



Quality Improvement in Free/Charitable Clinics:

A How-To Guide

Julie Darnell, Ph.D.

May 2014



INTRODUCTION

This guide is designed as a resource to help free/charitable clinics begin a quality improvement project and describes a framework, the Model for Improvement, better known as “Plan Do Study Act” (PDSA), which clinics can use to measure and report on their quality of care. Topics covered in the Guide include the following: (1) why free/charitable clinics should measure the quality of care they provide; (2) the steps involved in a quality improvement project based upon the PDSA model and (3) readily available information and metrics that can be put into practice in a quality improvement project. Additionally, an appendix of helpful graphical tools and four case studies that profile experiences of free/charitable clinics that have successfully undertaken quality improvement projects are available in support of this guide. The appendix of graphical tools can be accessed [here](#). By providing a rationale for measuring quality, describing the steps involved in quality improvement, and sharing examples of successful improvement projects undertaken by four free/charitable and charitable clinics, it is hoped that this Quality Improvement Guide will take the fear out of starting a quality improvement project.

The four case studies that accompany this resource guide illustrate quality improvement in action in free/charitable and charitable clinics and are available [here](#). The four clinics range in size, available resources (e.g., budget and staffing), patients, services, and operating hours, and their diversity underscores an important message: quality improvement projects can be carried out by clinics of all sizes and resources. The case studies feature four different quality improvement projects: (1) reducing no-show rates; (2) reducing medication errors; (3) improving the management of patients with diabetes; and (4) improving outcomes for patients with diabetes. The case studies illustrate that despite differences in resource environments and quality emphases, what the clinics have in common is a desire to improve the quality of care they provide to their patients by means of a formal quality improvement process. Each case study includes a profile of the clinic, a summary of the quality improvement project, a question-and-answer dialogue with the Executive Director, and copies of the supporting materials used by the clinic to carry out the quality improvement project so as to encourage replication.

For the purposes of this document, “quality improvement” is defined as “an organized approach to measure where you are and figure out ways to make things better.” As the phrase “organized approach” suggests, quality improvement requires a systematic process; it also involves measuring one’s performance. In this regard, quality improvement shares some similarities with scientific research methods. However, quality improvement differs from research in other important respects. One key difference is that the QI project demands only “just enough” data to learn and get to the next step. In light of this, it is perfectly acceptable to think small in terms of the amount of data one needs. This is appropriate to the typically low-resource environments that are characteristic of the free clinic setting, and it means that quality improvement initiatives are perfectly realistic for free and charitable clinics to undertake.

“Years ago, the entire process was quite intimidating. Now, when I see a need, I just create a study tool and collect the information I need to make an accurate assessment of any situation.”

*Jane Hawkins, Executive Director,
Metrocrest Community Clinic, Dallas, TX*

Table of Contents

1	Making the Case for Measuring Quality of Care in Free/ Charitable Clinics	Page 1
2	Getting Started Measuring Quality of Care <ul style="list-style-type: none">- How can free/ charitable clinics define quality? Page 3- What is the PDSA Model? Page 3- What indicators and performance measures might free/ charitable clinics use to guide their quality improvement efforts? Page 5- What reliable questionnaires and tools are available to measure the quality of care? Page 6- Where can free/ charitable clinics find benchmarks for measuring their performance? Page 6- What resources are available for further reading? Page 7	

Making the Case for Measuring Quality of Care in Free/ Charitable Clinics

Why should free/charitable clinics focus on quality of care?

1. Times have changed.

Free/charitable clinics have long existed below the radar, providing care to the uninsured and underserved with little fanfare and minimal federal oversight or support. In recent years, however, free/charitable clinics have gained much greater national attention, spurred in part the 2012 release of *A Report to Congress: Quality Incentives for Federally-Qualified Health Centers, Rural Health Clinics and Free/Charitable Clinics*. As the title of the report suggests, free/charitable clinics were the object of investigation alongside their better known counterparts, federally qualified health centers (FQHCs) and rural health clinics (RHCs). Over the past two decades, free/charitable clinics have also become more visible as they have become more formalized. The establishment of the National Association of Free Clinics (NAFC) in 2001 (renamed the National Association of Free and Charitable Clinics in 2011) as well as numerous state and regional associations of free/charitable clinics in the 1990s and 2000s has drawn increasing attention to the free/charitable clinic model and to the role that free/charitable clinics play in addressing unmet needs of the uninsured and underserved.

