

# Quality Management in Public and Community Health: Examples from Women's Health

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*Quality assessment and improvement activities are as relevant to the public health sector and community-based health care organizations as they are to the rest of the health care industry. This article provides a framework for the types of quality assessment and improvement approaches available to public health and community-based health care organizations and provides two examples drawn from the field of women's health. The first focuses on a population-based assessment of the performance of the health care system using indicators for the nation as a whole and for the states specifically in a women's health report card. The second focuses on measuring quality of care provided to clients of one type of safety-net organization, Title X family planning clinics. Either type of approach can serve as the basis for developing strategies for improving the performance of health care organizations.*

Key words: *community-based organizations, health care safety net, public health, quality assessment, quality improvement*

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**T**HIS ARTICLE is based on the premise that the growing emphasis on quality assessment and improvement in the health care industry as a whole should apply equally to the public health sector and to private not-for-profit community-based health care organizations that serve the uninsured and other vulnerable groups. These organizations are components of the health care “safety net,” which provides services of last resort to those without health insurance or access to mainstream services. Although a key mission of these organizations is extending access to health care to the underserved in their communities, they function in a health care delivery environment in which quality issues are of growing concern, and competition with other providers is increasing. Private-sector health care organizations increasingly are adopting a community perspective. Consequently, to maintain their missions, organizations that constitute the health care safety net must be concerned with measuring, monitoring, and improving quality of care. Yet they face some specific challenges in adopting a quality agenda.

One challenge is that, within the public health system, there is debate about the role of public health agencies in providing direct services to individuals. The three core functions of public health, as defined

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by the Institute of Medicine (IOM), are assessment of the health of the community, public health policy development, and assurance of the availability of personal health services for those unable to afford them.<sup>1</sup> To ensure availability, many public health agencies provide key services directly. Immunizations, maternal and child health services, family planning, and sexually transmitted disease screening account for the largest share of the average local health department's staffing and funds.<sup>2</sup> State and local public health agencies historically have been significantly underfunded, particularly in light of their broad range of responsibilities and consequent competing priorities, extending from management of public health emergencies (e.g., epidemic breakouts, natural disaster relief) to ascertainment of complete birth and death records, to community mobilization and consensus development for health policy decisions. As a result, quality assurance of personal health care directly delivered by these agencies often has not received sufficient attention.

Recently, however, a succession of environmental trends—including an increasing number of uninsured persons, eroding subsidies for uncompensated care, and the rapid growth of Medicaid managed care—threatens the ability of both public and private health care safety net organizations to maintain their missions and remain financially viable. The IOM recently identified several key capabilities that safety net organizations will need to adapt and survive in this changing environment.<sup>3</sup> Among these is greater accountability for the quality of patient-focused care. In addition, the Government Performance and Results Act of 1993 emphasizes the use of indicators for monitoring federally funded programs by focusing on inputs, processes, and outputs. In other words, there is a new recognition that, even within the health care safety net, quality is a necessary focus if organizations are to retain their niche and continue to be available to provide care to underserved populations.

This article provides a conceptual framework for the types of quality assessment and improvement approaches available to public health and community-based health care organizations and will present some case examples to illustrate how these approaches

can be used for quality improvement. We present two examples below to illustrate the assessment of quality of care by public health agencies and other community-based organizations. The first focuses on a population-based assessment, by state, of the performance of the overall health care system in relation to women's health. The second addresses quality of care for one type of safety-net organization: family planning programs funded through Title X of the Public Health Service Act. These two examples differ in that one uses indicators of population health and one uses measures of clinical performance in community-based organizations. Although our examples are drawn from women's health, other examples also are available.

## Definitions and Frameworks

We distinguish first between quality assessment and quality improvement. By *quality assessment*, we mean the process of measuring quality of care, including development of quality measures, implementation of quality measurement activities, and monitoring of quality information over time to detect trends or to identify high-performing and low-performing health care providers, organizations, or communities. Measures of quality are multidimensional and can focus on the structure, process, and outcomes of care; they can be based on administrative, clinical, or patient-reported data. Quality assessment also includes the process of providing information on quality to stakeholders, including providers, consumers, payers, policy makers, and the general public.<sup>4</sup> By *quality improvement*, we mean the ongoing, systematic process of using quality measurements to identify problems and to implement strategies to improve the quality of care, usually within specific organizational entities, such as a group practice, a health plan, a hospital, a public health department clinic, or a community-based clinic. The objective is to identify the causes of variation in the processes and outcomes of care and to strive continuously for higher levels of performance.<sup>5</sup>

