions and data collection instructions; most sites have collected and submitted data on the first two trimesters of 2005, and Ms. Palumbo has prepared a side-by-side tracking chart. She trained the sites in using fishbone diagram and flow charting tools to identify root causes and areas for improvement, and as of Nov, 2005, the group had brainstormed a lengthy list of potential root causes of no-shows, ranging from incarceration to perceiving visits as unnecessary. They also generated an even longer list of potential interventions, such as pre-visit reminder calls, a buddy system for patients, and using Title II case managers. HIVQUAL coach Johanna Buck shared her experience with a similar group project in New York with the tri-state group.

Participating Sites, Tri-State Regional Quality Meetings



## An Island Consortium for Quality: Lares Health Center Ryan White Consortium, Puerto Rico

**In Brief:** This unique Ryan White Title III Consortium, composed of 16 community health centers, organizes its HIV services on QI principles learned from HIVQUAL. Motivated by thrice-yearly data abstraction on 100 percent of HIV patients, followed by consortium-wide meetings, staff from these scattered clinics are constantly aware of whether care of each patient meets national standards of care. Each patient has a case manager, who works work one-on-one with him/her to improve visit compliance and medication adherence. Review results, including outcome indicators, have shown improvement across the board.

**About the Site:** The Centro de Salud de Lares (Lares Community Health Center) and its partners are mainly small town health centers set in the rugged, green mountains of central Puerto Rico. In 1991, the island found itself with a substantial number of HIV patients, but they were scattered among these far-flung clinic locations. In order to



Ryan White Program Coordinator Gonzalo Maldonado, Consortium psychologist Dr. Diana Ball and Lares Community Health Center Medical Director Dr. Francisco Ball.

access Federal Title III funds for as many patients as possible, the Lares clinic organized a consortium of 14 community and migrant centers. The number of clinics included in the consortium has now grown to 16, from 7 different non-profit corporations (see map.) The Lares center itself is a large, full-service community health center with seven physicians, a 24-hour emergency room and a relatively modern facility serving 18,000 patients. At others, such as the Corporation de Servicios de Salud y