At the same time the free/charitable clinic sector is garnering greater notoriety, the healthcare system is experiencing a paradigm shift, from a focus on access to a focus on quality. This shift began with the publication of the 1999 Institute of Medicine Report, *To Err is Human: Building a Safer Health System*. The shift in focus means a change from asking, “What are we doing?” to “Is what we are doing making a difference to our patients?” To keep pace with the changing healthcare landscape, free/charitable clinics also must change their orientation.

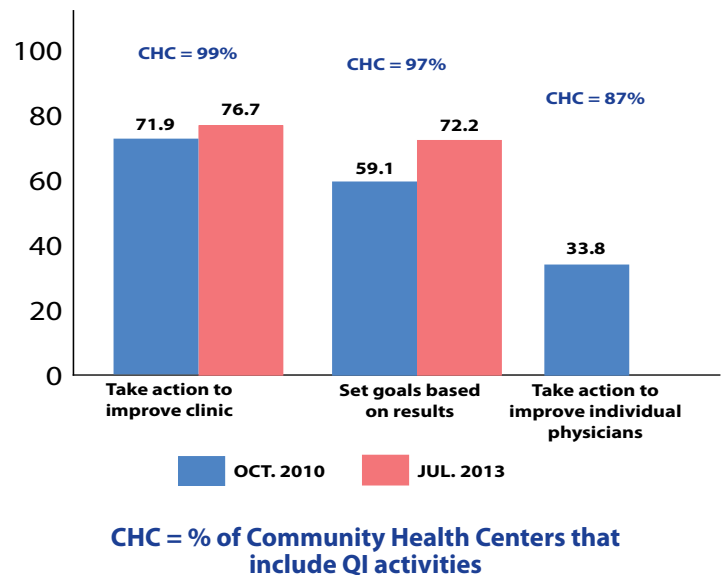
This change in orientation does not mean that free/charitable clinics should cease showcasing *what* they do. Rather, it means that free/charitable clinics must strike a balance between enhanced access and improved quality. Free/charitable clinics can and should demonstrate their importance in filling the gaps in the safety net by reporting on how much care they provide – the number of patients/patient visits, medications dispensed, referrals made, volunteer hours, etc. But they also need to provide data about the impact of their services on their patients, such as decreased blood glucose levels or non-emergency use of hospital emergency services. In the new healthcare paradigm, it is only by joining together what they are doing and evidence that what they are doing is making

a difference in the lives of their patients that free clinics will succeed in making a compelling argument for their value.

2. Comparisons to other safety-net providers are inevitable.

It is well known to free/charitable clinics that the general public, policymakers, the philanthropic community, researchers, and potential donors often cannot articulate the differences between free/charitable clinics and other safety-net providers. Stakeholders seem to have an especially hard time appreciating the differences between free/charitable clinics and FQHCs. Free/charitable clinics are often mistakenly thought to be synonymous with FQHCs. Given this confusion, it is inevitable that free/charitable clinics will be compared to FQHCs. When these comparisons do occur, one challenge for free/charitable clinics is that outcome data in the free/charitable clinic setting are quite limited compared with their health center counterparts (see Figures 1 and 2). The aforementioned 2012 *Report to Congress* acknowledges this fact in its conclusion: “Research indicates that FQHCs are a source of good quality health care. ... Data about quality at...free/charitable clinics are scant, although systems of quality assessment and performance improvement are often in place.”

