

P-CAT

A Primary Care
Community
Assessment
Tool



TABLE OF CONTENTS

Background	2-3
Definitions and Indicators	4-7
P-CAT – A Primary Care Community Assessment Tool	8-9
Results of Maricopa County P-CAT Evaluation	10
Summary	11
References	12

INSERTS

Design and Use of P-CAT	Exhibit A
Maricopa County Community Access to Primary Care Summary	Exhibit B1
Health Outcome Results by Zip Code Percentages	Exhibit B2
Relationship Between Health Outcomes and Access Characteristics	Exhibits C & D

St. Luke's Health Initiatives, like many grant making organizations with a focus on health issues, receives numerous requests to help provide primary care services for vulnerable populations. Whether it's support for a free-standing clinic, a school-based clinic, or a clinic attached to a hospital, church or other nonprofit organization, the issue is always the same: Residents in specific geographical locations lack access to basic primary care and prevention services, and they want to do something about it.

But how do you determine need? After several years of receiving these requests, one SLHI Board member wondered out loud, "Do we need a health clinic on every corner?"

Why does a community think they need another clinic when there is a hospital clinic just three miles away? Does the clinic need to be open every day, or would a mobile clinic fill the need?

And what about the relationship between access to care and health outcomes? Why do some communities with few primary care clinics seem to have good outcomes, and some communities with several clinics seem to have poor health outcomes?

What kind of information do we need to make a decision on which project to support? Better yet, what kind of information do communities need to determine whether they actually need another primary care clinic, and whether there will be sufficient resources to keep it up and running once it's in operation?

DO WE NEED

"Do we need
a health clinic
on every corner?"

To get a handle on some of these questions with a specific focus on Arizona, SLHI investigated various information resources, talked to health professionals and community organizations, and consulted with health researchers. To no great surprise, we found that there's a wealth of data and information, but few good ways of organizing and interpreting it to answer critical questions. This led us to wonder whether we could come up with a tool that not only SLHI could use to help determine whether a specific primary care project ought to be supported, but also that communities themselves could use to help assess their health care needs and how they might go about addressing them.

The result is P-CAT – a Primary Care Community Assessment Tool. SLHI enlisted the services of Lynda Miller, a health consultant and researcher with a background in health systems, financial and outcome issues. With assistance from SLHI staff and input from various community groups, Ms. Miller researched background literature, developed the first iteration of P-CAT, and offered suggestions for its future application and refinement.

SLHI is disseminating P-CAT broadly across Arizona to individuals and organizations with an interest in primary care access and health outcomes issues, as well as making it available on our web site, www.slhi.org. It's important to note that this is the first go-around, and not a final product. We hope to get constructive feedback on how to refine and apply the tool, and work with organizations and advocates to insure equitable and affordable access to health care for all Arizonans who need it.

Finally, P-CAT is only one approach for helping to assess the need for primary care services in a particular community. SLHI's intent in developing and disseminating it is to encourage its use in combination with other tools and activities that help citizens think critically about assessing health needs in their own communities, and effectively mobilize their energy and resources to meet those needs. ✂

We hope to get constructive feedback on how to refine and apply the tool, and work with organizations and advocates to insure equitable and affordable access to health care for all Arizonans who need it.

DEFINITIONS

A good place to start a discussion of the issues surrounding access to primary care is with definitions of terms and approaches. Fortunately, a number of health organizations and professionals have provided multi-faceted descriptions of both primary care and access.

One of the most comprehensive definitions of primary care comes from the Maternal and Child Health Bureau (MCHB), 1994. Although the definition was written with specific application to children and teenagers, the following applies to all populations:

Primary care is the integration of services that promote and preserve health; prevent disease, injury and dysfunction; and provide a regular source of care for acute and chronic illnesses and disabilities. Primary care serves as the usual entry point into the larger health services system and takes responsibility for assuring the coordination of health services with other human services.