Medicina Avanzada at Cidra, an expanding patient load is shoehorned

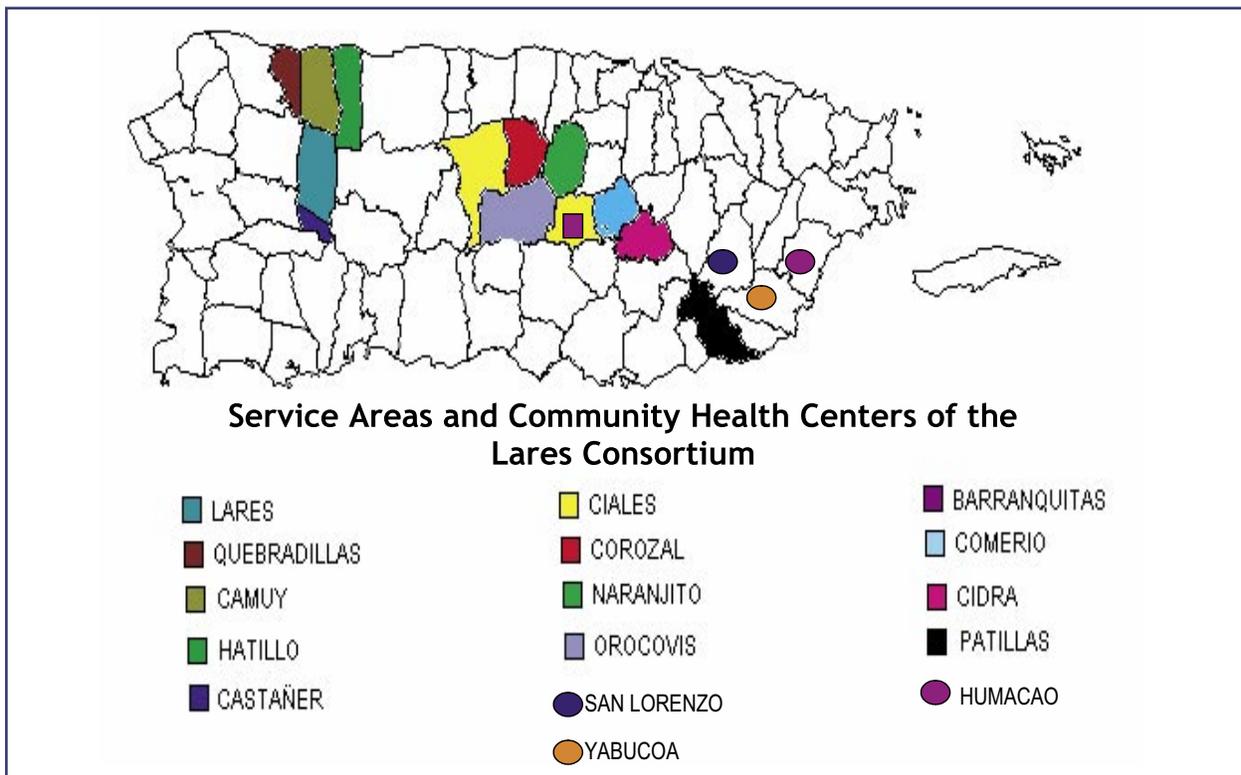
### Key Players

Gonzalo Maldonado, R.W. Program Coordinator  
Carmen H. Feliciano Lopez, CQI Coordinator  
Francisco Ball, Medical Director, Lares Health Center  
Julio A. Marrero Guadalupe, HIV physician, Cidra Health Center  
HIVQUAL Coach: Nanette Brey-Magnani, Onelia Crespo

into tinsel valentine-festooned cubicles and folding chairs by a nevertheless cheerful and good-humored staff. Patient loads at all the island's community health centers have been growing rapidly, fed, staff say, by the shrinking number of private physicians accepting Puerto Rico's new health reform program for Medicaid Managed Care.

The number of HIV patients at each site ranges from 93 at La Montaña to 5 at Castañer. With such a small number of patients, at many clinics, keeping physicians up to date on HIV care represents a challenge. Each clinic has a case manager, who conducts an initial assessment of each patient who enrolls in the consortium and is responsible for monitoring their care in detail.

The consortium holds consecutive quarterly meetings for member clinics' executive directors, physicians and case managers to organize the care network, provide continuing medical education on HIV, and keep the sites up-to-date on changes in the Ryan White program. Its guiding force is the full-time program coordinator, Gonzalo Maldonado, who began his career as an HIV nurse. The consortium also employs a QI coordinator and has a position for a coordinator for the many specialty referrals. A recent innovation is psychological screening for all the consortium patients, provided by a part-time psychologist/ counselor, Dr. Diana Ball, who also rotates among the clinics running support groups and providing



group and individual counseling, stress reduction, and even aromatherapy.

**First Contact with HIVQUAL:** During the initial years of the Lares consortium, Mr. Maldonado focused on direct HIV nursing and patient care, primarily for the HIV patients seen at the Lares clinic itself. He became aware of the need to fundamentally restructure his approach as a result of a HRSA PCAT visit in 1998. Mr. Maldonado recalled being informed to ensure the patients in the whole consortium receive equal access, not just the HIV patients in the Lares clinic. Following the PCAT report, he knew that it was up to him to find a way to accomplish this goal.

As he was searching for an approach, Mr. Maldonado was contacted by Dr. Onelia Crespo, then of the Puerto Rico Academy of Medical Directors. The Academy did a presentation on HIVQUAL and asked if the Lares consortium was interested in participating. “Yes!” was the enthusiastic reply. After orientations and buy-in of the consortium directors, HIVQUAL coaches Bruce Agins and Robb Gass visited to present the HIVQUAL software, data collection system and philosophy to all the physicians in the consortium. The team soaked up the information, and began to orient their program toward continuous quality improvement.