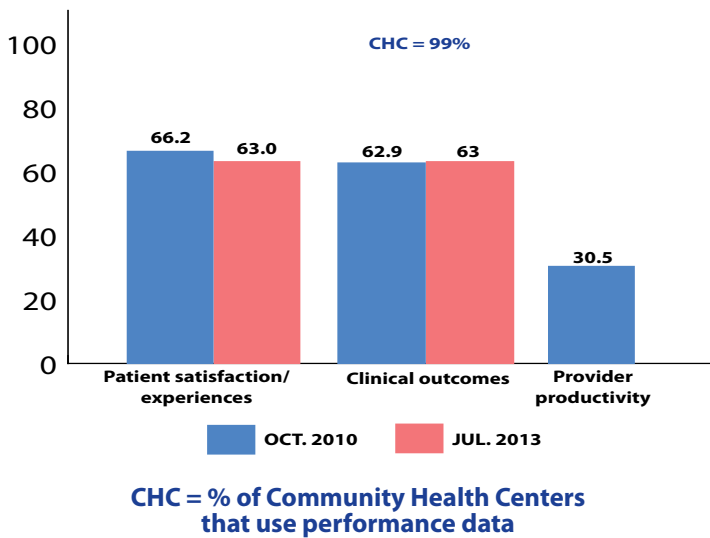
Figure 1: Quality Improvement Activities in Free/Charitable Clinics vs. Health Centers



Notes: 2010 data come from NAFC member survey shown in *Report to Congress*; 2013 data come from AmeriCares survey.

Source for CHC benchmark: Doty, MM et al. (2010). *Enhancing the Capacity of Community Health Centers to Achieve High Performance*. The Commonwealth Fund. Missing responses are interpreted as “No.”

Figure 2: Collection of Performance Data in Free/Charitable Clinics vs. Health Centers



Notes: 2010 data come from NAFC member survey shown in Report to Congress; 2013 data come from AmeriCares survey. Missing responses are interpreted as “No.”

Health centers’ more extensive record of evidence about their quality of care can be attributed, at least in part, to a heavy and sustained focus by the U.S. Department of Health and Human Services’ Bureau of Primary Care (BPHC), the agency overseeing the federal health center program, to invest in improving the quality of care at health centers. The BPHC has supported a focus on quality improvement in health centers by sponsoring grant programs such as the Diabetes Health Disparities Collaborative; offering financial incentives to carry out quality improvement activities, adopt information technology, and become recognized by the National Committee on Quality Assurance; and requiring health centers to report outcomes data. Historically, free/charitable clinics have lacked both the carrots and the sticks that have spurred a focus on quality of care in health centers: financial incentives to create an infrastructure conducive to measuring quality of care, a large, multi-year source of funding to carry out quality-related activities, and federal mandates to report outcome data. As a result, efforts to improve quality of care in free/charitable clinics have been much more piecemeal.

Nevertheless, free/charitable clinics have made progress in establishing “systems of quality assessment and performance improvement” by devising their own homegrown accreditation programs, creatively using grant funds to reward high quality of care, and initiating quality-related activities upon participation in the Federal Tort Claims Act (FTCA) program. FTCA is a federal program that provides medical malpractice coverage to free/charitable clinic volunteers, staff, board

officers, and contractors, but requires participating free/charitable clinics to have a written, board-approved quality improvement plan and adhere to rigorous credentialing procedures.

3. It is a strategy for survival.

As is the case with all non-profit organizations today, free/charitable clinics face greater accountability pressures than ever before. Free/charitable clinics are accountable to many stakeholders, including donors, volunteers, public officials, the media, community residents, patients, and themselves. To ensure their viability, free/charitable clinics must demonstrate to their donors that their money yields dividends and to their volunteers that their time is well spent. Focusing on outcomes and demonstrating a high-quality environment and a high-quality “product” (i.e., patient care) are essential to ensuring continued financial support and donated time. Outcome data also are needed to inform clinic decision-making about operational and clinical matters such as which populations to target, which additional services to provide, what staff/volunteers are needed, etc.

4. It is the right thing to do.

“I would advise [free/charitable clinics] to embrace the process, not to fear or dread it. It can and does lead to real positive change/improvement in your clinic and thus ultimately to better health outcomes for your patients—which is the whole point of what free/charitable clinics are about.”