Both quality assessment and quality improvement require defining what is meant by quality of care. The

most widely cited definition of health care quality is provided by the IOM. "Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."<sup>6(p.4)</sup> Chassin and Galvin have expanded this definition, defining poor quality of care as the underuse of effective services, the overuse of services when the potential for harm exceeds the potential benefit, or the misuse of services resulting in preventable complications.<sup>7</sup> Including the term "populations" in the IOM definition of quality conveys a systemwide perspective and draws attention to the need to assess whether all segments of the population have access to quality health care. Applying a systems perspective more explicitly, the IOM recently has proposed six dimensions for quality improvement in the health care delivery system: safety of patients, effectiveness of services, patient-centered care, timeliness of care, efficiency of resource use, and equity of care across gender, ethnicity, geographic location, and socioeconomic levels.<sup>8</sup>

A word of caution is warranted here. Although clinical medical care is necessary and important, the health of the population is not totally determined by the health care delivery system. Population health is determined by numerous factors in addition to the quality of health services.<sup>9</sup> The physical and social environment, genetic endowment, social policies affecting access to health-producing resources, the degree of social inequality in the population, and individuals' health-related behaviors all affect the health status of the population. Changes in health status indicators at the population level, therefore, cannot necessarily be attributed to health care delivery organizations. For example, a decline in the age-adjusted cardiovascular mortality rate cannot necessarily be attributed to improved health care services, because it could also be a function of declining cigarette smoking, improved diet, or other factors. Health status changes in the population may be influenced by simple demographic shifts, by broad-scale health education campaigns, or by use of economic and legislative policy levers, such as cigarette tax increases or restricting the sale of cigarettes to minors.

The interpretation of trends in population-based quality indicators therefore is an important part of the quality monitoring process.

At the level of health services delivery organizations, the quality of care is assessed by examining the effects of care on persons served by individual providers, by a health plan, or by some other organizational entity responsible for health care provision. In this approach, the denominator for quality measurement is the number of patients of a specific type served within the clinical setting being monitored or who receive specific services. At the level of the population, quality of health care can be assessed by examining health-related characteristics of the population attributable to the health care delivery system. For example, measures might include utilization rates for effective services appropriate for the population at large (e.g., clinical preventive services), the equity of service provision (e.g., differences in utilization by gender, ethnicity, socioeconomic status, or geographic area), or consumers' perceptions of the quality of the health care delivery system. In this approach, the denominator for quality measurement is the number of individuals residing in the target community, whether or not they receive services.

In either approach to quality assessment, some type of normative standard or benchmark may be used to determine whether the level of health care quality is acceptable or moving in the right direction. A key difference between these two approaches, however, is the ability to attribute responsibility for variation in quality to a specific organizational entity. At the level of personal health services, we can attribute quality outcomes to the provider, health plan, or other organizations that provide services. At the population level, however, we cannot usually attribute changes in the overall amount of health services used, let alone changes in the health status of the population, to a specific source of services or a specific program. This does not mean that it is not important to monitor the population, but rather that it is difficult to apply the information from population-level assessments to quality improvement efforts within specific organizational entities. Instead, the onus is on a network of agencies, organizations, and policy makers at

the local, state, and national levels to take action in response to quality assessments.

## Community Indicators Approaches

An important approach to quality assessment at the population level is the use of community health indicators. This approach is used to assess the health care of the population against a normative standard, to compare health care across communities (e.g., neighborhoods, cities, counties, states), or to assess disparities in health care across population subgroups. As reflections of how well a community is performing over time, indicators provide information to multiple stakeholders, including public health officials, to enable them to identify actions to improve health care delivery to the population. The selection of appropriate indicators and the use of valid and reliable data are key concerns in quality assessment. In addition, improving performance on the selected indicators requires identifying effective change strategies and the agencies or organizations to implement them.

