COMMUNITY ORIENTED PRIMARY CARE:

An Implementation Guide

Fitzhugh Mullan, M.D.,

Cheryl Focht, M.D., M.P.H.
and
A. Seiji Hayashi, M.D., M.P.H.
of
The Department of Prevention and Community Health
The George Washington University School of Public Health
and Health Services
and
Jaime Gofin, M.D. MPH, Rosa Gofin, M.D., MPH,
Yehuda Neumark, PhD., and Leon Epstein, MB, ChB, MPH
of
The Department of Social Medicine, Hadassah Medical Organization
Braun School of Public Health and Community Medicine,
Hebrew University of Jerusalem

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INTRODUCTION

Welcome to learning about community oriented primary care.

This COPC implementation guide is designed to provide learners with a brief, efficient introduction to the process of COPC. The first two chapters provide background information on the conceptual and methodological framework of COPC while the final six chapters describe the steps of the COPC process.

This document was first developed by the faculty at the Hebrew University for a COPC workshop that was taught jointly by the Hebrew University and the George Washington University in Jerusalem in June 1998. That workshop was part of a COPC certificate program that was again co-taught in 1999 in Washington, D.C. and in 2000 in Pretoria, South Africa. The current guide has been updated based on the experience of previous years for the purpose of presenting an introduction to COPC for students enrolled in the MPH program at the George Washington University School of Public Health and Health Services. It reflects the growing experience in the practice of COPC in the United States in recent years and will be a practical tool for you in learning and practicing COPC. At the end of each chapter you will find practical examples drawn from previous COPC projects that will illustrate the step in the COPC cycle covered by the chapter..

This guide, along with specific COPC related readings that will be assigned, will provide you with a basic library of reference materials that will help you learn and engage in the application of COPC to clinical practice.

We look forward to participating with you in this exciting learning venture. Good luck in your work.

Fitzhugh Mullan, MD
Cheryl Focht, MD, MPH
Seiji Hayashi, MD, MPH

Chapter 1
Conceptual Framework: Why? What? Who? How?

COPC — The Idea

For more than half a century, the idea of COPC has held an important position in health care systems around the world. Although it is not the predominant mode of practice in any one country, the concepts of COPC have influenced programs as varied and important as the community health center movement in the United States, the general practice movement in the United Kingdom, and recent reforms in the public health system of the Republic of South Africa. COPC has been a steady, important, and positive influence on global health services delivery.

The idea of COPC was first articulated by two young South African physicians, Sidney and Emily Kark, who went to live and work in the village of Pholela in a poor, rural area of their country, in 1940. Their task was to set up a system of health service delivery for a population that previously had received little benefit from Western medicine. They were, perforce, the public health authority and the emergency room. Their responsibilities, as they embraced them, entailed not only treating illnesses presented to them, but taking a census of the local population and performing baseline epidemologic surveys to form a true picture of illness in the community (Sidney and Emily Kark, *Promoting Community Health: From Polela to Jerusalem*, Witwatersrand University Press, 1999).

They carried out their surveillance work as well as their day-to-day clinical functions in collaboration with the leadership of the village. They trained indigenous health workers who carried out surveys, staffed the clinic, and gradually took on increasing responsibilities training others in health work. After a number of years at Polela, the Karks moved to the University of Natal at Durban where they established the Institute of Family and Community Health for the purpose of teaching and disseminating the principles they had pioneered in Polela. This enterprise took place in the early 1950s at the same time that South African politics moved towards Apartheid, compromising the Karks' program and eventually leading

to their leaving South Africa. In 1960 they settled in Jerusalem and went to work at the Hebrew University teaching and doing research on health service delivery that blended public health and primary care in community-based settings — an approach they came to call Community Oriented Primary Care. For the next twenty years, under the Karks' leadership, and to the present time under the leadership of their students and successors, the School of Public Health at the Hebrew University has offered training in COPC to physicians, nurses, health service administrators, and community organizers from all over the world.

The results have been a dissemination of COPC to many systems and clinical settings in all parts of the world. H. Jack Geiger, M.D., for instance, who was an early student of the Karks, developed the first neighborhood health centers in the United States under the Office of Economic Opportunity in the mid-1960s. From that start has grown today's $1.5 billion federal community health center program. The cities of Dallas, Texas, and Barcelona, Spain, have major COPC initiatives underway. Current reform efforts in the United Kingdom that are designed to establish Primary Care Groups draw substantially from COPC thinking. The post-Apartheid government in South Africa has recognized COPC as an important South African development and is building the concept into its health policy strategies.

The strength of the COPC idea is that it appeals to both practicality and to principle. Practicality argues for coordination between public health strategies and primary care delivery despite the fact that many health care systems have grown up without collaboration between these two vital forces. The current concept of "population health" argues that practitioners need to have broad views of health trends and disease patterns, even when practicing with individual patients. Managing care in any system with limited resources (which means <u>all</u> systems) requires that practitioners have some sense of disease patterns, costs, and benefits. COPC invites this kind of thinking.

COPC appeals on a principled level because it envisions community participation in health care decisions. From the Karks' work in Pholela to practice-based focus groups in the year 2000, COPC creates opportunities for consumers to participate in decision making about health care delivery. This kind of systematic democracy is not a feature of traditionally hier-

archical systems of health care. COPC provides a measured, practical way to factor citizen input into local decision making on health care policy.

This aspect of COPC is particularly timely in an epoch where quality concerns are emerging as a principle issue in health care. Movements such as total quality management (TQM) and continuous quality improvement (CQI) have moved from the industrial sector to the health care sector. TQM and CQI have a great deal in common with COPC, resting as they do on the basic principles of developing data, analyzing data, getting feedback on the data, and making changes based on that feedback. COPC is an instrument of quality management in health care, a term that the Karks probably never used, but whose importance they would surely recognize.

COPC, then, is a vital idea in today's world of health care because it provides a practical format (blending public health and primary care) in which to bring important principles into play (consumerism, quality, democracy).

WHY?

The planning and delivery of health services to populations have gone through many changes in recent decades. Those responsible for the health of the population are increasingly faced with the reality that it is not possible, on the one hand, to provide everything to everyone and, on the other, to satisfy all needs of different populations or sub-populations. These factors have been exacerbated by the growing costs of medical care, restricted resources and changing health needs and priorities. Furthermore, the public — not content to be passive consumers of medical care — wants a role in determining the content of health services.

It would be a mistake, however, to think that this is a new situation which has only emerged at the end of the 20th century. This is a process that began decades ago but only as we enter the new millennium have health planners realized the need for, and the potential of, a different concept of answering the needs of populations for health and health services.

COPC provides a concept and framework for answering these problems. While it had its beginnings in rural South Africa of the 1940's, its basic principles have been central to classical public health for many decades. The principles enunciated in the Alma Ata Charter in 1978 contain many of the ideas of COPC that have been developed and tested in recent years in Israel, and adapted and applied in Spain, the United Kingdom, the USA, and many developing countries.

WHAT?

The essence of COPC is the planning and delivery of health care to a community in response to the defined needs of that community. To do this successfully requires the planned integration of the classical public health roles of health promotion and disease prevention with the delivery of primary health care (PHC), which has focused on the clinical treatment of disease and its sequelae. COPC recognizes that, in line with the World Health Organization definition of health as being far more than the absence of disease, a clinical practice should be responsive to the broad health needs of the community and should be flexible enough to respond to changes in those needs.

COPC can be defined as a continuous process by which primary care is provided to a defined community on the basis of its assessed health needs through the planned integration of public health with clinical practice.

A number of points need to be made pertinent to the above definition:

> **Focusing on One Problem at a Time.** While the COPC process will highlight a variety of health problems that might be candidates for interventions, the reality of resources in most clinical settings argues for one intervention at a time. Therefore, the prioritization and selection processes are designed to pick a consensus problem that will provide focus for the COPC activity. This strategy has the critical benefit of embarking on a COPC project that is within the realm of the feasible for any given practice. It does mean, of course, that a number of other problems will not be targeted for immediate intervention. The importance of COPC is, in fact, not that it is

a cure-all for all community problems (by itself it does not bring new resources to the practice), but the COPC intervention marshals and directs the collective energies of the practice and its community to work together on a commonly identified problem. The process and the outcome of this activity stand to benefit both the practice and the community.

Creating Continuing Cycles. Once the COPC process is in place, data are in hand, and a COPC team has been established, subsequent interventions will become easier. A fully engaged COPC practice will have sequential cycles of interventions, each producing outcomes that often improve a health condition and frequently modify the behavior of the practice in dealing with that condition. In this way, COPC becomes the framework or the philosophy of the practice, providing a constant focus of the community and an ongoing awareness of projects for clinical improvement.

Forming the COPC Team. The decision to undertake a COPC project can come from many directions, including the interest of an activated individual or a directive from a governing agency. In all situations, there will undoubtedly be individuals in a practice who are heavily invested in the COPC idea and others who know far less about it. Once the decision has been made to proceed with the project, however, it is important to establish a COPC team to provide leadership to the activity. This team should be multi-disciplinary and take into account the various kinds of individuals working in the clinical setting. The team should be small enough to work effectively, but large enough to represent the diversity of the staff as well as interested representatives of the community. Communications with all of the personnel of the practice from time to time will be important to provide explanation and encourage participation, but selecting, orienting, and developing the COPC team is an important early step in the practice of COPC.

Involving the Community. Community involvement is an essential feature of COPC. The baseline involvement of communities in clinical practices will vary considerably depending upon the setting and organizational structure. If community

boards or advisory groups are available, they should be involved from the outset of the process. The COPC cycle has many points at which community members, individually or in groups, can participate in the project. COPC envisions the maximum possible community involvement for the purposes of providing good input to decision making and enhancing the effectiveness of interventions.

WHO?

The classical concept of the community, the “C” of COPC, is associated with a single defined community in a clearly defined geographical area that receives its PHC from a local service framework. The relationship between populations and their health service providers, especially in the developed world, has undergone major changes. The variety of primary care practices available in many urban areas has resulted in the adoption of different understandings of the "community" concept. Today it is accepted that persons/families registered with a care provider may constitute a "community" for the purposes of a COPC service. This is certainly the case in the United Kingdom (general practitioner practices), USA (HMOs), and Israel (health insurance frameworks). The COPC concepts also have been applied to more restrictively defined service frameworks, e.g., maternal and child health services, school health services, and hospital catchment areas.

An important and interesting development has been the realization that the principles of COPC, which were developed and largely applied to the PHC framework, are also applicable to the planning and administration of services at district, regional, and national levels. Needs-based planning has an important role at all these levels. The integration of defined needs with available resources is essential to efficient modern health care planning. This implies that the COPC concepts have a far wider applicability than at the PHC level alone.

HOW?

To implement the COPC program in a PHC setting, one needs to:

- Decide that a practice wishes to embark on a COPC program,

- Establish a multi-disciplinary COPC team,
- Convey the principles of COPC to the other clinical staff and community representatives, recruiting their support for and participation in the COPC process,
- Embark on the planning of the COPC process in the defined service community.

