Report of
Portland Community
Free Clinic Evaluation Findings

August 7, 2002

Prepared by:

Report of
Portland Community
Free Clinic Evaluation Findings

TABLE OF CONTENTS

Report of Portland Community Free Clinic Evaluation Findings

Introduction

In January 2002, Public Health Resource Group (PHRG), under contract for the Spurwink Center for Research at the University of New England, conducted an evaluation of the Portland Community Free Clinic (PCFC) located on India Street in Portland, Maine. The principle objective of the evaluation was to develop a set of primary care service delivery indicators that could be used over time to monitor the success of the clinic in meeting accepted standards for delivering primary health care services to the population it serves. Secondary objectives were to evaluate the current rates of primary care service, and to develop data collection protocols that will serve future monitoring and evaluation needs.

Background

The PCFC opened its doors in 1993 to serve the previously underserved population of Greater Portland's uninsured adults. The clinic's mission is to provide comprehensive primary health care to low-income, uninsured adults in Greater Portland. A full time principle nurse, a part-time public health nurse, a part-time office assistant, and a medical director staff the clinic. The clinic relies on the volunteer time of the 55 medical professionals (25 physicians and 30 nurses) who offer their services as primary care providers after normal business hours to see clients at the clinic. Eleven physician specialists provide services at the clinic site, and another 100 medical professionals who volunteer sub-specialty care services from their offices to PCFC patients. Currently available medical specialties include: allergy/immunology, cardiology, dermatology, podiatry, dental and oral surgery, endocrinology, ear/nose/throat, gastroenterology, gynecology, lipidimiology, psychology, neurology, ophthalmology, optometry, orthopedics, psychiatry, rhumatology, general surgery, plastic surgery, and urology. Mercy Hospital supports the clinic by providing ancillary services for patients at hospital clinics and labs, as well as inpatient services as needed. The Public Health Division, Portland Department of Health and Human Services provides the administrative structure and supervision that support the clinic. To be eligible to use the clinic, patients must be low income (under 200% of the poverty level), uninsured, and have no source of primary health care.

Evaluation Measures

The first task in the evaluation effort was to develop a list of indictors that the clinic could use in an ongoing effort to measure its success in providing primary care. To this end, PHRG collaborated with a small working group to select indicators that they felt would provide the most complete picture of the quality of primary care at the clinic given the current data available and the resources available to the project. Members of the working group included:

- Nancy Knapp, MD, Clinic Medical Director;

- Margaret Schepp, MD, Volunteer Clinic Physician;

- Marie Purser, RN, Principle Nurse;

- Neva Cram, Program Manager of Indigent Health, Public Health Division, Portland Department of Health and Human Services;

- Louise Haddock, RN, Nurse Volunteer;

- Ronald Deprez, Ph.D., MPH, President, PHRG; and

- Janie Diels, Research Associate, PHRG.

Existing data and the scope and budget of the project constrained indicator selection. We decided not to include indicators measuring the quality of mental health services because of the limited capacity of the clinic to provide mental health services and the limited scope of the project. We focused on primary care services and indicators surrounding the most prevalent health problems facing the patients of the clinic.

We selected benchmarks for assessing the selected indicators using the Centers for Disease Control's (CDC's) *Healthy People 2010* Objectives. *Healthy People 2010* is a Centers for Disease Control Initiative to improve the health of the nation. It is a statement of national health objectives to address the most significant preventable health conditions and establish goals to reduce these threats. The Healthy People initiative provides clear objectives for primary care for the most significant health problems in the nation. We used *Healthy People 2010* goals whenever possible as benchmarks for the clinic, however, there were some indicators that the working group felt were important to measure even though national benchmarks were not

available. In particular, indicators regarding quality of care with a special focus on screening for tobacco use and diabetes management. The working group set clinic specific goals for these indicators. See Table 1 for a listing of the evaluation indicators and corresponding *Healthy People 2010* benchmarks.