*Judy Long, Executive Director
The Free/charitable Clinics
Hendersonville, NC*

Free/charitable clinics strive to provide high quality care. Moreover, the aim to provide excellent care consistently appears in mission statements. In fulfillment of this aim, recent data are encouraging and suggest that many free/charitable clinics have some experience tracking their quality of care using a systematic process. Specifically, 79 percent of free/charitable clinics that are members of the NAFC and/or AmeriCares and responded to an AmeriCares-sponsored July 2013 online survey on quality improvement reported that they had implemented a quality improvement project (defined as an organized approach to measure where you are and figure out ways to make things better) within the past 3 years. It is worth noting, however, that the prevalence of quality improvement activities in the free/charitable clinic sector is likely overestimated by this sample because it is known that the average NAFC member clinic has more resources (i.e., larger budgets, more paid staff) than the average free/charitable clinic in the total population (Darnell 2010). These differences are

relevant because clinics having more resources are more likely to be involved in quality-related activities. It is also unknown whether the clinics that reported undertaking a QI effort in the past have any *ongoing* efforts. For these reasons, the estimate that 79 percent of clinics are engaged in quality improvement activities should be considered an upper-bound estimate of the prevalence of quality improvement efforts in the overall population of free/charitable and charitable clinics.

Getting Started Measuring Quality of Care

How can free/charitable clinics define quality?

The Institute of Medicine (IOM) (1990) defined quality of care as “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.” This definition makes clear that health services ought to be provided based upon the best evidence. It also focuses attention on health outcomes. A decade later, in their landmark report, *Crossing the Quality Chasm*, the IOM refined their definition by identifying the six aims to keep in mind when pursuing health outcomes. The six aims are: safe, effective, patient-centered, timely, efficient, and equitable. The IOM definitions are widely accepted and provide free/charitable clinics with a comprehensive framework to measure their delivery of health care to their patients.

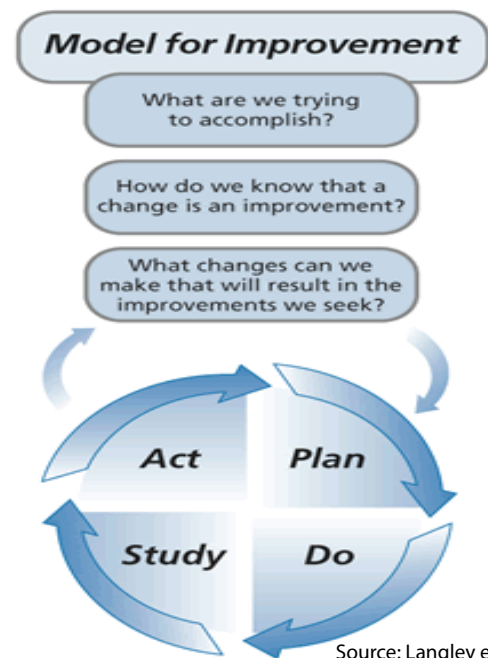
While it is unquestionably important for a clinic to focus on desired health outcomes, it is helpful to treat outcomes as an ongoing process rather than just an end point. One advantage of viewing outcomes as a process is that this approach recognizes that goal attainment does not happen overnight. Rather, this approach “starts where the organization is at.” Another advantage of seeing the outcome as a process is that it links the organization to the outcome and involves the organization in achieving the outcome. Therefore, it is useful to frame a quality-related activity as quality *improvement* rather than simply “outcomes.”

What is the PDSA model?