COPC in Perspective

COPC, as conceived by Sidney and Emily Kark and detailed in this document, is a rigorous and specific process. It entails a series of steps that need to be undertaken sequentially, and it involves the aggregation of significant amounts of data, community opinion, and community participation. This is not a simple process and it is not one that is resource neutral.

Students and practitioners of COPC will inevitably encounter confusion about the term itself. The melding of the terms "community oriented" and "primary care" is commonplace and frequently nonspecific. Any primary care activities that are undertaken in a fashion that is community responsive or consumer friendly are likely to be called "community oriented primary care." This generic use of the term is not inappropriate, but it does not refer to the step-wise, databased COPC cycle that we are elucidating here. In some circles, the Karkian method has been referred to as "upper case" COPC, whereas other forms of generic primary care that are community-oriented are called "lower case" COPC. This distinction is important because practitioners of "upper case" COPC will frequently be challenged with questions as to the "necessity" of all of the "cumbersome" steps of COPC. "Can't you just do it?" they will be asked.

The answer, of course, is what is "it?" No one will argue with the good intentions or the utility of primary care that is done in a community responsive fashion. The importance of the Karkian brand of COPC, however, is that it offers a formula of activities built on firm public health science and is the beneficiary of contemporary qualitative science techniques. It provides a road map for clinicians, practices, health systems, and communities who wish to move their primary care programs into a more community-oriented format. Finally, it

provides a template for the teaching of community health that is data-based and replicable across a wide variety of settings.

It is a powerful concept.

Chapter 2
Methodological Framework: The Process of Initiation and Implementation

The first step in the development of a community-oriented primary care activity or program is the decision of a primary care practice to adopt a COPC approach to its work. Alongside such a decision, it is helpful and important that the health care professionals undertaking such an activity be interested in expanding the scope of existing services and maintain an appropriate level of personal contacts with members of the community.

Stages of Development of a COPC Practice

COPC, as developed by the Karks, is based on three activities. The first is what they called "Community Diagnosis," which meant performing the necessary activities to analyze the community and its health problems. This was followed by an intervention and an evaluation of the intervention. All these principles serve to describe a process in general; they are not sufficient for planning and implementing COPC activity in the midst of an ongoing practice. For that purpose, other authors have developed specific steps for the COPC process that makes it easier to implement (see Institute of Medicine/National Academy of Sciences, *Community Oriented Primary Care, A Practical Assessment*, National Academy Press, Washington, D.C., 1984; and Robert Rhyne, Richard Bogue, Gary Kukulka, and Hugh Fulmer, *Community-Oriented Primary Care: Health Care for the 21st Century*, Washington D.C., 1998).

The six-step process on which this guide is based has been developed by the faculties at the Hebrew University in Jerusalem and the George Washington University in Washington, D.C. for the purpose of teaching a practical approach to applied COPC. The initial COPC activity of "community diagnosis" is divided into three steps because each step has a discrete set of tasks, which lead from the first to the third. These steps are: defining the community;

characterizing the community; and prioritizing the community's health problems. The next activity, defined by the Karks as intervention, is approached in two steps, now called detailed assessment and intervention. The final step is, of course, evaluation.

The six sequential steps of COPC are as follows:

1) Community Definition

The first stage of developing a new COPC practice is defining the community served by the practice. The community can be a geographically defined area, a health plan, a neighborhood, a school or a group of individuals registered to receive care at a certain clinic. Clarity in community definition is key to all the subsequent stages in the COPC process.

2) Community Characterization

Characterizing the defined community is the next stage in the COPC process and is crucial in establishing a clear understanding of the geography and demography of the community and the health status of its population. The characterization should include information on the geography of the community, the demographic and social features of its population, health and social services available to members of the community, and their health status. Additionally, opinion should be gathered about health issues in the community from individuals who live and work there. This should be done systematically by using of methods such as focus groups and key informants. This information will help the COPC team identify the main health problems and issues of the community. This stage is usually based on existing and available data.

3) Prioritization

Given the competing demands of different health problems and the restricted resources available at the primary care level in most health systems, the planning process must include an assessment of the different health problems afflicting the community. An objective selection of a health condition/problem (or set of conditions/problems) then must be made, with the goal initiating an intervention program. The participation of both community members and staff members from the COPC practice will assist the prioritization process and provide substantial buy-in from individuals other than the COPC team. Semi-quantitative techniques are available for performing this prioritization process.

4) Detailed Assessment of the Selected Health Problem

This stage involves the collection of additional data about the selected health condition and factors related to it. This exercise should provide the team with information about the distribution and the determinants of the selected condition in the specific population. It will be important to assess the past efforts of the practice and the members of the community in regard to this health condition. Additionally, the COPC team will perform a literature search and general exploration related to the selected problem to determine "best practices" — that is what interventions have been carried out elsewhere on similar problems and with what success. Intervention selection is the final and most important part of this phase. The COPC team must select a single intervention from among the several candidate interventions that have proved useful in combating a specific problem. This process must keep practicality foremost at all times such that the intervention selected is feasible within the resources of the practice.

5) Intervention

The precise nature of the problem chosen for intervention will, of course, determine the specifics of the intervention, such as its duration, location, and resources required. Intervention planning, however, must take place prior to the intervention and following the detailed assessment. Intervention planning entails adapting a proposed intervention to the realities of the problem in the specific community and the realities of the COPC practice. This would include finalizing the nature and objectives of the intervention, allocating resources, promoting community involvement in the activity, and planning the timeline for the intervention. The role of the community and clinical staff can be very important in both planning and carrying out the intervention and should be given thoughtful consideration.

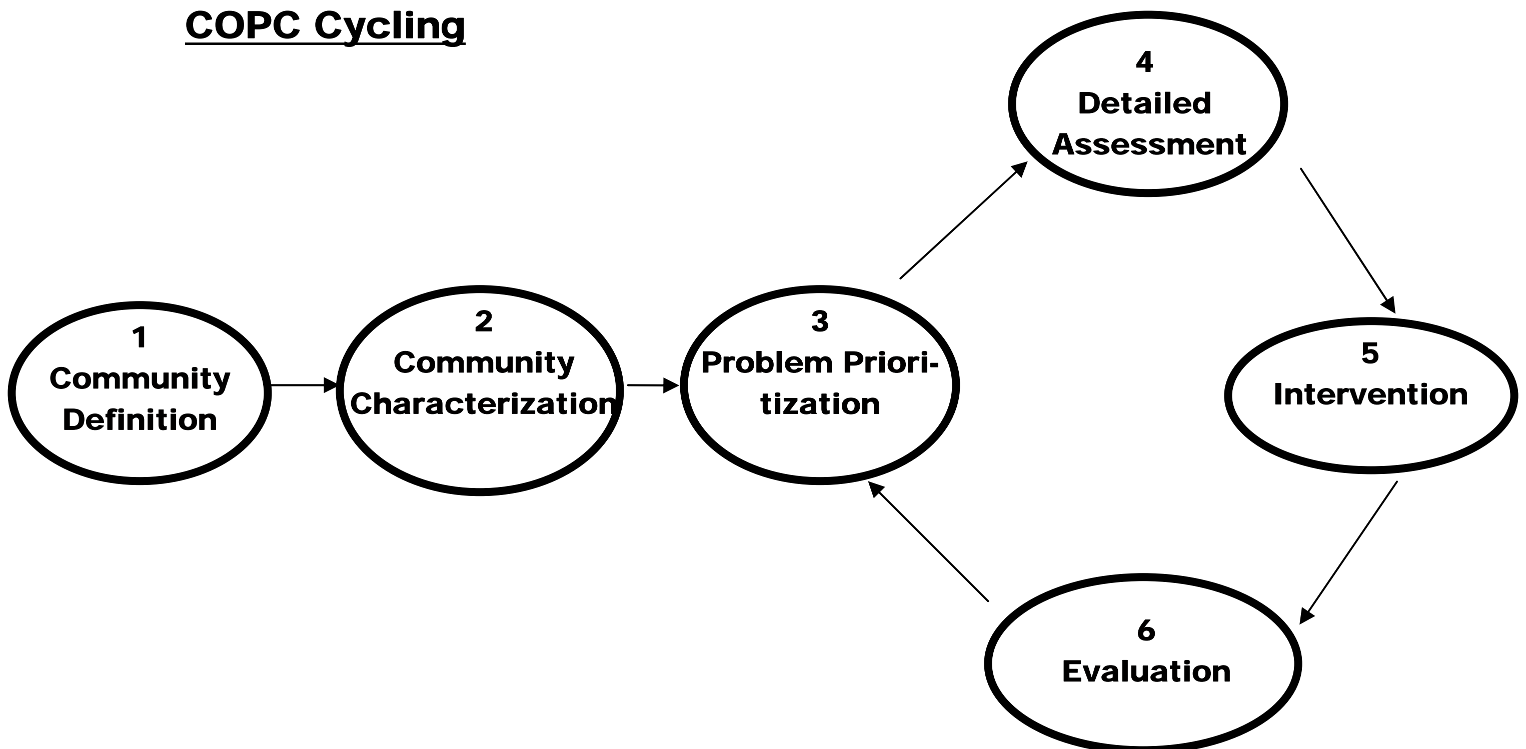
6) Evaluation

The nature of the evaluation of the COPC project is, likewise, determined by the nature of the intervention. This step cannot be well performed as an afterthought. Evaluation is an essential step in the COPC process to determine the utility of the intervention and to help in the process of considering future interventions. It is important to develop the evaluation plan in conjunction with the intervention itself. What will the data needs of the evaluation

be before, during, and after the intervention? Who will collect them? Where will they be maintained? And who will analyze them? Decisions on these questions need to be made prior to initiating the intervention.

The Ongoing COPC Cycle

For a committed COPC practice, the process does not stop with a single intervention, but rather is seen as a continuing cycle of carefully planned, data-based consensus projects for community health improvement. Although updating may be required from time to time, the definition and characterization of the community should remain valid for some period of time. Choosing a new problem for the intervention at the end of the process will, however, require reviewing the prioritization of health problems, selecting a new one, assessing it carefully, planning the intervention and evaluation, and carrying it out, as with the initial cycle. The process can be characterized graphically as follows:



Chapter 3

Defining the Community

The term "community" is used in many ways in many different settings. Therefore, it is important to develop a common definition of the community in question from the beginning of the COPC program. Sometimes this is a relatively straightforward task as in a rural area with a single health delivery site. The "community" in this case will undoubtedly be defined as the area served by the clinic. In urban settings with multiple sources and types of health care (personal physicians, public health clinics, HMOs, university clinics, etc.), definition becomes a much more difficult task — and a very important one. The sources of data that are sought for the COPC program as well as the planning and implementation of the subsequent intervention will depend a great deal on the definition of the community determined at the outset. It is essential to arrive at a consensus definition on the geographic parameters of the community so that data can subsequently be matched to that definition, since virtually all public data are collected by geo-political division (census tract, zip code, township, state, province, etc.). Moreover, the process of community definition itself is a vital first step in team building for the COPC program. If there are differences in assumptions about which community is the focus of the clinical activities or if there are significant methodological problems with identifying the community in question, this is the time to identify and clarify those potentially disruptive problems.