Soon thereafter, the Lares consortium came under the tutelage of

Nanette Brey Magnani, and HIVQUAL became the consortium’s major tool for reaching HRSA’s goals.

**HIVQUAL Assistance with QI Program Development:** On her biannual or triannual visits to Puerto Rico, Ms. Brey Magnani provided the Lares consortium with training on the PDSA process, with ideas, and with feedback on their progress. She also set up a learning group for all the programs participating in HIVQUAL within Puerto Rico, which meets on every visit. Mr. Maldonado and his QI coordinator are regular attendees. (In 2006, Dr. Crespo replaced Ms. Brey Magnani in coaching HIVQUAL program sites in Puerto Rico.)

“It’s useful and necessary to exchange views,” Mr. Maldonado said of the learning group meetings. “All my knowledge regarding the continuous quality improvement process, I got it from those meetings, because before I had never experienced working with CQI.”

As his learning on QI advances, Mr. Maldonado has modified the organization and structure of the consortium and its quality improvement program, which is constantly evolving. The consortium now conducts data collection on HIVQUAL indicators quarterly. They are so fundamental to the consortium’s operations that Dr. Julio Marrero Guadalupe, HIV physician at the Corporacion de Servicios de Salud y Medicina Avanzada in Cidra, P.R., tells new HIV patients

Key Data Points (From 2004 CADR)	
Ryan White Funding:	Title III, since 1991
Services Provided	Adult and pediatric clinical care Pharmacy Laboratory Prenatal care Dental care Vaccination Screening and prevention Nutrition Case management Emergency care
Number of HIV+ Patients	286
Gender Breakdown:	F: 37.8% M: 62.2%
Age	2-12 1.0%; 13-24 2.4%
Ethnic background:	Hispanic: 100%
Housing	Homeless: 12.6% Institutionalized 1.7%
Risk Factors	Heterosexual: 54.9% IDU: 25.5% MSM: 15.7%

that they must promise to meet their HIVQUAL indicators - come for visits and laboratory tests as scheduled, and adhere to their medications - in order to be enrolled in the consortium’s HIV care.

Among the skills they have learned from Ms. Brey Magnani’s group, the Lares team said, was how to develop a flow chart for the processes being carried out at each community health center, and identify areas of concern. Another critical piece of advice from Ms. Brey Magnani was patience: to implement changes one at a time. Quipped QI Coordinator Carmen H. Feliciano Lopez, “If you make two

chickens at the same time, one will be raw and the other one will burn.”

**The QI Program Today:**

*Structure:* The Lares consortium’s HIV quality improvement program is currently run by a Quality Assurance Committee, whose members are Ms. Feliciano, Mr. Maldonado, Dr. Francisco Ball, medical director of the Lares center, Dr. Miriam Rodriguez, Medical Director of the Patillas center, and HIV case managers from six participating community health centers.

Ms. Feliciano coordinates the ongoing QI process, while Mr. Maldonado provides continuing coordination, training for the

committee and – since QI is central to the consortium’s operations – an on-going fount of ideas.

The quality committee meets quarterly, in coordination with the quarterly meetings of the consortium administrative group, and the consortium clinical committee. Mr. Maldonado has modeled the meetings on those of the Puerto Rico Title III HIVQUAL learning group. He presents the results of the quarterly HIVQUAL data reports, provides a comfortable, pleasant retreat where the committee at each of the consortium’s clinics can share experience and ideas. Various members of the consortium staff may take the lead on **specific** improvement efforts; for instance Dr. Marrero of the Cidra center is leading the development of improved patient record formats that will more easily remind providers to address the care measured by the HIVQUAL core indicators.

Each community health center makes up its own QI project team, which includes the case managers (who may be social workers, nurses, or health educators), the center’s lead HIV care physicians, and the center executive director.

While each community health center has its own general quality improvement process - and some of them overlap in personnel with those involved in the HIV QI process - this overall QI process is not formally linked with the consortium QI structure.