This guide describes a widely-used model for measuring quality improvement, the Model for Improvement, which is more commonly known by its central feature, Plan Do Study Act (PDSA) cycle, shown in Figure 3. While many other frameworks are available for measuring improvement (e.g., Six Sigma, Continuous Quality Improvement), this Guide concentrates on the PDSA model because it is straightforward and easy to learn how to use with the aid of freely-available materials (e.g., worksheets, videos) from the Institute for Healthcare Improvement’s Knowledge Center (www.ihl.org) and from a book, *The Improvement Guide*. It is also the

most frequently cited model currently in use in the free/charitable and charitable clinic sector. According to the aforementioned July 2013 AmeriCares survey on quality improvement, among clinics that reported having conducted a QI project in the past, 15 percent reported they use the PDSA model. Though this percentage suggests that the model is not widely in use, it is the most prevalent and there are signs that the PDSA model is rising in popularity in the free/charitable clinic sector. The North Carolina Association of Free Clinics, for example, has adopted the PDSA model in its quality improvement grant initiative that is began in in 2013 in 18 clinics with the support of Blue Cross Blue Shield of North Carolina Foundation. The participating clinics in North Carolina are focused on improving the quality of care for patients with diabetes, hypertension or cardiopulmonary disease (COPD).

Figure 3: Model for Improvement



Source: Langley et al., (2009). The Improvement Guide

The PDSA Model is based on the Plan-Do-Study-Act cycle and three overarching questions:

1. *What are we trying to accomplish?*
2. *How do we know that change is an improvement?*
3. *What changes can we make that will result in improvement?*

Any quality improvement project must ask and answer all three questions, though not necessarily in the order listed above. Answering the questions at the beginning of the project helps to provide overall direction, but it is also useful to revisit these three questions during each of the stages of the PDSA cycle. In answering the first question, “What are we trying to accomplish?” it is imperative to set forth the improvement aims and convey

the *tangible* benefits of the improvement initiative for the patient, the customer. For example, an improvement aim to reduce repeated laboratory tests could result in fewer unnecessary trip to the clinic by the patient. “How will we know that a change is an improvement?” is a reminder to seize any opportunities for learning, i.e., by gathering and laying out the data and methods that will allow you to know if improvement is being achieved. Developing the actual changes and testing them fulfills the third question, “What change can we make that will result in improvement?”

The most well-known part of the Model for Improvement is the PDSA cycle. PDSA stands for Plan, Do, Study, and Act. The PDSA cycle is the method for organizing learning, testing, and implementing the quality improvement project.

Plan

The Plan step begins with defining the problem, specifying the aims, and describing the benefits of the proposed change for the patient. During the planning phase, the who, where, when, what, and how (including how often and how long) of the test and the collection of information are specified. In this context, “test” refers to implementing the change (i.e., new intervention). Determining what data need to be collected is an integral part of the Plan step.

Deciding what problem to tackle should be considered thoughtfully. “What can we do without killing ourselves?” is practical advice offered by Laura Michalski, Associate Executive Director, CommunityHealth, who has overseen several quality improvement projects. While this advice puts a constraint on the ambitions of any quality improvement effort, it recognizes the reality of the limited resources in free/charitable clinics. Following this advice basically boils down to tackling problems over which free/charitable clinics have control and can deal with.

Before collecting any data, it is imperative to ask three questions:

1. What do you want to know?
2. Why do you want to know it?
3. What are you going to do with that knowledge?

Demanding answers to these questions during the Plan stage (i.e., *before* collecting data) will help ensure that the right data are being collected and that only data that have a known, stated purpose will be collected. Any data that is collected should further the clinic’s goals and objectives. In determining what kind of data one can use, it is instructive to think of the concept of “actionable data.” Actionable data provide a basis upon which one can take action. Data that monitor processes over time,

help understand variation, bring out the effect of a change in the process, provide a common reference point, or provide a more accurate basis for prediction are all examples of actionable data.

During the planning step it is useful to be extremely specific about the data to be collected. One should clearly define the measure, the goal of the measure, and the data collection plan down to the actual graphs that will be used to display the data. Failure to be specific increases the risk of collecting data that are flawed or unusable. Bear in mind that data are not useful until they become information. Data become information when they are organized, processed, and put into a format suitable for decision-making. In light of this, one should strive for *producing information* rather than simply collecting numbers when preparing for an improvement project.