A useful first step in the definition process is to consider what community the practice *does* serve and what community the practice *should/could* serve. These questions might be addressed to the COPC team itself, the practice staff, and/or representatives of the community. The responses collected will be subjective and non-quantitative, but of considerable value in focusing the issue and getting the process started.

The community can be defined in a number of ways:

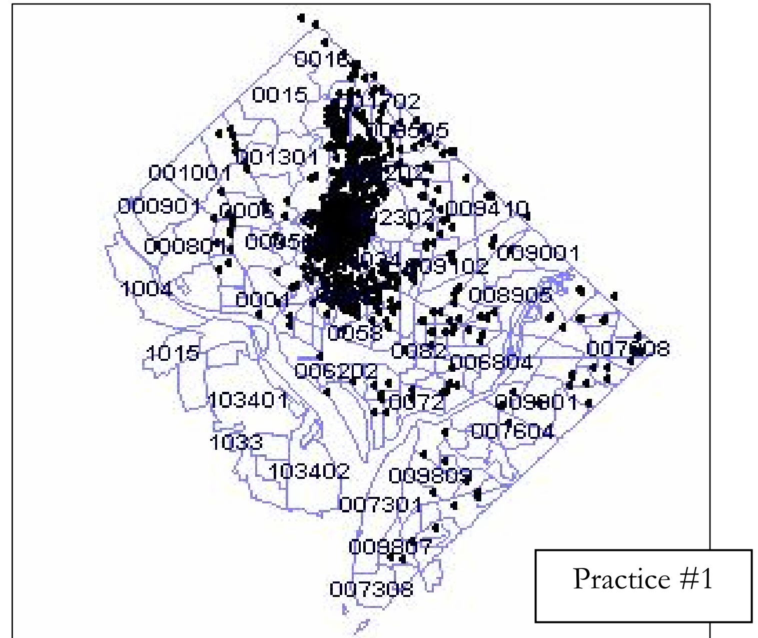
- a geographically defined area (urban or rural) served by a PHC practice or health center
- members of a health plan
- workers in a factory
- students in a school
- inmates in a prison

Early concepts of COPC were built largely on rural models where the PHC involved was the only provider of personal or public health services. This made the question of community definition relatively simple since there were no additional competing or conflicting providers of health care. The village or the town, as traditionally defined, sufficed as "the community" for the purpose of this type of COPC practice. The issue of definition, however, becomes much more complicated in contemporary urban settings where many COPC practices are located. In most settings there are multiple and competing providers of health care and, in some instances, individuals seeking service at a specific practice come from a distance due to ease of transportation or the linguistic capabilities of the clinic. Community definition in urban settings, then, presents an important challenge to a practice embarking on COPC.

A technique that has been used by COPC practices in complicated urban areas has been an approach called "geographic retrofitting." This technique consists of mapping the home addresses of (a sample of) current users of a clinical service to determine in a geographic sense the current "market area" of that practice. This allows the practice and the COPC team to make intelligent, semi-quantitative judgments about the boundaries of their community based on current patterns of use. They "retrofit" the definition of the community to the pattern of use that they discover based on current patients. This technique may identify areas that are surprisingly (in the eyes of the practice managers) highly penetrated or, to the contrary, underpenetrated by the practice. As such it can prove to be an excellent instrument for practice planning and developing community orientation.

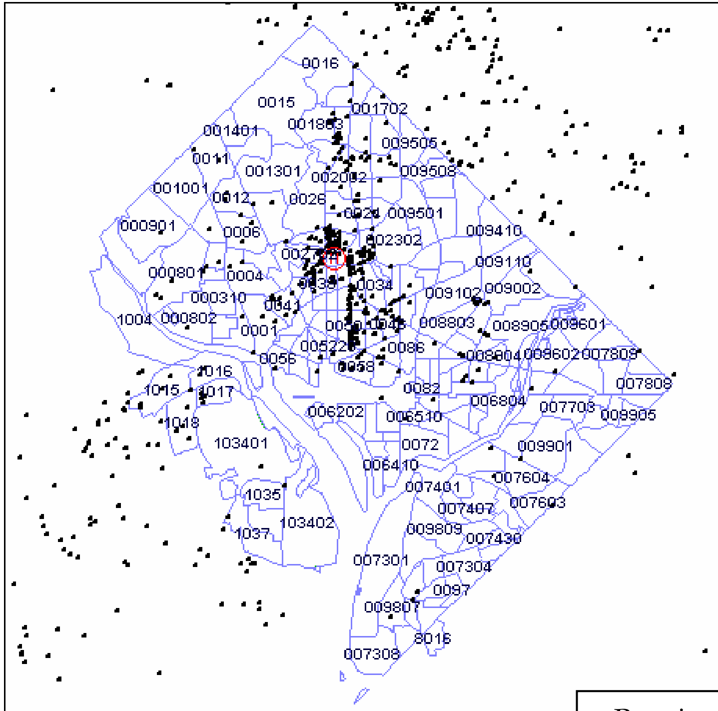
Mapping and Graphics

Mapping the users of a practice proceeds as follows: a recent sample of users of a practice is selected for the mapping exercise. Every tenth user during the past two years might be an example in a large practice, or every user for the past six months in a small practice. Using one of several available computer programs, or working by hand, the patients' addresses in the sample are placed on a map resulting in a geographic picture of the current practice.

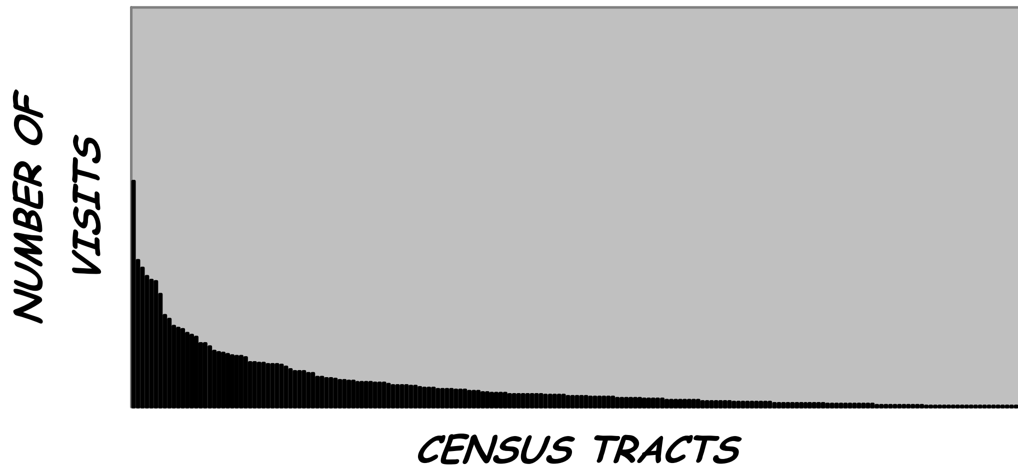


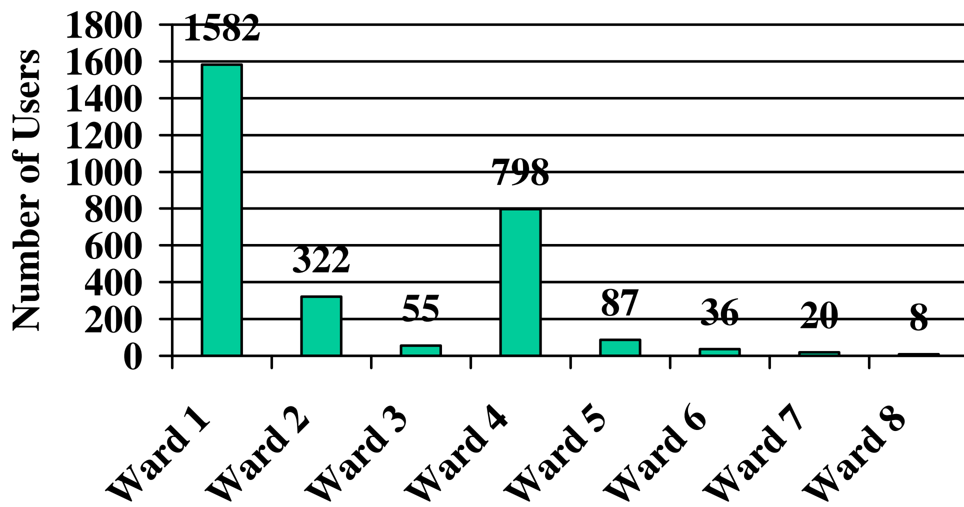
Practice #1

The following are two examples of recent mapping exercises performed by COPC practices in the same neighborhood in Washington, DC. As you will note the patterns of use are dramatically different. Practice #1 has a dense distribution of patients in a corridor extending north and south of the practice location, whereas practice #2 demonstrates a regional distribution with the majority of its patients traveling from considerable distances including Maryland and Virginia suburbs. These patterns suggest that these two practices, located on the same block with predominantly Latino patients, are serving two very different populations. Their ultimate community definitions will need to take their respective geographies into account, the data they match to their communities will be substantively quite different, and the interventions they consider will be influenced by the compactness of the one population and the dispersion of the other.



Practice #2


NUMBER OF VISITS PER CENSUS TRACT
NUMBER OF VISITS
CENSUS TRACTS


Pediatric Users by Ward
Number of Users
1800
1600
1400
1200
1000
800
600
400
200
0
1582
322
55
798
87
36
20
8
Ward 1
Ward 2
Ward 3
Ward 4
Ward 5
Ward 6
Ward 7
Ward 8

The address information displayed on the maps can also be displayed by geographic unit such as census track or ward. Such graphic displays of current users provide further objectivity and quantitation to the definition process, enabling the COPC team, the practice leadership, and the community to consider the current "market" of the practice as well as any strategies they wish to undertake to either reinforce or modify that pattern in the future.

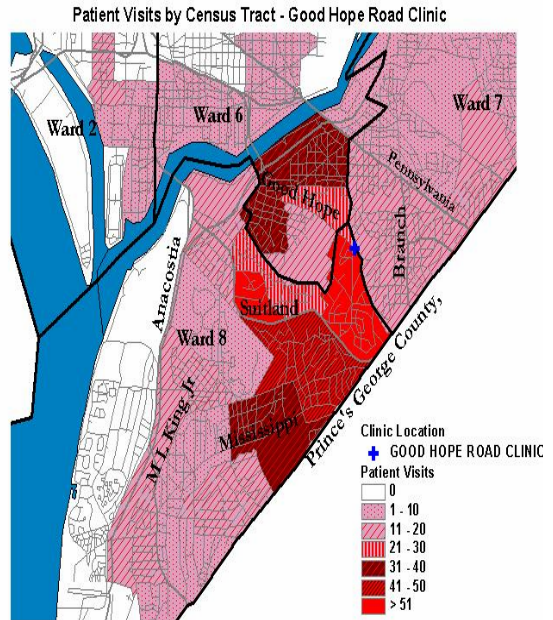
Established PHC practices that wish to embark on the development of COPC should take into account whether the population is a stable or mobile one. Mobility of the population does not preclude the development of COPC, but it may pose a serious challenge to the health team in all phases of the program. In some cases, sections of the population may be composed of foreign workers or immigrants. Their legal status as residents in the country may be questionable, and the exact size of this population, as well as its health insurance coverage, may not be known. Circumstances such as these call for a particularly careful definition of the community at the outset of the COPC program.