Another definition (Alpha Center n.d.) speaks to the provider's role in primary care:

Primary care is considered comprehensive when the primary provider takes responsibility for the overall coordination of the care of the patient's health problems, be they biological, behavioral, or social. The appropriate use of consultants and community resources is an important part of effective primary care. Such care is generally provided by physicians but is increasingly provided by other personnel such as nurse practitioners or physician assistants.

The Managed Healthcare Handbook, Third Edition (1996) further defines primary care physicians as "...internists, pediatricians, family physicians, and general practitioners and occasionally...obstetrician/gynecologists."

Several health authorities have also defined

access. The World Health Organization (1978) was the first to recognize that access could be achieved only through consideration of the individual characteristics of a community:

Accessibility implies the continuing and organized supply of care that is geographically, financially, culturally, and functionally within easy reach of the whole community...

In its definition of access, the Alpha Center (n.d.) also makes reference to certain characteristics, but in doing so, identifies the negative side of those characteristics as barriers:

Access: An individual's ability to obtain appropriate health care services. Barriers to access can be financial (insufficient monetary resources), geographic (distance to providers), organizational (lack of available providers) and sociological (e.g., discrimination, language barriers). Efforts to improve access often focus on providing/improving health coverage.

A third definition (Gulzar 1999) identifies the characteristics of access as both barriers and facilitators. This definition goes on to explain the link between access and improved health status.

The ability of people to access health care is influenced by health care system and user-related aspatial characteristics including need for services, sociocultural, psychological, financial, and attitudinal variables and geographic or spatial characteristics such as distance, architectural, and transportation variables which may be barriers or facilitators.

Barriers result in the inability of people to access health care. Facilitators enhance the use of health care services...

Efficient and effective access eventually results in improved health status, health outcomes, and quality of life as perceived and experienced by individuals, families, communities and providers.

Preferred Definition

These definitions help us to develop an understanding of the importance of access to primary care and the elements that determine success or failure. By condensing the primary points of each of these descriptions into one concise statement, a working definition of access to primary care was created for P-CAT:

Access to Primary Care: An individual's ability to obtain entrance into the health care system through care from a family practitioner, general practitioner, pediatrician, general internist, obstetrician, gynecologist, nurse practitioner or physician assistant. Ability to access the system is influenced by the following characteristics, which can serve as either barriers or facilitators:

- Sociocultural
- Financial
- Geographical
- Organizational

The outcome of successfully accessing primary care is improvement in health status.

INDICATORS

The World Health Organization (1978) was the first to recognize that access could be achieved only through consideration of the individual characteristics of a community.

Most of the instruments used to study access to primary care have been in the form of population-based surveys, which have proven to be an effective method for identifying the kinds of financial, sociocultural, geographical and organizational facilitators and barriers that can influence access to care to a significant degree.

In general terms, results of these population-based surveys most frequently emphasize two main categories of factors: Sociocultural and financial.

Race/ethnicity is often noted as an important sociocultural factor, and income is often mentioned as an important financial indicator. A wealth of data exist to indicate that minority populations and lower income families have a more difficult time obtaining health care than Caucasian and higher income families. For example, a Robert Wood Johnson Foundation survey (Berk, Schur, and Cantor 1995, 142) found that:

17 percent of Hispanics and 24.3 percent of African-Americans had difficulty obtaining health care, compared to 14.5 percent of whites.

24 percent of households with incomes below \$20,000 had unmet health care needs compared to 17 percent in households with incomes between \$20,000 – \$50,000 and 7.9 percent for those with incomes above \$50,000.

Similar findings are echoed elsewhere. The Community Tracking Tool from the Center for Studying Health System Change reported that Hispanic families found care harder to acquire than the average Caucasian family, and that 30 percent of families with incomes below the poverty line stated it was becoming more difficult for them to get care, compared to a 24

percent average for all families (Lesser and Cunningham 1997).

These sociocultural and financial issues are even more of a factor in Arizona. A telephone survey conducted in 1997 by the Centers for Disease Control and Prevention (CDC 2000) found that Arizona led the nation in the number of adults who reported cost as a barrier to obtaining health care:

Arizona numbers came in at 25.3 percent compared to the national median of 9.9 percent. Hispanics were above the median at 30.1 percent in Arizona compared to a 16.2 percent figure nationally.