What are appropriate criteria for indicators of quality health care in communities? The IOM identifies six criteria for leading health indicators: (1) They must be worth measuring, in that they represent important aspects of public health; (2) They can be measured for diverse populations; (3) People who need to act to improve health can understand them; (4) They provide information to galvanize action by individuals and groups at the national, state, and local levels; (5) Actions that can lead to improvement are known and feasible; and (6) Measurement over time will reflect the results of action.<sup>10</sup> Using this as a guide, health care quality indicators should:

- reflect the availability and use of health care services that are known to be effective and to affect the health of the population;
- reflect the perspectives of consumers and incorporate their assessments of availability, ease of access, the process of care delivery, and outcomes;
- be measurable in diverse populations and over time;

- focus on services for which there is room for improving availability, access among specific population segments, process of care, or outcomes; and
- correspond to actions or strategies that are known to improve service delivery at the agency, organization, or community level.

These criteria assume an evidence base that can be used to defend the selection of indicators and the identification of strategies for improving the quality of care for the relevant population.

### Case Example: Women's Health Report Card

A recent indicators project at the national and state levels is *Making the Grade on Women's Health: A National and State-by-State Report Card*, developed jointly by the National Women's Law Center, FOCUS on Health and Leadership for Women at the Center for Clinical Epidemiology and Biostatistics at the University of Pennsylvania School of Medicine, and The Lewin Group.<sup>11</sup> Designed to provide information on the health and well-being of women in the United States, the report card provides data for a set of indicators identified with the assistance of an advisory committee of health experts. (The first author served on this committee.) These indicators were intended to reflect the overall performance of the health care system in serving women and the capacities of communities to promote women's health. They include 32 "status" indicators that measure women's access to health care services, the degree to which they receive clinical preventive health care and engage in health-promoting behaviors, the occurrence of key health conditions and causes of death for women, and the extent to which communities enhance women's health and well-being. Also included are 32 "policy" indicators that are based on state statutes, regulations, policies, and programs that address the problems identified by the health status indicators.

Criteria for selecting the health status indicators were whether the health concern had a significant impact on women's quality of life, functioning, and well-being; whether it affected a large number of women generally or in a specific subpopulation or

age group; whether the women's health concern measured could be improved; whether it was measurable across states; and whether it was commonly accepted or reflected an emerging problem that was increasing in prevalence incidence, or severity. Twenty-five of the status indicators were graded based on overall benchmarks drawn primarily from the 10-year health objectives for the nation in *Healthy People 2000*<sup>12</sup> or *Healthy People 2010*.<sup>13</sup> The criteria for selecting the health policy indicators were whether the policy addressed or could significantly improve the women's health concern reflected in the status indicator; whether it was measurable and allowed for comparisons across states; and whether it had been adopted by at least one state. A number of important health problems could not be presented as indicators because they were not uniformly measured across states or because data were not available by gender or for key subpopulations.

Table 1 shows selected status indicators from the report card, the benchmark used in grading the states, the overall U.S. score on the indicator, and the range of values for the indicator (the lowest and highest performing states on the indicator). The data give an idea of the types of indicators and benchmarks available and the degree of variation in states' performances. This report card graded the nation as a whole and the states' performances based on the benchmarks, using grades of "satisfactory" (if the benchmark was met), "unsatisfactory" (if the state came within 10 percentage points of the benchmark), and "fail" if the state missed the benchmark by a wider margin.

The selection of the benchmark is quite important. The *Healthy People* objectives chosen as benchmarks are essentially targets and do not necessarily reflect what is likely to occur based on best practices within the health care delivery system. For example, the data for most of the wellness and prevention indicators (e.g., rates of screening tests such as Pap smears and mammograms) in the report card are from the Behavioral Risk Factor Surveillance System (BRFSS), which consists of state-level population-based surveys; the indicator for the United States in the report card is the median score of all 50 states, the District of Columbia

(DC), and Puerto Rico. These data reflect what is going on at the population level, based on women's reports. Another source of data (not used in the report card) comes from the managed care industry. The Health Plan Employer Data and Information Set (HEDIS) measures performance quality in managed care plans and includes some measures of screening rates that might be assumed to represent screening under optimal conditions. That is, the rates are based on defined populations of health plan members who have been enrolled for a minimum time period and received services in plans that participate in voluntary accreditation by the National Committee for Quality Assurance (NCQA). In other words, the screening rates are for individuals who have access to preventive services through health plans in which they have some degree of continuity of care.