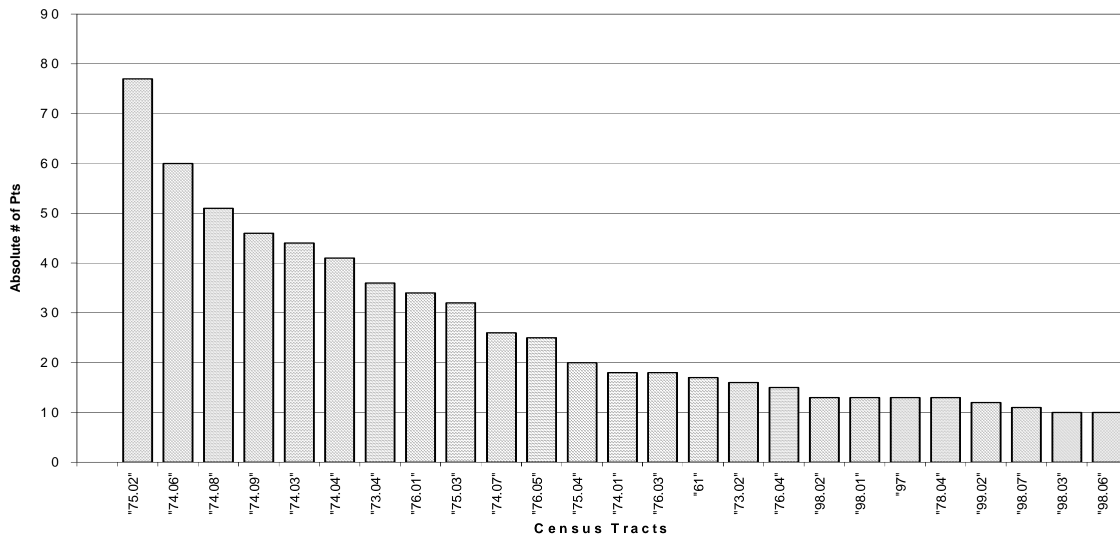
COPC Examples: Community Definition

Defining the community using Geographic Retrofitting:

Dr. Cara Lichtenstein, a pediatrician at the Children's Health Center at Good Hope Road (GHR), began a COPC project in 2002. GHR is located in Ward 8 of Washington, DC. Dr. Lichtenstein began the community definition by using the principles of *geographic retrofitting*.

Using the principles of geographic retrofitting, all patients visiting GHR in August and September 2002 were mapped. Then the areas where most patients came from were noted by census tracts, wards, zip codes or other geographic boundary. A graphic representation of their distribution by census tract appears below.



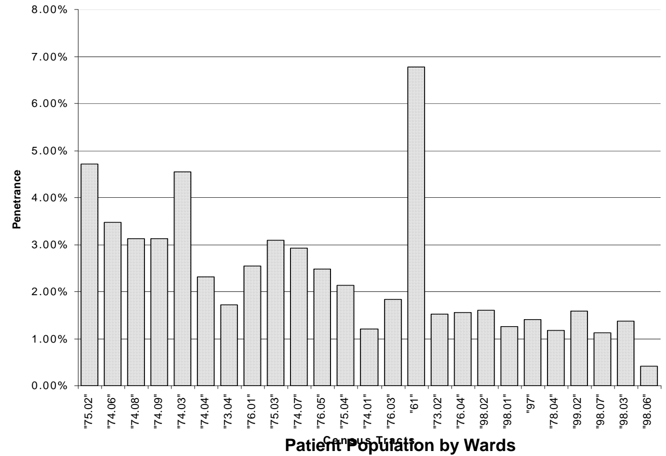


16 census tracts represent 60% of patients seen at GHR.

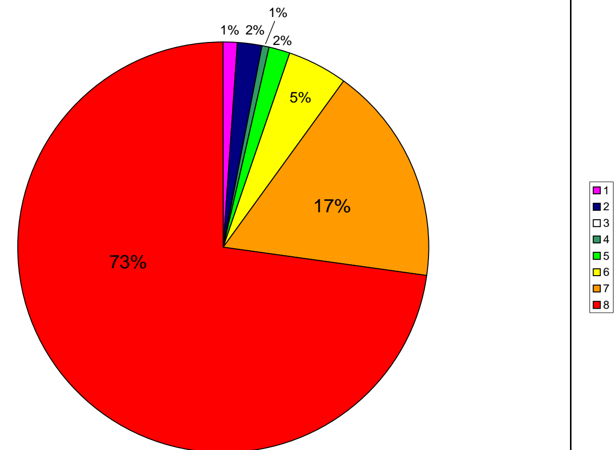
After the geographic boundaries were delineated, the penetrance (census tract distribution adjusted by census tract population) was calculated using the following formula:

$$\text{Penetrance} = \frac{\text{\# of people visiting GHR in Census Tract Z}}{\text{\# of people < 21 yrs old in Census Tract Z}}$$

Of the 16 census tracts with highest absolute numbers, only one tract, 74.01, falls out of the top 16 (from 13th to 22nd) in terms of penetrance. Tract 61 has a very small population which explains why penetrance is so high.



The vast majority of GHR patients from DC live in Ward 8. The GHR community was therefore defined as the 16 census tracts within DC with the highest ranking by absolute numbers. When census tract data was not available, Ward 8 was used as a substitute.



Community Definition 1:
The families of patients and non-patients who reside in census tracts 61.0, 73.02, 73.04, 74.01, 74.03, 74.04, 74.06, 74.07, 74.08, 74.09, 75.02, 75.03, 75.04, 76.01, 76.03, 76.04, 76.05, 78.04, 97.0, 98.01, 98.02, 98.03, 98.06, 98.07, 99.02.

Community Definition 2:
The families of patients and non-patients who reside in Ward 8.

Chapter 4
Characterizing the Community

The community in COPC is the equivalent to the patient in individual care. Knowing about the number of people and their characteristics in the community under care will be the basis for the calculation of rates of diseases or health conditions, and the denominator used when surveys are carried out. These measurements are part of the assessment of the health status of the community; they will provide knowledge about the differential distribution in sub-groups of the population and later about measurements of the impact of interventions. Knowing the characteristics of the community is an essential component in the development of all phases of COPC for the purpose of involving community members in developing the COPC practice.

There are two principal types of information for characterizing the community. The first type is *quantitative information* — information that can be expressed in a numeric form such as numbers, rates, percentages, and ranges. Quantitative information is usually available from census bureaus, public health departments, and government agencies. The second type of information is *qualitative information* that is interpretive in nature and is based on the systematic collection of opinions, attitudes, and beliefs. This form of information is usually gleaned from interviews or questionnaires that are administered to individuals who live or work in a target area. Quantitative information is more predictably available from local agencies but the collection of qualitative information is essential for community-based and community-oriented work.

Quantitative Information

Quantitative information is available in all communities in a variety of forms covering a multiplicity of topics. The challenge for the COPC team will be to develop a data-base of quantitative information that will be comprehensive yet useful in characterizing the community. For simplicity's sake, quantitative information may be categorized under three headings: (1)

community characteristics; (2) socio-demographic characteristics; and (3) health status characteristics and health services. The types of data available in the various categories are as follows:

- **Community characteristics** — data available under this heading would include history, politics, location, size, housing characteristics, environment, or other information that may be largely descriptive but is important in providing an overview of the geo-political setting in which the practice functions.
- **Socio-demographic characteristics** — these would include population characteristics such as age, sex, occupation, income, social class, educational level, marital status, ethnic groups, religious preferences, and family structure. In the United States much of this information is available through the Census.
- **Health status characteristics and health services** — these are quantitative data that will bear most directly on the clinical issues in the practice. They include: natality (birth-related information); mortality (death-related information); morbidity (acute, chronic, and infectious diseases); hospital discharge data; mental health data; sanitation and environmental data; patterns of health insurance; availability of health personnel (including indigenous and/or alternative healers); and program information in areas such as mental health, public health, hospitals, and clinics.

An important distinction exists between what is called primary data and secondary data. The data listed above are, for the most part, what is known as secondary data — information that has already been collected and does not require the COPC practice to initiate surveys or other methods of new information retrieval. The advantage of this sort of data is its "off the shelf" availability, reducing the time and labor required to gather the information. The disadvantage of this sort of data is that they may not be specific to the COPC community. That is, the data may be citywide when the practice needs information on specific census tracts, or the information released will be on all AIDS patients and not on individuals within the practice's area. These limitations of secondary data will tempt COPC practitioners to undertake surveys to collect primary data from community members and patients or from medical records. While this may sometimes prove necessary, the challenge of designing, administering, and analyzing a methodologically sound survey needs to be borne in mind. In

general, and for the purposes of most COPC projects, practicality argues for the use of secondary data whenever possible.

Many government and private agencies collect population, socio-demographic, and health-related data and many (such as the U.S. Census) are available today online. COPC practitioners should familiarize themselves with the availability of data from, at the least, the Bureau of the Census, the National Center for Health Statistics, local public health agencies, local government, and the local hospital association.

Locating hard copy and, where possible, electronic maps of the community and using them for the purpose of analysis and education is very helpful to community characterization and to the COPC process as a whole.

Qualitative Information

Qualitative information on the population is generally not available as secondary data since public agencies do not collect it as such. The gathering of qualitative information, therefore, will require a structured collection process. Target populations might include patients of a clinical facility, community leaders, or community members. An important source of information in any community are individuals who are not necessarily formal community leaders but who are knowledgeable about a community by dint of their jobs or positions. The term used to refer to such individuals is "key informants." Pharmacists, teachers, and police officers are examples of potential key informants. An excellent and very important source of information about any clinical enterprise is its own staff members, both because they have reason to know a lot about the practice and its community and because many of the staff may come from the service community. Any effort to develop qualitative information about the practice and the community should make use of the staff as a source of information. This has the additional benefit of enrolling the interest of the staff in the COPC program, which will pay dividends throughout the process.

In addition to "key informants" as a source of primary community information, focus groups have proved very useful. This is a process whereby a structured interview is undertaken with a selected group of community members for the purpose of eliciting opinion

about local health problems. The interview itself and its subsequent analysis provide a semi-quantitative approach to opinion solicitation. The results of these groups can be tabulated and compared systematically to other sources of information. This approach allows the COPC practitioner to cover ground quickly by engaging a series of informants at a single setting. There is an extensive and useful literature on focus groups that can be of assistance to those planning to use this technique.