Other financial indicators found to be relevant in a number of population surveys are employment and health insurance:

One analysis of the relationship between employment and health insurance noted that the working poor are more likely than the unemployed poor to lack health insurance (Guyer and Mann 1999, 2). The important point to underscore here is that employment cannot necessarily be viewed as a facilitator for access to health care when low income is also an issue.

At the same time, an Arizona survey sponsored by the Flinn Foundation found that those who are employed have less difficulty obtaining health care than those who are not (Louis Harris and Associates, Inc n.d.). The Flinn study reported that in 1995 only 7 percent of those families with health insurance found it difficult to obtain health care, compared to 22 percent of families without insurance.

Yet another survey on minority health status

LACK HEALTH INSURANCE

One analysis of the relationship between employment and health insurance noted that the working poor are more likely than the unemployed poor to lack health insurance.

linked the financial indicator of health insurance back to race/ethnicity (Collins, Hall, and Neuhaus 1999). Findings indicated that 38 percent of Hispanics and 24 percent of African-Americans were uninsured, compared with 14 percent of Caucasians.

A report based on two surveys addressing the issue of employer-sponsored health insurance found a disproportionately high percentage of African-Americans and Hispanics lacked health insurance compared to whites, despite all groups being offered employer-based coverage. The report surmised that the differences may be a result of lower incomes among minority workers, jobs that require a larger employee share of the cost of the insurance, and/or different cultural attitudes about maintaining health insurance (Cunningham, Schaefer, and Hogan 1999).

A survey found that low income uninsured persons had more difficulty accessing care in areas with high Medicaid managed care penetration (Center for Studying Health System Change 1999). Since the Arizona Health Care Cost Containment System (AHCCCS) is a managed care system and the only form of Medicaid available in Arizona, this finding is especially pertinent to the state. This same survey also

found that physicians who derive a high percentage of their income from managed care provide far less charity care than those whose income is only minimally impacted by managed care. These findings support the view that the financially competitive nature of managed care is eroding the safety net, which has traditionally been part of the American health care system in the form of charity care.

One obvious conclusion from the results of these and other population surveys is that the various sociocultural and financial indicators of facilitators and barriers to primary care are intertwined. Low income and minority status appear to be significant barriers, with unemployment, lack of health insurance and a high managed care penetration rate serving as additional indicators of limited access to primary care.

But what about connecting the ability to access care with health outcomes?

On that subject, the use of hospital stays as a proxy indicator for avoidable hospitalizations (Ambulatory Care Sensitive admissions, or ACS) is fast becoming popular (Center for Studying Health System Change 1997). This indicator, by noting the number of hospital stays that might have been avoided had the individual received primary and prevention services prior to admission, has a positive correlation with many of the socio-cultural and financial indicators listed above, as well as others:

A study sponsored by the Robert Wood Johnson Foundation compared survey participants' answers regarding access to care to the area's admission rate for five chronic conditions (asthma, hypertension, congestive heart failure, chronic obstructive pulmonary disease and dia-

BECOMING POPULAR

The use of hospital stays as a proxy indicator for avoidable hospitalizations is fast becoming popular.

betes). A strong association was found between access and preventable hospitalization rates (Bindman and others 1995, 31).

A study funded by the United Hospital Fund of New York and The Robert Wood Johnson Foundation looked at metropolitan areas in both the United States and Canada to determine the influence of low income on health outcomes (Billings, Anderson and Newman 1996, 247). The study found that, even in areas with high Medicaid or universal health coverage, low-income populations had higher ACS rates than their wealthier counterparts. The study concluded that the differences might be attributable to access barriers other than lack of health insurance faced by low-income families. Factors such as transportation, time off from work, childcare and disease prevalence were listed as examples of other cultural, operational or geographic conditions that may inhibit access to primary care.