Consider the example of Pap tests. Table 1 shows that the U.S. rate—which is the median rate for all states, DC, and Puerto Rico based on data from the BRFSS—nearly met the *Healthy People 2000* benchmark of 85 percent of women age 18 and over receiving a Pap test in the past 3 years. Twenty-four states and DC met the benchmark. (The *Healthy People 2010* benchmark is 90 percent.) According to HEDIS 2000, health plans performing at the 90th percentile for Pap test screening (defined as the percentage of women ages 21 to 64, enrolled for at least 1 year, who had at least one Pap test in the past 3 years) had screening rates of 83 percent.<sup>14</sup> Looking to the best-performing health plans for guidance would be one way to improve performance on this indicator, but even the best-performing plans have not met the national target. The *Healthy People* goal for the total female population may be unrealistically high and difficult to reach in some states, because many women are not enrolled in a managed care plan.

The key contributions of this indicators project are that it brings together, in one document, current information on women's health; it identifies key sources of data on women's health; it informs multiple stakeholders about the status of women's health and health policy in all 50 states and DC; it demonstrates that there is variation in performance on women's health indicators across states; it identifies

Table 1

## SELECTED STATUS INDICATORS IN WOMEN'S HEALTH

Indicator	Benchmark	US	Performance range (worst-best)
<i>Women's Access to Health Care Services</i>			
Women without health insurance (% women ages 18–64)	0% (Healthy People 2010)	14.0%	Texas (28.0%)–Hawaii (7.5%)
First trimester prenatal care (% mothers giving birth)	90% (Healthy People 2010)	81.9%	D.C. (64.6%)–Maine (89.9%)
<i>Addressing Wellness and Prevention</i>			
Pap smear past three years (% women ages 18+)	85% (Healthy People 2000)	84.9%	Utah (78.4%)–D.C. (93.9%)
Smoking (% women ages 18+)	15% (Healthy People 2000)	20.8%	Kentucky (28.5%)–Utah (12.6%)
<i>Key Conditions</i>			
Heart disease death rate (per 100,000)	100 per 100,000 (Healthy People 2000)	98.0	Mississippi (141.2)–Minnesota (65.4)
Diabetes (% women ages 18+)	2.5% (Healthy People 2000)	5.3%	Mississippi (8.2%)–Alaska (2.6%)
Chlamydia (% women ages 15–24 tested in family planning clinics)	5% (Healthy People 2000)	5.4%	Louisiana & Mississippi (11.3%)–West Virginia (2.4%)
<i>Living in a Healthy Community</i>			
Average life expectancy at birth	82.9 yrs (Japan)	78.8 yrs.	Louisiana (76.9)–Hawaii (81.3)
High school completion rate	90% (Healthy People 2010)	82.8%	Arkansas (76.2%)–Alaska (91.6%)

Source: Data from National Women's Law Center, FOCUS/University of Pennsylvania, and the Lewin Group. *Making the Grade on Women's Health: A National and State-by-State Report Card*. Washington, DC, National Women's Law Center, 2000.

some key health disparities by race/ethnicity, sexual orientation, and disability; it ranks states on performance, for some indicators, with respect to meeting national benchmarks for women's health care or health status; and it provides a basis for action to improve performance on specific indicators. The shortcomings of this and other indicators projects, however, are that the indicators are limited by the availability of data across states; the multiple indicators are not prioritized with respect to the importance of the health concern or the resources that would be required to address it; and the indicators in and of themselves do not suggest the reasons for variation across states or the strategies for meeting the benchmarks, nor do they identify the agencies or organizations with the experience or capacity to address the quality improvement problem.

### **Service Quality Measurement Approaches**

Much of the recent progress in quality measurement in clinical care has occurred within the managed care industry through the NCQA, which developed HEDIS. With the rapid increase in the number of Medicaid recipients enrolled in managed care plans in most states, NCQA also developed specific HEDIS measures for the Medicaid population. With federal encouragement and support through the Department of Health and Human Services, including promulgation of purchasing specifications, states are incorporating these measures into their contracts with Medicaid managed care organizations. Although the methodology is not perfect, progress in the development of these quality measures provides a prototype for assessing and improving quality in public and community-based health care organizations. Beyond Medicaid population measures and contracting, a number of categorical public health programs at the federal and state levels have turned their attention to quality-of-care concerns, especially now that all government programs, including those focused on health, are being asked to document their effectiveness.

### **Case Example: Measures of Quality in Family Planning Programs**

An example of such an effort is a project to develop quality indicators in Public Health Service Region VIII Title X (Public Health Service Act) Family Planning Programs.<sup>15</sup> (Region VIII includes Colorado, North Dakota, South Dakota, Montana, Utah, and Wyoming.) Title X regulations, in conjunction with standards developed by professional organizations such as the American College of Obstetricians and Gynecologists, have resulted in strong clinical practice guidelines for grantees. Consistent with federal requirements, state Title X programs routinely undertake quality assurance activities, such as medical chart audits and administrative site visits, to determine the adherence of an agency to the standards.