The consortium has never developed a QI plan, although one has been in draft form for quite some time.

*Performance Monitoring.* The consortium monitors performance on the HIVQUAL care process indicators - frequency of immunologic and virologic monitoring, appropriate provision of PCP and MAC prophylaxis, GYN care, PPD, sexually transmitted diseases, pneumococcal vaccination, dental care, and referral for ophthalmologic care. In addition, as part of a QI project focusing on medication adherence, the consortium is monitoring performance on two outcome indicators: CD4 count and viral load.

HIVQUAL reviews are conducted quarterly on 100 percent of HIV patients. The QI coordinator visits each community health center, and meets with the case manager, where they jointly conduct the review. The case manager is responsible for abstracting the patient information onto a consortium-specific HIVQUAL manual data collection form, and the QI coordinator is responsible for verifying the results. This system focuses the case manager’s attention on any deficiencies that need to be addressed, on a patient-by-patient basis. Many of the clinics have modified their patient progress notes and medical records to focus providers’ attention on compliance with the indicators, and to facilitate quarterly data abstraction. The QI coordinator then enters the

reports into the HIVQUAL database, and generates the quarterly performance report that Mr. Maldonado will present to the QI committee. In addition to presenting the data to consortium clinicians and managers as a group, either Mr. Maldonado or Ms. Feliciano visits each health center to present the data to the team there individually.

*Quality Improvement.* Each quarter, each community health center case manager is asked to select the indicator with the lowest percentage compliance in the previous report, and develop a workplan to raise it to target levels established in the Title III grant. In most cases, given the small number of HIV patients at each site, the QI coordinator generates a list of the patients who have not complied with the indicator, and the case managers work with those patients on an individual basis to resolve barriers to care.

In addition to individual center projects, Mr. Maldonado has selected critical areas for the consortium to address as a group: PPD screening rates and gynecological care. The techniques for improvement were highly individualized, said Carmen Torres Berrocal, case manager at the Camuy Community Health Center site; PPD screening for her 16 patients is tracked on the HIV care flow sheet developed by the center. The case manager reviews the flow sheet prior to every visit, and attaches an informal note to tell the physician which proce-

dures are missing. She set up a procedure whereby all annual laboratory tests are scheduled in the first quarter of the year, to make things easier for the physician. If on a quarterly review, 5 patients aren't up to date on their PPDs, she phones the patients, calls them in for a visit and sends them letters until they show for the procedure. The indicators have responded consistently to the improvement efforts. PPD rates rose from 75 percent in 2000 to 92 percent in each of 2004 and 2005. Compliance with the GYN indicator rose from 74 percent in 2002 to 88 percent in 2004. The consortium's latest joint effort is most ambitious: an effort to improve immunologic and virologic outcomes of care by focusing on adherence (see box).

While the teams have not been trained on formal PDSA cycles, they make extensive use of flow charts to analyze systems of care. For instance, in attempting to improve their Pap smear rates, the Lares community health center staff found that the major problem was that women were not showing for their GYN appointments. The center physician decided to perform the Pap smear as part of the yearly physical exam. The Ciales center, on the other hand, identified, during flow charting, a problem with transportation of specimens to their contract laboratory - specimens were arriving too late, and frequently rejected. (This has been

a frequent problem in Puerto Rico, as contracts often require shipping specimens to labs on the mainland.) As a result of their analysis, the Ciales center decided to contract with another lab.

### **Assessment and Future Directions:**

“We get a lot of benefit from the HIVQUAL program,” Mr. Maldonado said, “It is really what keeps running the consortium. All the activities of the consortium are centered around CQI.”

Focusing this unique Title III consortium on quality, he said, is a continual challenge. Equal access to care must be provided to patients from each of the 16 sites, so each of the sites needs to be actively involved in the QI program. Standardizing systems across the centers is critical, but only possible to a point. Given the multiple pressures of administration, regulation, and financing faced by a community health

center, keeping the executive directors actively involved in QI, excited about consortium activities and attending the quarterly meetings is one of his more difficult tasks - but it is an essential one.