At this point some readers of this guide might be thinking, “I can’t do this. It’s too involved and complicated.” Readers should not despair. Hope comes in the form of the “good enough” principle. The “good enough” principle states, “You need data that are ‘good enough’ to permit you to take the next step in the improvement process.” Keeping in mind that quality improvement is not research, it is perfectly acceptable to think small in terms of the amount of data one needs.

Do

The next step is when one actually carries out the test. Data are collected during the test and are then used to describe what happened. Testing the idea or change on a small scale is a strategy to minimize the cost and also gain support for the new idea. This step should be relatively easy if the planning step was carried out carefully.

Study

Here one reviews what was done and summarizes what was learned. During this step the actual results of the test are compared to the expected results. What was learned is the new knowledge that was gained. Edward Deming, one of the founders of quality improvement, had a name for this new knowledge: “system of profound knowledge.” Deming’s lofty name to describe what is learned during this step underscores the importance of reflecting upon what was learned.

Act

At the action step, one decides what action is warranted based on the “profound knowledge” gained during the previous step. The options are: implement the change, refine the change and test again, or abandon the change and look for others. Given the time and money required to carry out the previous steps, it is tempting to move

forward with implementation, but one needs to find the courage to start over if the evidence collected during the testing phase fails to establish that the new idea works as expected. More often than not, an idea will be put through multiple cycles before it can be implemented. With its emphasis on improvement and its process-centered rather than endpoint-fixated approach, the PDSA model presumes that Action is gradual so that changes can be made over time, making improvements as needed.

What indicators and performance measures might free/charitable clinics use to guide their quality improvement efforts?

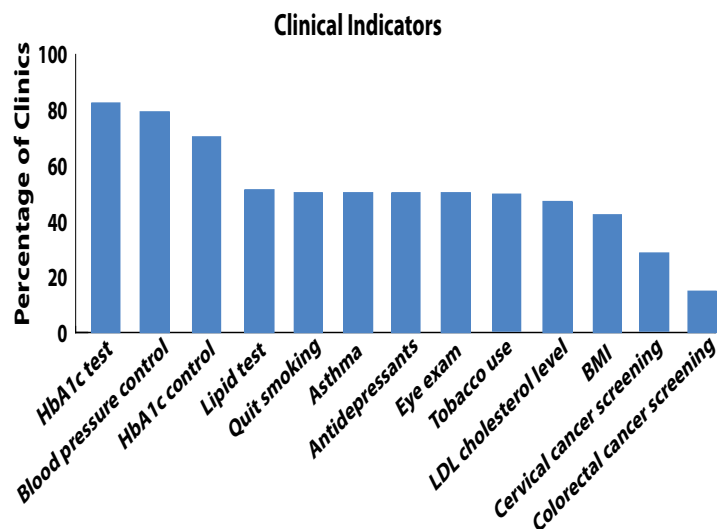
Quality indicators and performance measures are needed to carry out a quality improvement initiative. All quality improvement efforts start with an aim by which success will be measured. Indicators and performance measures are used to define these aims. The terms “indicators” and “performance measures” are often used interchangeably but one distinction between them is that indicators can be thought of as proxies for something else while performance measures are quantifiable metrics that make it possible to assess how well an organization is doing in comparison to an agreed upon criterion. HbA1c is an indicator of (proxy for) blood glucose control while the percentage of a clinic’s diabetic patients whose HbA1c levels is below 7 is a performance measure because the clinic’s performance is being measured on a standard yardstick based upon a criterion established by expert opinion or evidence.

Free/charitable clinics have reported using a variety of clinical indicators (see Figure 4). Among clinics that reported engaging in a quality improvement activity in the last 3 years, the majority indicated a clinical focus on diabetes and hypertension indicators. Given the high prevalence of diabetes and hypertension among free/charitable clinic patients, it is not surprising that clinics target these conditions for improvement. Much less commonly measured are indicators for other chronic diseases or health behavioral risk factors, such as smoking.