Although Title X grantees currently use many appropriate measures, no single set of criteria has been designated to evaluate the quality of care provided at family planning clinics. Moreover, quality monitoring activities are undertaken by varying program staff and with varying data system capabilities. Believing that consensus regarding an appropriate set of quality assessment criteria will ultimately lead to better and more consistent analysis of the Title X Family Planning Programs, state family planning professionals in Region VIII initiated a project in collaboration with consultants from the Johns Hopkins Women's and Children's Health Policy Center (WCHPC) to develop a set of performance indicators and to provide guidance and a work plan to collect data for measuring these indicators. (The second and third authors were consultants.)

The existing literature on family planning effectiveness covers a broad range of program indicators, including immediate program impact such as the population served or services delivered, and ultimate population outcomes such as the number of unintended pregnancies averted and decreases in teen pregnancy rates. Measuring the longer-term or ultimate outcomes of family planning programs typi-

cally requires population-level analyses in which researchers control for a variety of factors other than Title X services and activities that might affect these outcomes. To assess long-term impact, it is essential, however, to implement systems that track processes and intermediate program outcomes. This project specifically focused on identifying these intermediate outcomes.

Several activities were undertaken in determining a consensus among the directors of Title X programs in the six Region VIII states about a common set of performance indicators. The first step involved a comprehensive review of the literature on family planning indicators not only from the United States, but also from developing countries, where most of the research has been conducted. The literature review also included an assessment of various frameworks that have been used to evaluate quality of family planning and reproductive health services and of the limited literature on the effect of family planning services on the outcomes of interest. Subsequently, an inventory was made of the available data sources in the region's states for measuring performance and of the indicators that could be obtained from each source. In addition, a survey was undertaken to understand each state's current data capacity for obtaining potential indicators.

Consensus development involved face-to-face meetings and conference calls, between the WCHPC consultants and the Title X professionals, to clarify the objectives of the project and to present iterations of recommended performance indicators. The WCHPC consultant team next adapted a framework for monitoring and evaluation of Title X programs that was used to organize the indicators and to assist the family planning program directors in assessing the usefulness of each indicator. Finally, the team translated the performance indicators into data collection instruments that could be used by each state for medical records access and client exit surveys. These data sources were selected because they could provide most of the process and intermediate program

outcomes and because the states, along with the Region VIII federal office, were willing to commit resources to obtaining them over the ensuing few years.

Frameworks for assessing the quality of family planning services have been heavily influenced by the pioneering work of Avedis Donabedian, who identified three major aspects of quality of care: the structure of the health care delivery system, the process by which care is delivered (including both technical and interpersonal components), and the outcomes of the care.<sup>16</sup> Building upon the work of Donabedian, Judith Bruce developed a framework specifically for assessing the quality of family planning care.<sup>17</sup> Bruce's framework conceptualizes program inputs, six main elements reflecting program activities and outputs, and impacts on clients served. Specific domains of quality of care in family planning programs included in Bruce's work are choice of methods, information given clients, technical competence of providers, client-provider interaction, mechanisms to promote continuation of services, and appropriateness and acceptability of services. While not originally considered a domain in the Bruce framework, a measure of access to services also was included to assess quality.

To facilitate the process of selecting indicators, these components were displayed using Vaughan's causal pathway model for evaluating family planning programs.<sup>18</sup> (See Figure 1.)

The causal pathway model divides the structure of health care into two components: *inputs* at the program level and *activities* at the clinic level. Process of care involves a set of *outputs* among clients served at the clinic level. Outcomes are divided into intermediate impact, those that occur at the clinic level in terms of the population served, and effects, as measured at the population level. To further assist in the indicator selection process, the components of quality were organized by data source so that state professionals could understand the usefulness of each source and determine priorities for data collection. The