Table 1: Evaluation Indicators:

Service and Interval	Target Population	*Healthy People 2010* Objective
Blood cholesterol screening every 5 years	Men 35-64 Women 45-64	80%

Blood pressure screening:
    Every 2 years for normotensive patients
    Annually for hypertensive patients
	Adults 18+	95%

Taking action to control blood pressure	Hypertensive adults	95%
Screening for cigarette smoking	Adults 18+	[Clinic goal: 100%]
Cigarette smoking	Adults 18+	12%
Fecal occult blood test (FOBT) annually	Adults 50+	50%
Pap smear every 3 years	Women 18+ (with a cervix)	90%
A1c in the past year	All diabetic patients	[Clinic goal 100%]
Lipids profile (ever)	All diabetic patients	[Clinic goal 100%]

Data Quality

The second task in the evaluation was to evaluate the electronic database and determine what supplementary information would be needed to complete the evaluation. We received the patient intake and encounter databases from the City of Portland MIS Department and evaluated the databases in terms of data quality and completeness. Great improvements can be seen in the quality of the patient database from September 2001 to date. These improvements are a direct result of changes in the data entry windows. Currently, no patient encounter information can be entered without intake history, and there are front-end edits to prevent inconsistent data entry.

Problems that remain with the current system include some duplication due to inconsistent spelling or character usage; for example, a patient's information may be replicated in the

database if their name contains a character such as an apostrophe as in O'Toole that is easily omitted. Consistent data entry rules set up by the primary data entry person will help to eliminate duplication for this reason.

Another common problem is inconsistent use of ICD-9 codes to code diagnoses and services. Proper ICD-9 coding requires that coders use the most detailed code appropriate, up to 5 digits. Currently, there is a listing of commonly used codes that the clinic uses to code diagnoses and service but codes are entered into the database inconsistently. Sometime a very general 3-digit code is used, other times the full 5-digit code is entered. The use of decimal points is also inconsistent. The conventional system of ICD-9 coding used by healthcare providers for billing purposes may place more of a burden on clinic staff than the level of detail in diagnoses is worth for evaluation purposes. Editing the current listing of codes frequently used to include more diagnosis codes, limiting the number of digits that can be entered into that category to four digits, and rules for the use of decimal points would facilitate consistent data entry and provide the level of detail needed for evaluation purposes.

Since September 2001, the primary problem with the patient database has been the lack of information collected rather than the quality of the data. The vast majority of information about each patient resides in the patient's chart rather than the database. Currently the database is not used to evaluate or measure quality of clinic services. In order to make the database useful for ongoing evaluation efforts more information will need to be stored there including: all tests ordered, (cholesterol screening, lipids profiles and A1c tests), results of all tests returned (cholesterol screening, lipids profiles and A1c tests), blood pressure, patient weight, and smoking follow-up and counseling for smokers. In order to measure the indicators selected, PHRG determined that additional information would need to be collected from patient charts.

Methodology

All findings in this report are based on individuals who were seen at the clinic between January 4, 2001 and March 24, 2002. Given the limited information in the database, PHRG conducted a chart review to collect the information needed to measure each indicator of quality of care. We

did use the patient intake and encounter databases provided by the Public Health Division, Portland Department of Health and Human Services, to determine the clinic's patients who should have received relevant primary care services based on age, gender and health status according to clinical guidelines and *Healthy People 2010* Objectives. Two PHRG staff members then conducted a comprehensive patient chart review in April and May of 2002. The data collected during the chart review was entered into the database with the cleaned data supplied by the Public Health Division, Portland Department of Health and Human Services.

Since the mission of the clinic is to provide primary care services, we eliminated patients who visited the clinic on a single occasion for services other than a physical from the analysis for many of the indicators. For example, an individual who visited the clinic only once to seek care for a rash was not included in the analysis to determine cholesterol-screening rates. However, we included all patients seen at the clinic between January 4, 2001 and March 24, 2002 in the analysis to determine blood pressure screening rates and screening for tobacco use because everyone using the clinic should have completed the intake form and it is the clinics goal to take blood pressure at every medical visit.

Many of the evaluation indicators include a service interval. Cholesterol screening, for example, should be done every 5 years for men over 35 and women over 45. To determine the appropriate 'cut-off' date, the indicator service interval (5 years for cholesterol screening) was subtracted from the date the patient most recently visited the clinic. Therefore, the service interval is the time period from each patient's most recent visit to the clinic rather than 5 years from the date of the analysis.

Findings

Demographics:

During the time period studied, 207 women and 205 men visited the clinic for any reason and 115 people visited the clinic for a routine physical. The most common diagnoses made included: hypertension, depression, hepatitis C, anxiety, and joint pain. The age of patients ranged from 19 to 66, and the average age was 40 years.