Considerable progress has been made over the past two decades in developing and refining performance measures. For example, the National Committee for Quality Assurance (NCQA) has been a leader in creating a set of performance measures, the Healthcare Effectiveness Data and Information System (HEDIS), for health plans. Today these measures are used routinely by all kinds of healthcare providers. Government agencies, led by the Agency for Healthcare Research and Quality (AHRQ), as well as numerous provider organizations, professional associations, private

foundations, and researchers, have contributed to the field of performance measurement. The American Diabetes Association, for instance, regularly updates clinical practice recommendations for diabetes care (<http://professional.diabetes.org/ResourcesForProfessionals.aspx?cid=84160>). Similarly, the American Heart Association publishes practice guidelines for cardiovascular diseases (http://my.americanheart.org/professional/StatementsGuidelines/ByTopic/Performance-Measures_UCM_321625_Article.jsp). In light of the sustained, strong interest in performance measurement from both the public and private sectors, free/charitable clinics have a mature and plentiful marketplace from which to cull performance measures.

Figure 4: Focus of Quality Improvement Activities among Free/Charitable Clinics



There are numerous searchable databases of performance measures. A key resource for selecting reliable measures is the searchable database of measures (<http://www.qualitymeasures.ahrq.gov/browse/nqf-endorsed.aspx#3025,1005>) endorsed by The National Quality Forum, a non-profit organization whose purpose is to review and recommend performance measures (<http://www.qualityforum.org/Home.aspx>). The National Quality Measures Clearinghouse, <http://www.qualitymeasures.ahrq.gov/>, a public resource, has a searchable database of evidence-based measures. Also searchable is a subgroup of quality measures, the HHS Measure Inventory, used by agencies within HHS (<http://www.qualitymeasures.ahrq.gov/hhs/index.aspx>). Performance measures specific to health disparities and compiled as part of the National Healthcare Quality and Disparities Reports are searchable at the national level or within states at <http://nhqrnet.ahrq.gov/inhqrdr/data/submit>.

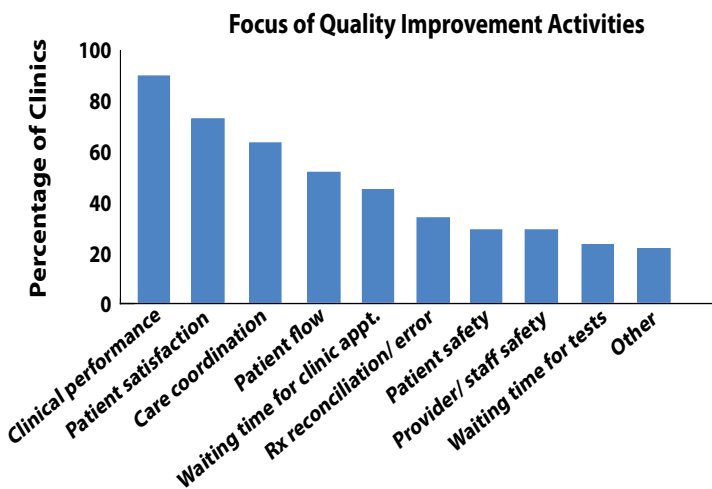
But if the vast amount of available information on performance measures proves daunting, then it is recommended to consult the Ambulatory Care Quality Alliance Recommended Starter Set as a starting point. This AHRQ document compiles 26 performance measures suitable for ambulatory care settings. They include measures for several chronic conditions, such as diabetes, coronary artery disease, asthma, depression, as well as health behaviors, including tobacco use and cancer screening. The Starter Set is available from <http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/ambulatory-care/starter-set.html>.

Given the similarities between free/charitable clinics and health centers, another useful point of departure is the HRSA Quality Toolkit, <http://www.hrsa.gov/quality/toolbox/>. It provides clinical quality measures for cancer screening, diabetes, HIV, hypertension, and prenatal care. The Toolkit also includes introductory modules on quality improvement. Besides the Toolkit, HRSA also has archived webinars and PowerPoint presentations to help health centers learn about quality improvement <http://bphc.hrsa.gov/policiesregulations/quality/>. These tools are pertinent to free/charitable clinics as well.

What reliable questionnaires and tools are available to measure the quality of care?