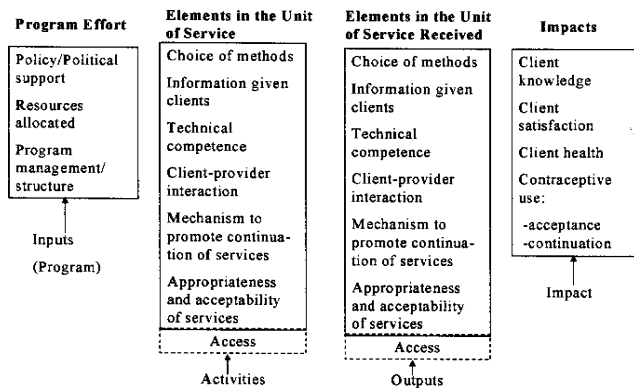


Figure 1. Causal pathway and Bruce framework

sources of data that were emphasized included clinic surveys (to ascertain clinic policies and procedures), medical records, client exit surveys, and client follow-up surveys. Population assessment of important effects, such as unintended pregnancy rates, was excluded from consideration for this indicator set because a limited number of states in this region had the capacity or resources to commit to the collection of such population data. Moreover, as noted above, these data would not have provided the states with much insight into the performance of their Title X programs because these safety-net providers address only the neediest populations.

Within each source of data, the domain in the Bruce framework and specific performance indicators measuring the domain were listed, although not all domains could be measured for each source. This approach enabled the state family planning program directors to assess priorities for data collection, potential costs of obtaining the data, and the timing or feasibility of obtaining data on the indicator for all six states in the region. A set of recommended indicators was presented to the state directors, and the directors decided which indicator(s) to use for each domain for each data source.

The complete list of performance indicators agreed upon by the Region VIII state family planning program directors is presented in Table 2. The indicators focus on both contraceptive and reproductive health services and prioritize the most important compo-

nents of these services, as judged by the program directors. Taking into consideration costs, state program and local agency/clinic staffing, and data system capacity, the consultant team developed instruments for a standardized clinic survey, medical records abstraction, and client exit interviews. Efficient sampling and data collection strategies were recommended. Client follow-up surveys are not planned as a source of data primarily because of the cost of conducting them. Each state program has committed to working to put these quality-monitoring systems in place, and federal Title X regional office resources have been awarded to a contractor in the mountain states area to provide ongoing consultation and technical assistance for implementation of the indicators set.

A major strength of this project is that the recommended performance indicators will be uniformly collected across the six states and can be used to assess performance of Title X programs both across and within states. A limitation, nevertheless, is the variability in the capacity of the six states to collect data, ruling out options for collection of data from client follow-up or population-based surveys. The data also are not linked with data from other providers, nor do they focus, at this time, on variations across population groups.

### Conclusions

This article presents two examples of efforts to develop quality measures for women's health for public health and community-based programs: one population oriented and the second focusing on performance of safety-net organizations. The population-oriented example shows how state-level data can be used to identify major health concerns for women and to develop policy and programmatic approaches to address these concerns. The second example illustrates measures that can be used to assess the performance of a specific type of safety-net organization, in much the same way as HEDIS is used to assess clinical care in managed care organizations and to provide a basis for quality improvement efforts. These measures, because they are tailored to a specific type of organization and service mix, provide

Table 2

## PERFORMANCE INDICATORS FOR REGION VIII FAMILY PLANNING PROGRAMS

Indicator agreed upon	Potential data sources
<b>Choice of Method:</b>	
Full range of methods available	Clinic survey (policy and procedures)
Referrals provided to other sites	Clinic survey (policy and procedures)
Client receives chosen method	Client exit interview
Client receives method acceptable to her	Client exit interview
<b>Information Given to Clients:</b>	
Program/clinic undertakes community information campaign and outreach	Clinic survey (policy and procedures)
Client given verbal information on method use	Client exit interview
Client given verbal information on method side-effects	Client exit interview
Client given written information on method use	Client exit interview
Client given written information on method side-effects	Client exit interview
<b>Technical Competence:</b>	
Appropriate screening procedures for STIs	Clinic survey (policy and procedures)
Appropriate follow-up on positive screens and cultures	Clinic survey (policy and procedures)
<b>Client-provider Interaction:</b>	
Client treated with respect and courtesy	Client exit interview
Client's privacy respected	Client exit interview
<b>Mechanism to Promote Continuation of Services:</b>	
Follow-up at appropriate intervals for annual exam	Clinic survey (policy and procedures)
Follow-up at appropriate intervals for oral contraceptives	Clinic survey (policy and procedures)
Follow-up on missed appointments	Clinic survey (policy and procedures)
Follow-up on negative pregnancy tests	Medical records and/or clinic survey (policy and procedures)
<b>Appropriateness and Acceptability of Services:</b>	
Appropriate screening for chlamydia	Medical records, Special Chlamydia Project
Appropriate provision of Pap test (timing at initial and annual exam)	Medical records
Appropriate follow-up on positive screens and cultures for chlamydia	Medical records
Appropriate follow-up on positive screens and cultures for Pap test	Medical records
Client knows she has been screened	Client exit interview
<b>Access:</b>	
Waiting time between client's contact and date of visit	Clinic survey (policy and procedures)
	Client exit interview
<b>Outcomes:</b>	
Contraceptive continuation rates	Client follow-up survey, BRFSS
Contraceptive failure rates	Client follow-up survey, BRFSS