Smoking:

One of the biggest risk factors for patients using the clinic is smoking. Screening for tobacco, alcohol and drug use is part of the intake procedure. Patients are asked to complete an intake form asking several questions about their current use of tobacco, alcohol and drugs as well as their history with these substances. After the intake form is completed, the data is entered into the patient database. Of the 447 patients who visited the clinic, 376 (84.1%) had been screened for tobacco use and the data entered into the database (see Table 2). Possible reasons for the missing tobacco use data for the other 15.9% of patients could be that they refused to answer the questions on the intake form, or that the data was not entered into the database. Screening for tobacco use is an important step to measuring tobacco use and cessation. In addition to improving the screening information that is in the database, a schedule and system of up-dating information on use in order to measure cessation will need to be implemented.

Table 2: Screening for Cigarette Smoking

Screening For Cigarette Smoking (At Intake)	N	Total Screened	% Screened	Clinic Goal
All Adults	447	376	84.1%	100%
Men	225	190	84.5%	100%
Women	222	186	83.8%	100%

Past reviews of clinic data indicated that a very large proportion of clinic patients smoke. The current evaluation indicates that this is still true (see Table 3). According the information recorded at patient intake, 50.5% of the male patients and 43.5% of the female patients are current smokers. The total proportion of smokers (47.1%) is more than double the State proportion of current smokers (23.3%). Unfortunately, we were unable to quantify tobacco cessation counseling at the clinic due to the lack of consistent recorded information, and information about a patients tobacco use after the initial intake is very limited for the majority of patients. Once there is a reliable system of recording tobacco cessation counseling and a system of up-dating information about patients' tobacco use, PHRG recommends adding Tobacco Cessation counseling as an indicator of the quality of primary care. (*Healthy People 2010*

objective for smoking cessation is 85% of primary care providers providing smoking cessation counseling to patients who smoke.)

Table 3: Current Cigarette Smoking

Current Cigarette Smoking	N	Current Smokers	% Smokers	*Healthy People 2010* Objective
All Adults	376	177	47.1%	12%
Men	190	96	50.5%	12%
Women	186	81	43.5%	12%

Hypertension:

The most common medical diagnosis made at the clinic is hypertension. Given the high prevalence of hypertension in the population it serves, clinic staff strives to check the blood pressure of every patient at each medical visit. Clinical guidelines state that hypertensive patients should be checked annually, and normotensive patients over the age 18 should be checked every two years. As shown in Table 4, nearly all patients had their blood pressure checked in the past two years, and 86% had their blood pressure taken at their last visit to the clinic. The clinic exceeded the *Healthy People 2010* goal, but fell short of its own goal to check blood pressure at every visit. While there were no differences between men and women in the proportion that had their blood pressure taken in the past two years, a slightly greater proportion of men had their blood pressure measured on their last visit than women.

Table 4: Blood Pressure Screening

Blood Pressure Screening (Past 2 Years)	N	Total Screened	% Screened	*Healthy People 2010* Objective
All Adults	355	345	97.2%	95%
Men	171	166	97.1%	95%
Women	184	179	97.3%	95%
BP taken last visit				Clinic Goal
All Adults	355	305	85.9%	100%
Men	171	151	88.3%	100%
Women	184	154	83.7%	100%

Given the prevalence of high blood pressure among the clinic population, blood pressure control is of prime concern.   What happens after a diagnosis of high blood pressure is made varies depending on the level of blood pressure elevation and the patient. Nearly 90% of the patients with elevated blood pressure (above 85 mm hg) received some documented follow-up; this is just slightly below the *Healthy People 2010* Goal of 95%. The clinic goal for this indicator is 100% of the patients with high blood pressure receiving education about actions to control blood pressure or medication to lower blood pressure depending on the severity of the case. It should be noted that the findings presented in Table 5 below reflect only what has been recorded in a patient's chart. It is possible that clinic staff may have talked about blood pressure control and counseled on behavior changes to lower blood pressure but never noted the conversation in the chart.   It is also important to note an important difference in the indicator used to measure follow-up in the current evaluation and the *Healthy People 2010* Objective. The clinic measure is a measure of clinic staff behavior. It is meant to measure what the clinic is doing to assist patients in controlling their blood pressure. The *Healthy People 2010* Objective, on the other hand, is really a measure of patient behavior. It is meant to measure what efforts the patient is taking to control their blood pressure.   While these two indicators are not directly comparable, we felt that some benchmark of success would be useful for this indicator even if not perfectly congruent. There is likely a correlation between staff advice on what actions to take to control blood pressure and patient behaviors to control blood pressure.