Gathering qualitative information by random interview, structured interview, "key informant" strategies, or focus groups not only provides information to the community characterization process, but systematically involves community members in the COPC process and the practice itself. In addition to the opinion that these individuals provide that will be of use to the practice and the process, these individuals become candidates for future activities involving intervention selection and carrying out the intervention itself. Additionally, the use of these same techniques (particularly the focus group) with clinical staff from the practice can provide valuable insights into community health problems and the potential of the practice to address them. Likewise, staff members can be recruited in this way for further participation in the COPC intervention.

COPC Examples: Community Characterization

Example of Community Characterization (by Sarika Rane)

The Children's Health Center at Good Hope Road (GHR) is one of five pediatric and/or adolescent centers which are part of the Children's National Medical Center in Washington, DC. Each community health center serves as an extension of the primary care services offered at Children's Hospital. GHR is located in the East of the River community of DC, and serves children and adolescents from birth to 21 years of age. Eligible members of the community have available a wide variety of services including physical exams, early developmental testing and immunizations, diagnosis and treatment of illnesses, care for children with special needs, health education, nutritional support and counseling, WIC-special supplemental food program for women, infants and children, follow-up care after hospitalizations, help with Medicaid applications, referrals to Children's National Medical Center specialty services, prescription refills, completion of school and daycare forms, and family planning.

History and Politics

Early English explorers encouraged other Europeans to settle the land bordering the Anacostia and Potomac rivers during the 1600s. These immigrants became farmers of tobacco fields, employing tenant farmers, indentured servants, and enslaved Africans for labor. During the 1800s, Anacostia (located in Ward 8) was established as one of the District's first suburbs. Land developers named it Uniontown – presently called Historic Anacostia. In 1877, Frederick Douglass purchased a home which he called "*Cedar Hill*." In doing so, he not only challenged a restriction limiting land ownership to whites, but he also became the first African-American to do so. (The site is currently the *Frederick Douglass National Historic Museum*.) Before and after the Civil War, free blacks continued to settle in Southeast, perpetuating the harsh racial segregation in the area. However, the white population began moving out of Southeast during the 1950s. The area's demographic has remained predominantly black since that time.[11]

Community Organizations and Resources

Faith-based organizations are a very prominent force – there are currently 45 places of worship in Southeast. Many places of worship also organize and host community events, and house various outreach programs. The *Ward 8 Business Council* is active in community affairs and; in fact, it annually publishes an East of the River Business and Resource Directory, which contains a directory of resources, key contact numbers for businesses and local officials, and advertisements from community organizations. Community collaboratives also function in Wards 7 and 8, combining the efforts of family advocates, faith-based organizations, non-profit organizations, safety entities, social services, schools, etc.

Socio-demographic characteristics

Tract 75.02, where Good Hope Road Clinic is located, contains 4,221 residents, of which 1.0% are white, non-Hispanic, 97.2% are black or African-American, and 1.0% are Asian or Hispanic. Nearly the entire population was born in the United States, and almost all only speak English at home. Table 1 presents selected socio-demographic characteristics of Census Tract 75.02, the District of Columbia, and the US.

The population of Southeast, DC is relatively young compared with that of the entire city and the country. Not only is the median age lower, but the percentage of the population younger than 18 years of age is also greater than that of DC or the US as a whole. Southeast, DC is one of the least affluent portions of the city.

	Census Tract 75.02	DC	US
Population	4,221	572,059	
Male: Female	46:54	47:53	49:51
Median Age	28.6	34.6	35.3
% > 18 years	65.8	79.9	74
% < 18 years	34.2	20.1	26

Socio-Economic Characteristics

Ward 3 is generally quite affluent and highly educated. It is a predominantly white population, and borders the most affluent portions of Montgomery County. Ward 8, on the other hand, is much more poverty-stricken. Over 40% of individuals and families are living below the federal poverty level; this number is far greater than both national and Ward 3 figures. Almost half of the population is not a part of the labor force. Although a majority of the population has at least a high school education, formal post-secondary education drops quite rapidly. Fewer individuals are living in family households, a fact which demonstrates the trend of the exodus of families (replaced by singles and families without children) from the District. Finally, only a small portion of the Ward 8 population owns a housing unit, in contrast to over 65% nationwide, and over 85% in Ward 3. The economic disparity between our community, the rest of DC, and the US is apparent, as well as the lack of formal education, employment, family life, and poverty.

	US	Tract 9.01	Tract 75.02
Median Household income	$ 41,994	$ 160,829	$ 19,950
Per capita income	$ 21,587	$ 55,243	$ 11,567
Individuals below poverty	12.4 %	4.4 %	44.8 %
Families below poverty level	9.2 %	1.3 %	41.6 %
In Labor force	63.9 %	79.3 %	51.4 %
Educational Attainment			
High school or higher	80.4 %	98.1 %	66.7 %
Bachelor's degree or higher	24.4 %	84.0 %	6.3 %
Family Households	68.1 %	73.7 %	58.1 %
Owner-occupied housing units	66.2 %	88.9 %	15.8 %

Health Status Indicators

The DC Kids Count Collaborative noted that as of 2001, the District's infant mortality rate was 10.6 deaths per 1,000 live births. Infant mortality in Ward 8 is the worst in the city and almost 4 times the national average. Ward 8 also has the highest percentage of low birth weights (under 5.5 pounds) in the city – 20.6%. Ward 8 has the highest rate of child deaths in the city

	US	DC	Ward 8	Ward 3
Live Births	3,959,417	7513	1237	854
Rate (per 1000 population)	14.5	14.5	20.40	12.5
Infant Mortality (per 1000)	7.1	15	27.5	5.9
% of infant deaths in city		100%	30.1%	4.4%
Deaths (all ages- per 100,000)	877	1162	952.1	925.2
# of deaths to children (1-19yo)	Not Avail	81	17	2
% of child deaths in city		100%	21%	2.50%

Qualitative Data (by Cara Lichtenstein)

"Key informants" are an important source of qualitative information about the community. (Focus groups are used for the same purpose.)

- Example of Key informants:
  - William Lawrence- Medical Director, SE Centers of Children's National Medical Center
  - Monique Cox- Social Worker at SE Health Centers
  - Diane Moore- Employee, Friendship House
  - Robin Ijames- Commissioner, ANC 8D
  - Darius Stanton- Area Director, Boys and Girls Clubs of Greater Washington, High School Branches
  - Samuel Powell- Staff Member, Boys and Girls Club at Ballou High School
  - Marie Dudley- Outreach Specialist, East of the River Police-Clergy-Community Partnership
  - Lynne Murray- Owner of local day care center
  - Ms. Peoples- School Nurse, Birney Elementary School

- Problems identified in key informant interviews
  - "our kids are angry and stressed"
  - "people unable to get what they deserve from healthcare system"
  - "hard to get community involvement unless you offer a gimmick in return"
  - "lack of education about asthma"
  - "kids are being exposed to a lot of violence at a young age"
  - "parents don't know how to set the tone and make rules"

- Community Identified Strengths in key informant interviews
  - Desire to be employed and self-sufficient
  - Resiliency
  - Persistence
  - People are survivors
  - Willingness to move, learn, and listen
  - People know how to navigate the system
  - Well established community and grass-roots advocacy system in DC
  - A lot of resources (non-profit and government agencies and money) available

Chapter 5
Prioritizing Health Problems and Conditions

The various health problems that are faced by a population at any given point in time compete for the restricted resources (monetary and manpower) that are available in any primary health care setting. While the characterization activity will inevitably produce and highlight health problems, which will be good candidates for special attention, practicality requires that a single problem be selected as the focal point of the COPC activity. Any problem selected or intervention undertaken will be an add-on to the ongoing essential service delivery activity of the practice. Therefore, the prioritization process is key to a functional COPC program. Since the COPC process is an ongoing, iterative one, the selection of a single problem for intervention at this point does not mean that other identified problems will not receive attention in subsequent COPC cycles. The selection of a problem for intervention, moreover, establishes a focal point for the practice and the community to work together to improve community health. Therefore, the prioritization process is a key one.

There are multiple ways in which the prioritization activity can be approached. For the purpose of this discussion, we are going to present a method that has proved efficient and successful in many COPC settings. It involves two important basic elements. The first is the *prioritization process*, which entails decisions about the steps to be taken in prioritizing problems, who will be involved in those steps, and what information they will have available for the process. The second element is the *prioritization method*, which involves the formal selection system that will be used by individuals participating in the prioritization process.

Prioritization Process

The prioritization process begins with preparing information gathered in the characterization phase. Undoubtedly, a great quantity of data on the demographics and health of the community will be in the hands of the COPC team. Additionally, semi-quantitative information gathered from qualitative data collection activities, such as focus groups, will also be available to the team. For anyone to participate in a decision making process concerning the rela-

tive standing of one problem compared to another, the COPC team must organize the problems in a coherent and standardized manner. This means, at the least, that a master list of health problems should be culled from the information available. The items on this master list then need to be arrayed in a standardized fashion so that an individual participating in a prioritization exercise can weigh the merits of problems in a relatively objective fashion. Appended to the master list, or available and cross tabulated with it, should be some summary or highlighting of data (quantitative or qualitative) that have been collected and are associated with the problem. In other words, someone participating in the prioritization process should be presented with a list of problems and some associated data that have been developed by the COPC team.

Problem lists may prove to be dauntingly long and the COPC team should be prepared to edit lists down to comprise only those problems that have both data and opinion backing their importance. While it is not uncommon for the characterization exercise to produce dozens of potential problems, practicality suggests that the COPC team should, at the outset of the prioritization process, winnow the list to something fewer than twenty.

Presenting the data for consideration by individuals who may be new to the COPC process in the prioritization phase argues for a careful and systematic display of the problems under consideration. This suggests that information on each problem be codified and presented in a hard-copy format that can be used by individuals engaged in the prioritization exercise.

A two-step prioritization process has proved effective and satisfactory in many settings. This process involves a preliminary prioritization in which consideration is given to the initial complete problem list by a group designated by the COPC team. The mission of this preliminary group is to reduce the "long list" of problems under consideration to some five to ten in number for subsequent final selection — a "short list." A second group, comprising different individuals, deliberates on the short list and selects the problem it deems most important, which becomes the intervention problem. A variation on this theme would be that the final group selects several problems in prioritized order and leaves it to the COPC team to choose the actual intervention problem.

The principle of the two-step process is that it provides input in a step-wise fashion by two different groups of people with two different sets of perspectives. Moreover, it provides an opportunity for buy-in to the COPC process by many individuals who will both be affected by the process and stand to contribute to the subsequent intervention.