All such studies illustrate that there are a variety of factors influencing access to primary care, and that many of them are linked to, or influenced by, one another in myriad ways that are often not well understood. The lesson to underscore for communities that wish to make a more careful determination of their need for primary care services is that access to care is a multi-layered problem requiring multiple solutions, and no one assessment tool or approach to the issue is likely to suffice by itself. ☘

The purpose of P-CAT is to serve as an aid in gaining a better understanding of the extent to which access to primary health care is a significant problem in specific Arizona communities. The central idea was to develop an instrument that was easy to administer, yet could provide some reasonable measurement of those factors identified above in the professional literature as important indicators of access to primary care.

The design of P-CAT began with a review of the project's working definition assembled from the many definitions found in the literature. We repeat it here for convenience:

Access to Primary Care: An individual's ability to obtain entrance into the health care system through care from a family practitioner, general practitioner, pediatrician, general internist, obstetrician, gynecologist, nurse practitioner or physician assistant. Ability to access the system is influenced by the following characteristics which may serve as either barriers or facilitators:

- Sociocultural
- Financial
- Geographical
- Organizational

The outcome of successfully accessing primary care is improvement in health status.

In looking to the definition for indicators to measure to determine whether a community has problems with access to primary care, the last line stood out. Determining the success of a community's ability to access primary care could first be determined by using health status indicators as outcome measures. Consequently, the measurement of outcomes became the primary component of the tool. If a community has successful health outcomes, then the issue of access to primary care is largely moot.

At the same time, health status indicators alone are not sufficient to assess where particular barriers to primary care exist for communities without successful health outcomes. Again, the financial, sociocultural, geographical and organizational characteristics of a community as outlined above could be further analyzed to determine where these barriers might lie.

A review of the professional literature confirmed the appropriateness of the elements selected from the project's working definition for designing P-CAT, and a number of studies provided specific examples of indicators that were selected for the tool:

Ambulatory care sensitive hospital admissions (preventable hospitalizations), as used in nationally recognized studies and cited by the Center of Health Systems Change as a popular measure for primary care access, was selected as P-CAT's main outcome indicator.

Low birth weight and infant mortality rates, two well-established public health measures, were chosen as secondary outcome indicators.

A low income rating was selected as P-CAT's primary indicator of a community's financial characteristics.

A minority race percentage was selected for use as the tool's primary sociocultural indicator.

A transportation rating was selected as a community's geographical indicator.

The ratio of primary care providers to population was selected as a community's organizational/operational indicator.

Even though these indicators have been validated by studies that link them to potential problems with access to primary care, it is important to stress that none of them, either individually or collectively, has a necessary or causal relationship to access to health care. Taken together, they

provide one assessment of potential problems with that access and offer a context for further investigation. For example, if a community has a low score on the transportation index, citizens may want to think carefully about where they place a new primary care clinic; state health officials may want to look first at communities with a high P-CAT score for the allocation of scarce primary care health resources instead of looking first at communities with low scores on the various indexes, etc. Phrased differently, P-CAT is meant to be used as an initial screening and interpretive tool, and not as a diagnostic, predictive or prescriptive tool.

Once the primary indicators were selected, the next task was to find and collect the relevant data and make it easy for the end user to apply to specific Arizona communities. Fortunately, a single source for these indicators already exists in Arizona: the Primary Care Area Profile – a report prepared by the Arizona Department of Health Services/Bureau of Health Systems Development that is updated annually and made available on the Internet through the Department of Health Services web page at www.hs.state.az.us/hsd/profiles/index.htm. In addition to the published data by primary care area, special data runs by other units of measure (e.g., census tract, block group and zip code) are available upon request from the Bureau of Health Systems Development. For further information, contact Rodney Cluff, PCA Database Administrator, at 602-542-1219 or by e-mail at rcluff@hs.state.az.us. P-CAT defines a community first as a zip code area: the user can designate specific zip code areas either individually or collectively, note the P-CAT score for those designated areas, and begin to make a critical assessment on the need for primary care access.