Table 5: Blood Pressure Control

Blood Pressure Control	N	Follow-up*	% Follow-up	*Healthy People 2010* Objective**
All Hypertensive Adults	52	46	88.5%	95%
Hypertensive Men	23	20	87.0%	95%
Hypertensive Women	29	26	89.7%	95%

* Follow-up defined as education or medication to control BP along with monitoring BP at every visit (provider focus)
** *Healthy People 2010* Objective is 95% of those with HBP are taking action to monitor/control BP (patient focus)

Cholesterol:

An important indication of quality primary care is the screening of appropriate patients for elevated levels of cholesterol. This is especially true in populations where risk for heart disease is elevated. Current clinical guidelines suggest that all men over the age of 35 and all women over the age of 45 should have their cholesterol checked every 5 years—more often if cholesterol levels are high. The clinic fell below the *Healthy People 2010* Goal of 80% with 63% of the women over 45 and only about half of the men over 35 having had their cholesterol checked in the past 5 years (see Table 6). In an attempt to better understand why patients are not having their cholesterol checked, we tried to gauge patient refusal or lack of patient follow-through. The clinic is not equipped to draw blood so patients must go to another site to have their cholesterol checked. Many patients do not go to have their blood drawn after receiving a lab slip from clinic staff, but this may not always be recorded in the chart. The proportion of patients who refuse or do not follow-up reflects only those cases that are documented.

Table 6: Cholesterol Screening

Blood Cholesterol Screening (Past 5 Years)	N	Total Screened	% Screened	% Patient Refusal	*Healthy People 2010* Objective
All Appropriate Adults*	188	106	56.4%	2.1%	80%
Men (35-64)	104	53	51%	1.9%	80%
Women (45-64)	84	53	63.1%	2.4%	80%

*Appropriate adults include women over 45 and men over 35 years of age

Screening for Cervical Cancer:

Past efforts to evaluate cancer screening indicate that the clinic provides excellent screening for cervical and breast cancers. The present evaluation indicates that this is still the case. The clinic exceeded the *Healthy People 2010* Goal of 90% of women over 18 years of age with a cervix having a pap smear in the past 3 years (see Table 7). Again, it should be noted that the proportion of patients refusing screening reflects only those cases where refusal is documented.

Table 7: Screening for Cervical Cancer

Pap Smear (Past 3 Years)	N	Women Screened	% Screened	% Patient Refusal	*Healthy People 2010* Objective
Women 18+ (with cervix)	178	161	90.4%	2.8%	90

Screening for Colon Cancer:

The fecal occult blood test (FOBT, also called a stool guaiac test) is a chemical test for blood that is visually undetectable in a stool sample. The American Cancer Society recommends that people over 50 years of age have fecal occult blood test done annually. According to the Centers For Disease Control, screening for colorectal cancer lags behind screening for other cancers. Findings from the 1999 Behavioral Risk Factor Surveillance System indicate that only 21% of respondents over 50 years of age reported having had an FOBT in the preceding year. Findings from the clinic are similar to findings for the nation with nearly 40% of patients over 50 having

had the test in the preceding year (see Table 8). Nearly 8% of patients refused taking the test indicating that in addition to increasing the proportion of adults over 50 years old taking the test annually to 50%, patient education is needed to make the importance of the test understood to patients.

Table 8: Fecal Occult Blood Test

Fecal Occult Blood Test (Past 2 Years)	N	Adults Screened	% Screened	% Patient Refusal	*Healthy People 2010* Objective
Adults Age 50+	102	40	39.2%	7.8%	50%
Men Age 50+	40	16	40%	10.0%	50%
Women Age 50+	62	24	38.70%	6.5%	50%

Diabetes Management:

While only a small proportion of the clinic's patients have diabetes, these patients are at a higher risk for health related functional impairment, and use the clinic at a higher rate than those without diabetes. How patients manage their diabetes is a very important measure of the quality of primary care. As seen in Table 9 below, the indicators selected for diabetes care included an A1c (Hemoglobin A1c, or HB A1c) test annually, and a complete lipids profile at least once. While there were no *Healthy People 2010* Objectives corresponding to these indicators, there are well-established clinical guidelines regarding the care of diabetics.

An A1c test is a measure of the amount of glucose in the blood over the previous 90 days. It is a better measure of diabetes control than simple glucose tests that measure the amount of glucose in the blood at the time of the test only. An A1c test is considered by the American Diabetes Association to be the most accurate long-term measure of treatment success. An A1c reading of 7% or less is desirable, 5% is average for the non-diabetic population. This test requires that blood be drawn, so as with cholesterol screening, patients must go to another site to have the their blood drawn.