There are many ways in which the preliminary and final selection groups can be chosen. An approach that has proved effective in many settings is that of designating a community group for the preliminary selection and a group drawn from the staff of the practice for the final selection. This approach allows for buy-in by two important COPC constituencies and assures a thoughtful triaging of the problems by individuals in a position to have both a community-based and clinical understanding of them. It is also possible and desirable that individuals chosen to participate in these groups have been key informants or members of focus groups previously interviewed by the COPC team. Their continued participation in the process reinforces their role in COPC and their value in helping to address community health problems.

The COPC team is the ultimate recipient of the prioritization process. It is important that its members be satisfied that the recommended problem is one that is important and for which there are feasible interventions. If they are not satisfied in regard to these matters they should continue the discussion with the final selection group.

Prioritization Method

The term method as used here refers to the actual scoring system that will be used by the groups engaged in prioritizing community health problems. A number of prioritization methods pertinent to COPC have been described elsewhere (Vaughn and Morrow, Pickett and Hanlon, and Maesneer. See references at end of chapter). The method described here draws from these approaches and is based on practical experience applied in COPC settings.

Any health problem under consideration may be scored on three important dimensions:

- The magnitude of the problem

- The severity of the problem
- The feasibility of intervening to address the problem.

Some problems may be of great magnitude but minimal severity (acne in teenagers); other problems may be of low magnitude but considerable severity (menningiccoccal meningitis). There are also problems of substantial magnitude and severity for which the feasibility of intervention by a clinical practice is not great (poverty).

In order to weigh and balance these factors in a quantitative fashion it is necessary to use a numeric scoring system. After ample discussion and consideration of such data as are available on all of the problems under discussion, each rater (prioritizor) is asked to score each problem on three characteristics (magnitude, severity, and feasibility), assigning a score of one through five to each characteristic, with one bearing the least weight and five the most. Therefore a problem that scored fifteen (5 x 3) would be a highly likely candidate for intervention, whereas a problem that scored three (1 x 3) would have little likelihood or reason for being selected.

This scoring system used at both steps in the prioritization process provides a quantitative and quasi-objective means for prioritizing the candidate problems and selecting among them. Equipped with the outcome of this process, the COPC team can move forward with confidence that it has received good and systematic direction from the characterization and prioritization processes.

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COPC Examples: Prioritization of Health Problems

Example 1: Health Center at Good Hope Road

The COPC team developed a list of health problems taking into consideration the following: magnitude of problem, severity of problem, feasibility of solution, originality in the community.

The list of 11 problems was then made into a survey asking people to rank top 5 problems. The survey was completed by key informants (3 completed), additional community members (6 completed), office staff (7 completed), and parents in the waiting room (10 completed).

Problem	Magnitude	Severity	Feasibility	Originality	Totals
High rate of drug abuse among adolescents	5	3	2	3	13
Frequent exposure of children to violence	5	5	3	4	17
High rate of sexually transmitted diseases among adolescents	5	4	4	2	15
Lack of mental health counseling/ support services for children	**5**	**5**	**3**	**5**	**18**
Children with poor anger management skills	3	3	3	4	13
Poor parenting skills	5	5	3	3	16

The responses were tabulated and “Lack of mental health counseling/support services for children” was chosen as the priority health problem.

Example 2: Walker Jones Community Health Center

The Georgetown University-Providence Hospital Family Practice residents conducted a COPC project from 2003-2004 at Walker Jones Community Health Center. As the first step of the prioritization process, a series of key informant interviews were conducted with patients and staff to generate a list of health concerns. A list of the top 15 health concerns were then incorporated into a survey. The survey was created in English and Spanish and handed out to patients in the waiting room on 2 consecutive weeks. The survey asked three main questions: 1) What are the **most common** health problems amongst your family and friends, 2) What are the health problems that **concern you the most**? 3) If you could **add or change something** in the clinic, what would it be? Question 1 attempted to assess the “magnitude” of the problem. Question 2 assesses the community’s impressions about the “severity” of the problem. Question 3, although inadequately phrased, attempted to assess what changes were “feasible” in the community.

Most Common (Magnitude)	Most Concerning (Severity)	Add/Change (Feasibility)
HTN (81%)	HTN (64%)	Waiting time (50%)
Diabetes (69%)	Diabetes (62%)	Nutrition education (36%)
Smoking (62%)	Drug/etoh abuse (48%)	Child care (26%)
Drug/etoh (52%)	Smoking (43%)	Weight loss program (24%)
Asthma (33%)	Asthma (33%)	Transportation (21%)
Cholesterol (31%)	Violence (33%)	Addiction counseling (17%)
Depression/anxiety (26%)	HIV/AIDS (29%)	Family counseling (17%)
HIV/AIDS (24%)	Hepatitis (29%)	Diabetic education (17%)
Obesity (24%)	Cholesterol (29%)	Literacy program (12%)
Violence (19%)	Obesity (26%)	Translators (12%)
Insurance access (19%)	Depression/anxiety (26%)	Smoking cessation (7%)
Hepatitis (14%)	Insurance access (21%)	Change nothing (7%)
Medication access (12%)	Medication access (19%)	
Venereal disease (10%)	Venereal disease (17%)	

The Magnitude and Severity were combined to generate a new list in order of priority:

1. HTN
2. Drug/ ETOH abuse
3. Diabetes
4. Cholesterol
5. HIV/AIDS
6. Obesity
7. Violence
8. Smoking
9. Depression/anxiety
10. Asthma

Since a clinic initiative to improve waiting time was already under way, “Nutrition education” scored as the most feasible area of intervention. Nutrition education was applied to the priority list above and examined. The COPC team then decided to re-word the priority health issue as follows: *The lack of adequate nutrition education focusing on hypertension, diabetes, high cholesterol, and obesity.*

Chapter 6
Detailed Assessment of a Selected Health Problem

This stage of the COPC process entails three distinct processes: the first is *developing community-specific information* regarding the nature and extent of the health problem or condition that has been selected for intervention through the prioritization process. The second is *examining the literature and experience* for existing interventions on the selected problem that will inform and guide the design of the intervention based on the specific practice setting. The third is *selecting intervention* from among those available and based on the analysis of the applicability of the intervention technique to the particular setting.

Developing Community-Specific Information

Although data and opinion on the selected problem were collected during the characterization process, there may well be more detailed or specific information available on the selected problem. If so, it is important to obtain it. This effort is intended to provide more targeted information on the determinants and impact of the selected problem in the community. This information will then serve as the basis for the planning of the intervention, establishing the baseline data on which intermediate measurements of change and final evaluations of the intervention program will be based.

Questions will undoubtedly arise about the scope of this additional information collection. Should primary data be collected? Should surveys be conducted? Careful consideration should be given to these questions, taking into account the resources available, the priorities of the service, and the scope of the anticipated intervention activities.

Examining Literature and Experience

Few COPC practices will select problems for intervention that have not been identified as priorities for other communities and clinical teams. On virtually any problem that will arise, there is a literature and a set of experiences that will surely inform and guide the COPC team

as it considers the nature and design of the intervention. Put simply, no one should start by reinventing the wheel. The first job will be to identify and learn from the "wheels" that others have already built. There is a growing literature of "best practices" in most areas of public health intervention. The Internet is a powerful tool for doing just this in a rapid and efficient way. Additionally, for many areas of intervention there exist organizations, institutions, self-help groups, scholars, promoters, and companies that have already established programs. These programs may not fit precisely, may be too expensive, or may not be in the right language, but a bit of creative program modification will usually produce an intervention model appropriate to the new setting. The wholesale creation of a new program that you build from the ground up is usually inadvisable. Speed, cost, and ease of evaluation all argue for a pragmatic approach to the literature and the experience of others.

This process may well produce a number of potential interventions that bear on the problem selected. For almost all problems, there are educational interventions, preventative interventions, and treatment interventions. In studying the literature and analyzing the work of others, it will be important to consider all varieties of interventions and array them in some manner that will allow for a strategic selection to be made among them.

Selecting an Intervention

The final step in the detailed assessment phase is the selection of a specific intervention from the various candidate interventions that have been developed by reviewing the literature and examining the work of others. This process does not preclude the design of an innovative or "unprecedented" innovation, but it will be an uncommon problem that has not received specific attention before and that has not been described elsewhere in the literature.

The two operative words are "adoption" and "adaptation." Adoption refers to selecting from among existing strategies rather than "inventing one's own wheel." Adaptation refers to the modification necessary in an intervention to make it appropriate to your particular community. The timeline, the participants, the literature used, the age group involved, are all examples of elements of interventions that may need to be tailored to your specific setting. Feasibility is of overriding importance in selection. It will be important for you to choose an

intervention that is most practical and fits within the resources available to you in your clinical and community setting.

Armed, then, with a detailed knowledge of the data pertinent to your selected problem, conversant with interventions designed and carried out by others on the problem, and having selected a specific intervention and adapted it as necessary, you are prepared to plan your implementation and evaluation.

COPC Examples: Detailed Assessment

Dr. Jessica Schroeder conducted a COPC project at Mary's Center, which is a health center that provides care for women and children in the Adams Morgan neighborhood of Washington, DC. The patients are predominantly immigrants from Central America (El Salvador). The problem prioritization revealed "children's poor education" as the most important health issue faced by the community. The following is an excerpt of the detailed assessment she conducted.

Examining the Literature

National

Poor education affecting the Latino community appears to be a national crisis. The educational level of Latinos is the lowest of any group in the United States. Latinos also have the highest drop out rates nationwide as high as 30% in some States. According to the US Department of Education, 37% of Hispanic youth do not finish high school and of those who stay in school 34% are below grade level. Only half of Latinos in the United States have a high school diploma and only 2% of all doctorates are awarded to Latinos. Educational attainment varies with the country of origin: 51% of Mexican origin adults have a high school diploma compared to 73% of Cubans. Surveys show that 38% of Hispanic parents nationwide believe that schools give them information they need to help their children to succeed. The National Institute of Health and the US department of education are conducting a 5-year study of drop-out issues in the Latino community. In general, these rates have been attributed to poverty, language proficiency, accelerated role taking, generational status and acculturation and violence among students.

1. Brindis, et al. Fact Sheet on Latino youth: Education. University of California. 2002
2. Presidential Commission on Educational excellence for Hispanic Americans website (http://www.yesican.gov)
3. Rolon et al. Educating Latino Students. Educational Leadership. December 2002.
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Community-Specific Information: Washington, DC

Approximately 66% of drop-out took place during the school year. In 1997, The Council of Latino Agencies (CLA) reports that 17% of Latinos students left because of fear of violence, 16% were threatened or injured at school for the same year. This number increased to 19% in 1999. In 2000, 75% of Latinas aged 16 to 19 were employed in part time or full time jobs.

The PTA representative at HD Cooke, an elementary school located on the same block as Mary's Center, gave some insight.

"Parents don't have time for their children"
"Would the Clinic provide transportation and babysitting?"

The PTA representative concluded that for a parental involvement initiative, parents should be trained in a small group by giving them the proper tools to work with.