To date, free/charitable clinics have shown the greatest interest in measuring clinical performance rather than other dimensions of quality of care, as shown in Figure 5.

Figure 5: Focus of Quality Improvement Activities in Free/Charitable Clinics



It is important to bear in mind that performance measures are not limited to measuring patient “outcomes” nor are they limited to clinical outcomes. As the IOM Reports remind us, quality of care cuts across several dimensions. Free/charitable may therefore choose to examine their quality of care in any one or more of the following domains: processes of care, patient outcomes, patient experiences, clinic structure, and access to care. Examples of available questionnaires and tools are provided for each quality domain in Table 1.

Table 1. Selected Measures by Quality Domain		
Domain	Example/ Standard	Measure/ Questionnaire/ Tool
Processes of care	Annual foot exam % of diabetic patients receiving 2 HbA1c tests in past year Wait time to see providers COPD patients with documented spirometry results	Asking patients whether they removed their shoes during an office visit Patient’s medical record or Diabetes Clinical Form Consumer Assessment of Healthcare Providers and Systems (CAHPS) Physician Consortium for Performance Improvement
Patient outcomes	% of hypertensive patients whose blood pressure is <140/90	Patient’s medical record or heart360.org : Measure Up Pressure Down Toolkit
Patient experiences	Patient satisfaction Self-management Behavioral health care patients perceived rating of improvement	Consumer Assessment of Healthcare Providers and Systems (CAHPS) Diabetes Self-Management Assessment Report Tool (D-SMART) Consumer Assessment of Healthcare Providers and Systems (CAHPS)
Clinic structure	Communication climate	Communication Climate Assessment Toolkit
Access	Wait time for an appointment for urgent/routine care	Consumer Assessment of Healthcare Providers and Systems (CAHPS)

Where can free/charitable clinics find benchmarks for measuring their performance?

Free/charitable clinics can compare their progress in achieving their desired outcomes to national goals and to the actual performance realized by health centers, health plans, and by the community as a whole. Refer to Table 2 for a listing of benchmarks.

Benchmark	Brief Description	Link
Healthy People 2020	The U.S. Department of Health and Human Services (HHS) sets national goals every 10 years for health promotion and disease prevention. It includes more than 1,200 measures.	Click here
Health Centers	Health centers report outcome data for a variety of chronic disease and preventive health services indicators. They include diabetes control (diabetic patients with HbA1c <9), blood pressure control (hypertensive patients with blood pressure < 140/90), tobacco use screening, tobacco cessation counseling for tobacco users, and adult weight screening and follow up.	Click here
HEDIS	More than 90% of health plans report their performance on 80 measures in the Healthcare Effectiveness Data and Information Set (HEDIS), a tool created by the National Committee for Quality Assurance.	Click here
BRFSS	The Centers for Disease Control and Prevention’s Behavioral Risk Factor and Surveillance System (BRFSS) collects information on a host of health behaviors, such as colorectal cancer screening and tobacco use, through annual telephone surveys conducted by state health departments. Data are reported at the national, state, county and city levels.	Click here

What resources are available for further reading?

This “How To” Guide is designed to be a starting point on quality improvement. With this in mind, free/charitable clinics ought to seek out additional resources, highlighted throughout this document and in Table 3 below, to further aid their quality improvement efforts.

Resource	Link
American Society for Quality	http://asq.org/learn-about-quality/tools-templates.html
AmeriCares Safety Net Center	http://www.safetynetcenter.org
CDEMS User Network	http://www.cdems.com/
Institute for Healthcare Improvement	www.ihl.org
Migrant Clinician Network	www.migrantclinician.org
The Improvement Guide by Gerald J. Langley, et al.	Not applicable
The Quality Toolbox by Nancy R. Tague	Not applicable
Quality Improvement How-to Guide Appendix: Graphical Tools Available for Quality Improvement Activities	http://www.safetynetcenter.org/quality-improvement
Quality Improvement How-to Guide Case Studies	http://www.safetynetcenter.org/quality-improvement