The American Diabetes Association recommends that A1c tests be given twice a year to non-insulin dependent patients with diabetes and quarterly to insulin dependent patients with diabetes. The clinic set a goal of at least one A1c test each year for all diabetic patients. Of the 18 patients with diabetes visiting the clinic, 15 (83%) had an A1c in year since their most recent medical visit (all 18 had an A1c in the past 2 years).

A more relevant measure of diabetes management is whether A1c results are increasing or decreasing over time. The mean result of A1c tests for the 14 patients who had two or more A1c tests in the past two years since their most recent visit decreased from 8.34 to 7.61 during the study period indicating that, overall, clinic patients are managing their diabetes well.

Table 9: Diabetes Care

Diabetes Care	N	Diabetic Patients Monitored	% Monitored	Clinic Goal
A1C in past year	18	15	83.3	100%
Lipids Profile Ever	18	17	94.4	100%

Future Tracking of Indicators

An important component of the present evaluation effort was the creation of indicators that could be tracked by clinic staff to measure improvement in care over time. Several indicators were selected and measured for the current evaluation; however, several important indicators of health were not measured because the data was not recorded either in the patient chart or in the patient database. The working group selected two additional indicators to monitor in the future, smoking cessation counseling and weight measurement. The final list of indicators to be tracked in the future with the relevant benchmarks is listed in Table 10 below. New indicators are presented in *italics*.

In order to track these indicators over time, additional data will need to be recorded in the patient database. Currently, clinic staff enter information from the patient intake form into the patient

database along with the date, reason for the visit, and any diagnoses made at each patient visit. In order to track the selected indicators successfully, additional information from each patient visit the following information will need to entered into the patient database:

- All procedures performed (pap smears, and FOBT tests);

- All tests ordered (cholesterol screening, lipids profiles and A1c tests);

- Results of all tests returned (cholesterol screening, lipids profiles and A1c tests);

- Blood pressure;

- Patient weight; and

- Smoking follow-up and counseling for smokers.

Table 10: Ongoing Evaluation Indicators:

Service and Interval	Target Population	*Healthy People 2010* Objective
Blood cholesterol screening every 5 years	Men 35-64 Women 45-64	80%

Blood pressure screening:
    Every 2 years for normotensive patients
    Annually for hypertensive patients
	Adults 18+	95%

Taking action to control blood pressure	Hypertensive adults	95%
Screening for cigarette smoking *[at intake for all patients and at every visit for smokers]*	Adults 18+	[Clinic goal: 100%]
Cigarette smoking	Adults 18+	12%
Smoking cessation counseling	*All current smokers*	*85% (of providers)*
Fecal occult blood test (FOBT) annually	Adults 50+	50%
Pap smear every 3 years	Women 18+ (with a cervix)	90%
A1c in the past year	All diabetic patients	[Clinic goal 100%]
Lipids profile (ever)	All diabetic patients	[Clinic goal 100%]
Weight measurement at every visit	*All patients*	*[Clinic goal 100%]*

This information will also need to be recorded in the patient charts, but with the exception of follow-up on current smokers and smoking cessation counseling, the charts are already set up for recording the needed information. The working group recommended a stamp to facilitate recording smoking information in the charts of patients who smoke the stamp could look like the

sample below.

Still Smoking	Yes)	No)
	#/Day_____	Since_____
Counseled to Quit	Yes)	No)

Summary:

Overall, the findings of the current evaluation indicate that the clinic is providing excellent primary care services to its patients. The clinic exceeded the *Healthy People 2010* Objectives for blood pressure screening and cervical cancer screening, but needs to increase cholesterol screening for men over 35 and women over 45, and FOBT tests for all patients over 50. Clinic staff must also strive to meet their own goals of screening all patients for smoking and providing smoking cessation counseling to all current smokers, weighing patients at every visit, measuring blood pressure at every visit, and monitoring diabetes through annual A1c tests and complete lipids profiles.

In order to continue to track the indictors selected however, the clinic will need to expand the current database to include the information necessary to track the selected indicators in order to track its performance over time and compare future performance to the current evaluation findings. While adding the required elements to the current database will add to the workload of clinic staff, the increased awareness of the indicators will, no doubt, facilitate the improvement of the clinic's performance over time, and the information will be useful in writing grants to increase clinic resources in the future.