Waiting Room Survey

A total of twenty four mothers were interviewed at Mary center pediatrics waiting room from August 2003 to January 2004. A common comment was the following:

> "I can't help my child because I don't speak English" I can't help my child because I didn't go to school myself."

A total of 10 out of 24 mothers (42%) help their young kids with homework sometimes up to 2nd grade. Beyond this grade the parents found the homework too complex for them. A total of 11 out of 24 mothers (46%) communicate with the teachers or other school workers in Spanish. The parents felt very comfortable when someone at the school can talk to them in their native language; otherwise they feel that they are not being respected. Low-income, newly arrived and non-English speaking mothers felt intimidated in a non-culturally sensitive environment.

> "I would like more Spanish speakers in the school system"

Selecting an Intervention

Multiple studies show the importance of parental involvement in children's education. When parents engage with their children in learning activities at home, provide the basic needs and communicate with the school, this can mitigate the negative impacts of poverty and prevent drop-outs. Literature shows that Latino immigrant families have a genuine interest in their children' education but face a mismatch of expectations.

The Parent Institute for Quality Education (PIQE) is a program that aims to increase parent's knowledge and skills to support the academic achievement of their children. PIQE uses informal education techniques promoted by Paulo Freire and others dedicated to promoting social change, such as using dialogue to build community and social capital, situating educational activity in the lived experience of participants, and raising participants' consciousness about their situations and their own power to take informed action. The PIQE program has been found to be effective at increasing parents' behaviors that support their children education, including the frequency with which parents communicate with their children's teachers, read to their children, praise or recognize their children fro doing well in school, and review their children homework. Further, almost all of these positive impacts on parent behavior were sustained five months after parents completed the Institute.

Tellin' stories: In the District, one of the ongoing projects that promote parental involvement is called "Tellin' stories". This project is a family /school partnerships of "Teaching for change": building social justice starting in the classroom. This project is funded by a nonprofit organization and works nationally to promote social and economic justice through public education. Tellin' Stories and community building: Tellin' Stories creates opportunities for families to connect to each other and to their children school, often for

the first time through the power of story. Gathering information and developing skills: Parents gain the tools they need during regular parent meetings to analyze the school climate, the facilities, and the quality of teaching and learning at their children' school.

*Elsie Whitlow Stokes Community Public Charter Schoo*l is a model after school enrichment program. The program include: homework assistance, academic tutoring, art, conflict resolution, tae-kwon-do, science, nutrition, strategy games, storytelling and library club, tennis, music, Spanish, French and computer science. The program lasts 2 hrs and 30 minutes beginning with a snack time and homework assistance and end with an enrichment club. The children enrolled in this program are from kindergarten though fifth grades. Parent volunteers teach the classes and childcare services are available to any adult who participates in the classes. Each month, parenting education workshops are offered.

The intervention selected by the COPC team was an after school homework clinic run at the Mary's Center on a once a week basis staffed by volunteers from the staff and greater Washington Community.

Chapter 7
Intervention

Once an intervention has been identified and adapted to meet the needs of the target community, it is time to detail exactly how the intervention will precede. The success of a COPC intervention lies in careful preparation and in community buy-in.

COPC Team

The previously established COPC team will play a key role in leading an effective, organized and sustainable intervention. A typical COPC team is multidisciplinary consisting of staff members from the practice as well as community members. However, team members may also include individuals from different organizations or institutions or individuals with expert knowledge or experience about the particular health problem being targeted. Early on, the team should designate a spokesperson or leader and spell out each member's responsibilities during the intervention and evaluation phases. This group will be responsible for the planning, oversight and sometimes the day-to-day activities of the intervention. The decision as to how often the group will meet should also be established in advance. There may be a need to meet more frequently early on when planning is taking place and less frequently as the intervention progresses.

In addition to the team, the entire staff of the clinic should be kept up to date with program activities. Understanding and enthusiasm on the part of the staff can provide not only a smoothly running intervention but also a level of community credibility that often cannot be attained by staff that are not members of the community being served. Staff ownership of the COPC intervention is essential to the well-being and longevity of the program.

Targeting the Intervention

Depending on the intervention chosen and resources available, the COPC team may decide to focus on a subgroup of the target community, who may particularly at risk, such as children aged birth to 3 years in a Latino community. Initial focus can be placed on certain subgroups of the population with the eventual expansion of the intervention program to cover the remaining members of the community. The resources that are available for the program will at least in part influence this decision.

In rethinking the target community, it is important to determine the type of intervention the practice is capable of conducting. There are two main types of COPC interventions. A *practice-based* intervention consists of aiming the intervention at clients who are currently using the COPC practice. In contrast, a *community-based* intervention consists of targeting the intervention at community members in general which will include some practice users and some practice non-users. Ideally, an intervention will be both targeting practice users and reaching out to non-users of the practice. But depending on resources (i.e. manpower, time) and funding this may be unrealistic for some practices.

Intervention objectives

Deciding on the specific objective of the intervention builds on information collected and work done during the detailed assessment and is essential for directing the intervention activities as well as completing an evaluation of the program.

Most interventions are planned with one overall goal in mind (i.e. to decrease the prevalence of anemia among children aged 6 months to 6 years). Objectives are precise statements that map out the tasks and/or behavior changes necessary to reach this goal. The objectives of an intervention program must be formulated in measurable terms, in other words what the program intends to achieve in what period of time. (i.e. over the first year, to increase the percentage of children from 25% to 50% in the target community who are fed iron fortified cereal at the age of 6 months) These objectives are specific to the needs of the community. One community may have anemia due to high hookworm infestation, while another may

simply lack iron in their diet. Therefore, objectives to achieve the same goal may be different — hookworm treatment versus a campaign of education and behavior modification. In a comprehensive health care practice, the program might address all the sequential stages of the natural history of a condition. These would include the stage prior to onset of the condition (health promotion and primary prevention activities), the pre-symptomatic stage (early diagnosis activities), the symptomatic stage (treatment), and finally the outcomes and consequences of the condition (rehabilitation). COPC interventions are applicable to many practice settings whether it is preventive care, curative care or specialty care that is available. Interventions must be tailored to the resources available in a COPC practice.

Intervention Activities

Each program objective must have an accompanying program activity. It is important to distinguish between the program *objectives* (what we want to achieve) and its *activities* (how we are going to achieve it). Again, these activities are most often based on ideas collected during the detailed assessment and should be built on proven effective means of targeting health problems. Intervention activities can take the form of a mass media campaign, environmental modification, behavioral change, initiation of an immunization campaign, provision of medication, etc. The degree to which a program and its activities can be adapted and adopted from other settings should be examined carefully prior to implementation. The timing and frequency of application of the activity should also be determined in advance of implementation while allowing for the flexibility to address changing needs in the community and in the health care service.

The ability to create change within a community requires a very basic understanding of the community and its specific cultural norms, values and beliefs. The importance of learning from and communicating with the community has been mentioned several times during the COPC process and is essential for an effective and sustainable COPC intervention. This is where a community member as part of the COPC team is valuable. For example, attempting to institute a campaign to combat anemia via the use of iron-fortified cereals in a community that believes the use of processed foods is dangerous will certainly fail. It is important to communicate with community member to uncovered and understand community beliefs and

norms. However, cultural characteristics do not have to serve as a barrier, but may actually enhance an intervention if integrated into the program appropriately. Going back to our example, in our same community there may be a strong belief in the use of medications and a great compliance when they are prescribed.

Resources

Prior to the start of the intervention, resources that will be needed for the different aspects of the intervention program should be listed and secured. This includes manpower, funding, materials (e.g., stationery, educational aids, etc.) and equipment (e.g., scales, sphygmomanometers, syringes, refrigeration facilities, etc.) needed for the development and implementation of the program. In addition, a detailed budget should be put together which considers all the expenses that may be incurred in carrying out the program and where the funding will come from.

Timeline

At the beginning of the COPC process there should have been a basic timeline outlined and adhered to as much as possible. This helps individuals involved in the process to plan their time frame of involvement and in keeping the project moving forward at a reasonable pace. At the beginning of the intervention step a more detailed timetable should be developed to delineate when activities will occur as well as when evaluation activities will take place.

Record System

Record systems used by different practices vary immensely. Baseline data should be tabulated and available for use in the evaluation. The COPC team before the start of the intervention should decide on exactly what data is needed, the format of the data and how and when this information will be collected. Designating one or more team members responsible for this task will be useful. Different collection methods include surveys, interviews, and patient medical records. This may include new data that is not routinely collected in the pa-

tient's medical record. For example, a program focused on anemia in children should develop a method to deal with data on hemoglobin levels that may not be routinely collected and recorded.

Community Partnerships

Depending on the particular program chosen, there may be ongoing projects within the community targeting the same health problem or other particular strengths within the community that will enhance an intervention. Given this, working with other community individuals and organizations may increase the effectiveness and/or sustainability of the intervention. There may be opportunities to share resources and or responsibilities. It is important to be aware of potential resources within the community (i.e. community health promoters, lay health professionals). They provide a channel through which the community can receive information about the intervention and in return the practice can gain information on the communities needs and ideas.

Community buy-in recognizes a shared responsibility in implementation. Community partnership is an essential feature of any COPC intervention and is the most important factor in sustainability. The nature of community participation should be carefully considered from the very outset of the program planning. In each community, the nature of participation of its members will depend on, among other things, the level of organization of the community, the cultural and social characteristics of its members, and the expectations of the community and of the health care providers. The level of participation may range from passive participation (for example, compliance with the doctor's advice) to full partnership in the planning and implementation of the different aspects of the program. The dialogue and mutual respect between the health team and the community will often prove to be the most important component in the success of the program.

COPC Examples: Intervention

1. Example of Intervention (by Denise Greene)

The Intervention: Homework Center at Mary's Center

Targeting the Intervention: Teenagers

Intervention Objectives:

- To improve the grades and achievement of children within the Mary's Center community
- To improve attitudes about school
- To provide role models for children/ teens who use the Center
- To develop homework/ clinic concept and explore the utility in a primary care setting
- To assess the strength and weakness of the program.

Intervention Activities and Timeline

- A weekly one-to-one tutoring homework session will be held at the Center every Wednesday afternoon from 4:30 to 6:00 pm starting March the 10th 2004 in the Kalorama Building attached to the Center.
- The volunteers will be recruited from the George Washington undergraduate school, medical students and graduate public health students, starting February 2004. Dr. Schroeder provides tutoring training session with a brief orientation upon enrollment of volunteers to the program with tutoring packet. Volunteers will also sign a volunteer agreement or contract once enrolled. The first tutoring session was on March 3rd 2004.
- The children eligible for the program are from kindergarten to 12th grade. They will be divided in 2 groups: 1) kindergarten to fifth grade 2) six grade to 12th grade. The recruitment of children will start after recruiting the volunteers by distributing flyers at the Center and at the neighboring schools. At the beginning of the program, I did the recruitment at the schools. I went to HD Cooke elementary school, Mary Reed elementary school and Bruce Monroe elementary school. I presented the intervention and give flyers to the principal at HD Cooke and to the PTA representative at Bruce Monroe. At Mary Reed, I handed out the flyers only. I contacted some middle schools and high schools in the District: MacFarland middle school, Deal junior high school, and Cardozo senior high school. All 3 schools received flyers and information about the program. I also give flyers and program details to parents at Mary's Center and outside the Center: on the street and at the pediatrics center affiliated to Children's Hospital. The students recruitment started on March 4th 2004.
- The materials for the program were purchased. The materials include educational activities for the children who will finish their homework before the time. The materials include: flashcards, books, educational games, calculators, paper, rulers, pencils, pens and snacks, resources for tutors such as handbooks and tutoring packet.