BRFSS = Behavioral Risk Factor Surveillance System

STIs = sexually transmitted infections

Source: Data from D.M. Strobino, M. Koenig, H.A. Grason, *Approaches and Indicators for Measuring Quality in Region VIII Family Planning Programming*, Baltimore, MD: Women's and Children's Health Policy Center, Johns Hopkins School of Public Health, 2000.

an illustration of how to expand the types of performance measures obtained in HEDIS for community-based health care organizations without enrolled populations.

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## REFERENCES

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1. Institute of Medicine, *The Future of Public Health*. Washington, DC: National Academy Press, 1988.
2. Wall, S. "Transformations in Public Health Systems," *Health Affairs* 17, no. 3 (1998): 64–80.
3. Institute of Medicine, *America's Health Care Safety Net: Intact but Endangered*. Washington, DC: National Academy Press, 2000.
4. McGlynn, E.A. and Brook, R.H. "Ensuring Quality of Care." In Andersen, R.M., Rice, T.H., and Kominski, G.F. eds., *Changing the U.S. Health Care System: Key Issues in Health Services, Policy, and Management*. San Francisco: Jossey-Bass, 1996, 142–179.
5. Berwick, D.M., Godfrey, A.B., and Roessner, J. *Curing Health Care: New Strategies for Quality Improvement*. San Francisco: Jossey-Bass, 1990.
6. Lohr, K. (ed.) *Medicare: A Strategy for Quality Assurance, Volume 2*. Washington, DC: National Academy Press, 1990.
7. Chassin, M.R. and Galvin, R.W. "The Urgent Need To Improve Health Care Quality: Institute of Medicine Roundtable on Health Care Quality." *Journal of the American Medical Association* 280, no. 11 (1998): 1000–1005.
8. Institute of Medicine, *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press, 2001.
9. Evans, R.G. and Stoddart, G.L. "Producing Health, Consuming Health Care." *Social Science and Medicine* 31 (1990): 1347–1363.
10. Chrvala, C.A. and Bulger, R.J., eds. *Leading Health Indicators for Healthy People 2010*. Washington, DC: National Academy Press, 1999.
11. National Women's Law Center, FOCUS on Health and Leadership for Women at the Center for Clinical Epidemiology and Biostatistics at the University of Pennsylvania School of Medicine, and The Lewin Group. *Making the Grade on Women's Health: A National and State-by-State Report Card*. Washington, DC: National Women's Law Center, 2000.
12. National Center for Health Statistics. *Healthy People 2000 Review, 1997*. Hyattsville, MD: U.S. Public Health Service, 1997.
13. Office of Disease Prevention and Health Promotion. *Healthy People 2010, Conference Edition*. Washington, DC: U.S. Department of Health and Human Services, 2000.
14. National Committee for Quality Assurance. *The State of Managed Care Quality, 2000*. Washington, DC: National Committee for Quality Assurance, 2000.
15. Strobino, D.M., Koenig, M., and Grason, H.A. *Approaches and Indicators for Measuring Quality in Region VIII Family Planning Programming*. Baltimore, MD: Women's and Children's Health Policy Center, Johns Hopkins School of Public Health, 2000.
16. Donabedian, A. "The Quality of Care: How Can It Be Assessed?" *Journal of the American Medical Association* 260, no. 12 (1988): 1743–1748.
17. Bruce, J. "Fundamental Elements of the Quality of Care: A Simple Framework," *Studies in Family Planning* 21, no. 2 (1990): 61–91.
18. Vaughan, R. "Using Causal Pathways: A Sensible Design, Monitoring, and Evaluation Strategy." Presented at Region VIII Title X Grant Directors Meeting, Denver, Colorado, December 13–15, 1999.