P-CAT DESIGN AND USE

P-CAT is a norm-based assessment tool. That is, norms are established from an average of indicators taken from a large population – in this case, the entire population of Maricopa County – and the averages of indicators within specified communities defined by zip code are then compared to the larger norm set. If they exceed the norm, each is assigned one or two points, the magnitude of which is determined by the importance of the indicator in the primary care literature:

Health Outcome Characteristics

Ambulatory care sensitive hospital admissions	2 points
Infant mortality rate	1 point
Low birth weight	1 point

Financial, Sociocultural, Geographical, Organizational Characteristics

Race/ethnic categories	2 points
Income	2 points
Transportation	1 point
Primary care provider ratio	1 point

The point to stress here is that P-CAT is an interpretive, and not a diagnostic tool. A total score that is higher than the Maricopa County average score for any particular category illustrates only that a potential problem with access to care might exist and should be investigated further. P-CAT is the starting point, and not the final destination, in the community assessment process.

More specific information on the design and use of P-CAT is found in **Exhibit A**. ☞

P-CAT was tested by applying it to the 105 zip codes of Maricopa County. Since the zip codes vary in population from 563 to 100, 235, individual zip codes on either end of the spectrum may warrant additional analysis for statistical validity. Overall, however, the evaluation succeeded as general indicators of access barriers and facilitators, and in linking health outcomes to key characteristics.

EXHIBIT B1 presents the results for each zip code according to number of points scored on the evaluation, starting with those having the highest points, and thus having the most significant indicators of access barriers.

EXHIBIT B2 provides health outcome results by zip code percentages.

EXHIBITS C & D illustrate the relationship between health outcomes and access characteristics:

Exhibit C breaks down the twenty zip codes for which all three health outcome indicators were found to be above average by their access characteristics. Its significance lies in the fact that where all three health indicators are above average, every zip code displays at least two above average characteristics: one of them is always low income status, and the race/ethnicity factor is above average in 85 percent of the zip codes.

Exhibit D illustrates the extent to which characteristics identified as access barriers may still exist for those 29 zip codes with no health outcomes above average. Over 41 percent displayed no above average characteristics whatsoever. In another 34 percent, only the population to primary care provider ratio was above average. Minority race/ethnicity, alone or with other characteristics, was above average in 24 percent of the cases, while low income in conjunction with other indicators was present in only 13.8 percent.

national studies that underscore the significant influence that financial and sociocultural characteristics have over access to primary care, while the operational and geographical characteristics are less of a factor.

The results of this first evaluation of P-CAT point us in the right direction to identify and address access to primary care problems, but they are only a beginning. They provide a map for identifying where to search and, to some extent, what to look for. Digging beyond general averages to the exact numbers for each community might help to further pinpoint individual community problems; combining certain zip codes or splitting them out may also produce useful information. Because Arizona's Primary Care Area Profile database is built on census blocks and provides additional characteristics to those presented here, further analysis may be done using various configurations to isolate a particular problem. The information is continually updated, so analyses may be repeated on a periodic basis. Looking into communities that illustrate no negative outcomes despite having characteristics which otherwise might be seen as barriers might also provide interesting findings on what works and what doesn't in preventing access to primary care problems; the same is true for investigating communities with high negative outcomes.

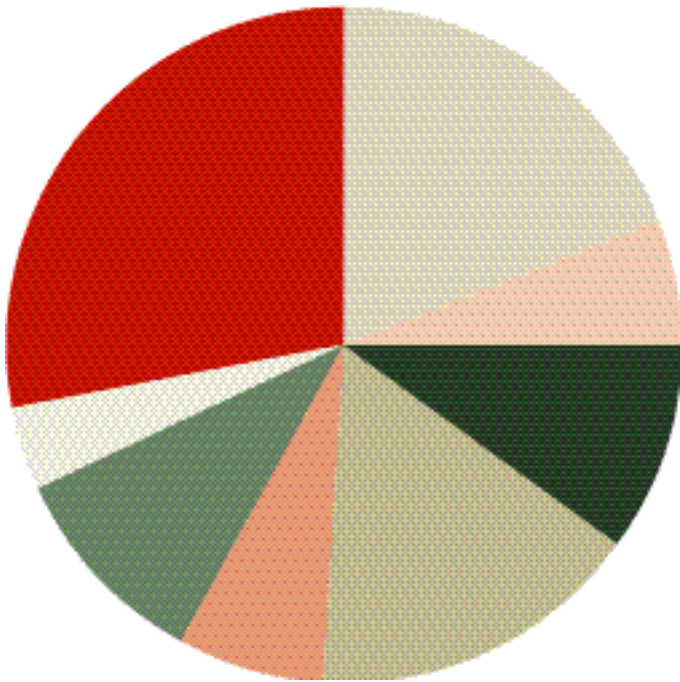
St. Luke's Health Initiatives hopes to update P-CAT on an annual basis and make it available through our web site at www.slhi.org. ☘