2. Example of Intervention (by Maia Carter)

The Intervention: HIV/AIDS Education Video

Targeting Audience: Homeless African-Americans working from a base at the clinic at the Community for Creative Non-Violence Shelter in Washington, DC.

Intervention Objectives:

- Increase knowledge of HIV/AIDS among Homeless African-Americans

General Methods:

- Creation of a culturally sensitive video
- Combine three learning styles: Visual, Auditory, and group discussions
- Keep sessions short and interactive
- Provide sessions when residents are able to attend

Intervention Resources:

- Technical equipment: Video, Television, VCR
- Personnel: Program Director, Discussion group leaders
- Funding: American Red Cross, Federal grants, Pharmaceutical company grants
- Community Partners: Phoenix Outreach Team

Intervention Activities and Timeline:

- Secure cooperation from interdisciplinary team.
- Revise the resident survey to complement the video educational content.
- Seek funding assistance from shelters, organizations, pharmaceutical companies in the area that are concerned with prevention of the transmission of HIV/AIDS.
- Hire a video production team and secure volunteer actors.
- Create culturally sensitive colorful posters and leaflets.
- Schedule of times and location of sessions. Post them and verbally explain the sessions to all in-coming residents.
- Facilitator and moderator pre-assigned to each session everyday.
- Explanation of session to incoming residents in culturally sensitive terms.
- Sessions administered by staff residents and acceptable role models from staff.
- Post test re-administered at 1, 2, 3, month intervals if resident is still at the shelter.

Budget Considerations

- Video production team …. . …………………………………$2000
- Actors for the video……………………………………… Volunteers
- Television and VCR …… . ………………………………… On -site
- Printing of pre-test and post-test materials………………… $100
- Pencils……………………………………………………… On-site
- Secretary……………………………………………………Volunteer
- Promotional posters and brochures…………………………. $100
- Total cost to create intervention………………………………. $2,200

Chapter 8
Evaluation

Evaluation is the process of inquiry into the performance of a program. Evaluation provides evidence about what a program intervention has achieved and, as a consequence, the advisability of continuing or modifying the program. It provides the COPC team, the practice, and the community with empirical evidence as to the effectiveness of the program, what worked and what did not, and analyses of whether resources were used efficiently and successfully. Finally, evaluation can produce lessons for future interventions both in regard to substance and technique.

Evaluation should first be considered at the point when an intervention is selected and intervention planning begins. Evaluation will be most effective when it is planned in advance and least effective when it is attempted after the fact. Data for evaluation may need to be collected before or during an intervention; systems may need to be put in place to monitor the impact of an evaluation; and resources may need to be set-aside for subsequent analytic purposes. All of this need to be
thought through before an intervention goes live.

Surveillance

Surveillance is an important epidemiological concept. It covers a variety of activities that relate to the monitoring of health conditions. The term suggests that there is a system in place that will collect information over a period of time. Furthermore, that system will be able to identify health trends as well as unusual incidents. The classic model for surveillance is the tracking of infectious diseases, such as cholera or AIDS, but the term has much broader implications covering all biopsychosocial circumstances. Smoking among teenagers, breast cancer, and days missed from school due to illness are all subject to current surveillance systems. The term used in regard to COPC evaluation refers to monitoring or measuring systems that a practice would put in place to track the impact of an intervention.

Types of Evaluation

There are many theoretical and applied approaches to the science of evaluation. The selection of an approach to evaluation will be dictated to some degree by the nature of the intervention. An intervention, for instance, targeted at reductions in teen pregnancies will call for an evaluation that includes tracking birth rates in the practice community, whereas an intervention aimed at diabetes awareness might need to measure levels of knowledge concerning diabetes in the practice populations.

In general, one can talk of three general categories of evaluation, which are process evaluation, impact evaluation, and outcome evaluation.

- **Process Evaluation** examines the intervention system itself. It looks at such things as numbers of patients seen, numbers of individuals educated, numbers of contacts for a given prevention activity, etc. In a nutrition intervention, for example, it might measure the number of clients attending educational sessions or the number of sessions held. The qualitative aspects of the intervention process can also be measured. This would include feedback from clients about the nutrition classes or from patients about an educational intervention. Process evaluation is often the most readily available form of evaluation since virtually any intervention will put in place an activity whose process can be measured against the pre-activity baseline or against some other ongoing process. While this may not be the most elegant or definitive form of evaluation, it provides a firm basis for a quantitative commentary on virtually all types of COPC intervention.
- **Impact Evaluation** measures the immediate effects of an intervention activity on an individual or a population. Measuring weight change in obese individuals for whom a dietary education campaign is underway is an example of impact evaluation — what percent of individuals enrolled in the program experienced weight loss over what period of time. Impact evaluation has the advantage of measuring an immediate effect of a strategic intervention. Immediate effects, however, and long-term results are not always the same.
- **Outcome Evaluation** is the gold standard of evaluation science. Outcome evaluation measures (as much as possible) the long-term, final result of an intervention.

What is the impact on the incidence of strokes based on a hypertension reduction intervention or is there a demonstrable decrease in the number of new cases of HIV infection based on a campaign of safe sex education? Outcome evaluation has the appeal of definitiveness. When successfully measured, outcome evaluation links a targeted health intervention to a downstream health outcome. While the logic of this connection is very straightforward, surprisingly few current clinical interventions have a large body of outcomes research that supports them. This is the case because isolating the link between a given intervention (a procedure, medication, or therapeutic regimen) and a subsequent health outcome is very difficult to do because of (multiple) other factors that potentially contribute to the health outcome. In sum, an evaluation focused on outcome is enormously valuable when it can be achieved, but it is generally a difficult analytical challenge to undertake.

Evaluation and Cycling

The evaluation process is important not only for tracking and evaluating the initial COPC intervention, but also for positioning the practice to undertake future interventions. What is learned from the evaluation can help the practice make decisions about the advisability of undertaking similar or different types of interventions in the future. It can also provide insight into important questions that invite regular reconsideration, questions such as; is the COPC team optimally constituted to carry the project on; have sufficient resources been made available to maintain the COPC project; is the level of communications within the practice and throughout the community adequate? It is questions like these that the COPC team, the practice, and the community will need to answer in embarking on subsequent cycles of the COPC process. The evaluation step should provide useful input to this process.

COPC Examples: Evaluation

In October of 2002, the DC Health Care Alliance which provides health care for the uninsured in DC stopped providing prescription drug coverage for Medicare recipients. Thousands of seniors barely over the poverty threshold were affected. In order to provide medications to these seniors, the Department of Health and the DC Primary Care Association created the DC Pharmacy Resource Center (DCPRC). The DCPRC used existing pharmaceutical company's indigent drug programs to procure the needed medications. An initial evaluation of this program was conducted in 2003. The evaluations were conducted by compiling available data regarding the program and a patient satisfaction survey. The surveys were conducted over the phone.

Process Evaluation:

The survey evaluated some key aspects of the intervention process: client satisfaction -- 97.5% of the participants indicated they would recommend the DCPRC program to a friend, neighbor, or relative in need of medications. 82.5% reported being satisfied with no complaints or suggestions. Two important concerns that received multiple responses from the participants included not receiving medications on time (22.5%) and the inconvenience of having to pick up the medications at the providers' offices (22.5%). Overall, this showed that the process from the client's perspective was worth the effort.

No formal process evaluation was conducted with the health care providers; however, anecdotal evidence suggests that the program was understaffed and the coordination frustrating. The need was overwhelming in the individual health centers yet few had personnel to fill out the applications. Each application took a few minutes to fill out; multiply this by a number of medications per patient; multiply this by several hundred patients per health center. A provider survey is being developed currently.

Impact Evaluation:

As of December 2003, the DCPRC had enrolled 545 low-income DC seniors and requested over $1,000,000 worth of free medications for its' participants, averaging $2,804 per active enrollee. The number of eligible seniors at Congress Heights Health Center alone was 131 patients. The estimated figures of eligible seniors would probably reach a minimum of a thousand patients. This would mean that the DCPRC reached half of eligible seniors.

The average length of time during which the participants received medications from the DCPRC was 4.2 months, with a range of 1-6 months. Of all of the participants, 67.5% previously received their medications from the DC Alliance, 27.5% previously received their medications by paying out-of-pocket, and 5% previously received their medications free from other clinics. When asked if the participant had any difficulty in taking their medications as indicated prior to enrolling in the DCPRC, 85% of the participants indicated having no problems. The average number of medications received from the DCPRC per participant was 3 medications, with a range of 1 – 10. When asked if the individual required additional medications from what was provided from the DCPRC, 70% of the participants indicated needing additional medications. The average number of additional medications needed was 2, with a range of 1 – 10. Of the 70% of individuals who required additional medications, 92.8% of them obtain these medications by paying out-of-pocket

Outcomes Evaluation:

The participants indicated taking medications for a variety of diagnoses. The top five diagnoses included: 85% with diagnosis of hypertension, 60% diagnosed with diabetes, 32.5% diagnosed with hyperlipidemia, 12.5% diagnosed with gout, and 10% each diagnosed with asthma or heart problems. Left untreated, these conditions have significant health risks including death.

Participants were also asked about their use of healthcare resources before and after their enrollment in the DCPRC. When asked if since they had been enrolled in the DCPRC, the number of times they had been hospitalized increased, decreased, or remained the same from the year before they were enrolled in the program, 15% of the participants indicated an increase in the number of hospitalizations, while 40% indicated a decrease in the number of hospitalizations, and 45% remained the same. When asked if since they had been enrolled in the DCPRC, the number of times they visited their primary care provider had increased, decreased, or remained the same from the year before they were enrolled in the program, 85% indicated no change in their number of primary care visits, 12.5% indicated a decrease, and 2.5% indicated an increase in visits.

When asked whether the participant felt better about their health since receiving medications from the DCPRC, 80% indicated yes, 7.5% indicated no, and 12.5% indicated no change. When asked whether the participant felt as if their family finances had improved since receiving medications from the DCPRC, 57.5% indicated yes, 35% indicated no, and 7.5% indicated no change. Of the 35% that indicated that they had noticed no improvement in their family's finances, 64.4% were previously on Alliance, 28.6% were previously paying out-of-pocket, and 7.1% of individuals were receiving medications free from a community clinic.

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