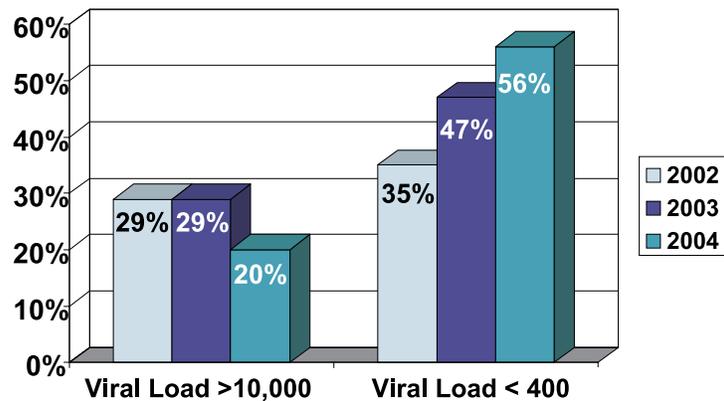
Mr. Maldonado said he will continue to focus relentlessly on patient outcomes. Now that viral load measurements have improved as a result of the consortium’s adherence project (see box), he is investigating what can be done for those patients who appear virologically suppressed, but whose CD4 counts remain low. On the HIVQUAL indicators, the number of patients with CD4 counts below 200 has remained stubbornly at 20 percent, even increasing slightly within the past year. “I am planning to make some sort of intervention to see if there is a way to get immunological improvement to the patients,” he said.

### Assessing and Improving Outcomes

In 2002, Mr. Maldonado became concerned about whether all the consortium’s attention to improving the processes of HIV care was really making a difference. “I can perform viral load and CD4 (testing) for 100 percent of the patients,” he said, “but that doesn’t mean with that intervention I improve the lives of the patients.” He traveled to the mainland to attend a HIVQUAL workshop on indicator development, and developed a way to use the HIVQUAL software to report on percents of patients with very high and undetectable viral loads. The results were unsettling: only 35 percent of consortium patients had viral loads that were undetectable. In response, the consortium developed its adherence project. The hypothesis: that lack of virologic response to therapy was a result of poor adherence to antiretroviral medications.

He printed out a list of patients with high viral loads and instructed the QI coordinator “to go to the case managers and tell them to develop an intervention with that group of patients. See if they really have a problem with adherence, or if it’s the HIV medicine.” Case managers met with every patient, sometimes with the QI coordinator by their side, to evaluate their problems with the medication. Each patient was provided an individualized plan of care. For the most part, consortium staff said, the problems were adherence-related, particularly with injecting drug users, who pay little attention to managing their disease. Case managers’ response to this situation was proactive - even aggressive. “The social worker sometimes has to go over to the [housing] project and kick the patient out of bed and bring them over here,” said Dr. Marrero of the Cidra Health Center, “To keep the quality this patient has to come and has to keep visiting us and has to use the medication.”

Percent of Consortium Patients with Virologic Outcomes



Patients were intensively educated, provided with tools, such as pill boxes and alarm clocks, and advised to obtain family support to remember to take medications. The consortium tracked adherence, both with the patient and with pharmacies, which provided a drug dispensing report. A part-time psychologist, Dr. Diana Ball, was brought in to provide group therapy, which helped motivate the patients to adhere. For some of the substance abusers, unfortunately no motivation was enough; two of her most noncompliant patients recently died, said Ms. Torres of the Camuy center. The consortium now counsels providers not to begin antiretroviral therapy if the patient seems unwilling to comply. For others, adherence did not appear to be the issue, and physicians were urged to evaluate the patients for drug resistance and consider switching regimens. The success of this multi-pronged approach can be seen in the graph: the number of consortium patients with undetectable viral loads increased 20 percentage points in 2 years.