These findings further support numerous

The following points underscore both lessons learned and relearned:

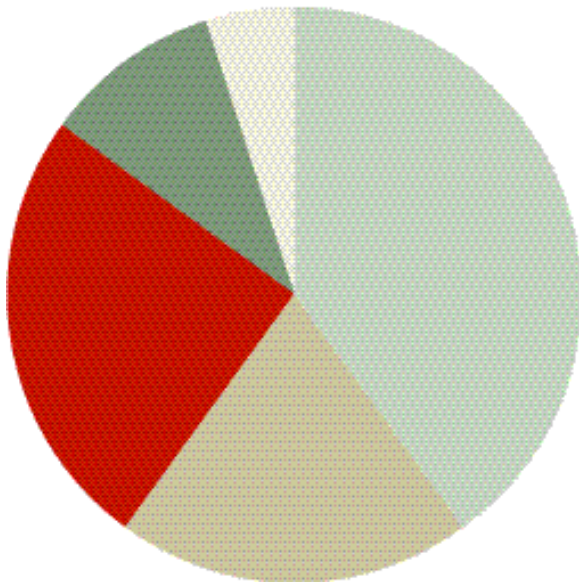
- ⌘ The purpose of primary care, as the preferred gateway into the health care system, is to prevent disease and preserve health. Barriers of the type described often block access, and this results in poor health outcomes.
- ⌘ Arizona is hardly alone among the states in having its share of access to care problems. This is most likely heightened by our state's competitive managed care environment in both the private and public sectors.
- ⌘ Access to primary care problems in Arizona need to be measured and analyzed in order to find and apply solutions appropriately.
- ⌘ P-CAT is an example of how publicly available data may be used to identify and analyze potential access to primary care problems.
- ⌘ The results of the first application of P-CAT to the zip codes of Maricopa County identified specific areas of concern. By building on those results through application of the tool to other areas around the state, as well as through the performance of more intensive analyses of specific areas of concern, a clearer picture of problems and a better understanding of how to address them may emerge.

- Alpha Center Policy Resources. n.d. Glossary of Terms Commonly Used in Health Care. Database on-line. Available at <http://www.ac.org/httpdocs/publications.html> (accessed 26 July 1999).
- Berk, Mark L., Claudia L. Schur, and Joel C. Cantor. 1995. Ability to Obtain Health Care: Recent Estimates from the Robert Wood Johnson Foundation National Access to Care Study. *Health Affairs* 14, no. 3:139-146.
- Billings, John, Geoffrey M. Anderson, and Laurie S. Newman. 1996. Recent Findings on Preventable Hospitalizations. *Health Affairs* 15, no. 3: 239-249.
- Bindman, Andrew B., Kevin Grumbach, Dennis Osmond, Miriam Komaromy, Karen Vranizan, Nicole Lurie, John Billings, and Anita Stewart. 1995. Preventable Hospitalizations and Access to Health Care. *JAMA* 274, no. 4: 305-311.
- Centers for Disease Control and Prevention, 2000. Office of Communication Media Relations. New CDC report identifies state-by-state gaps in health risk factors for racial and ethnic groups. Available at <http://www.cdc.gov>.
- Center for Studying Health System Change. 1997. Access to Health Care: Bridging the Gap Between Policy and Research. Issue Brief (April), no. 8. Available at <http://www.hschange.com>.
- Center for Studying Health System Change, 1999. Managed Care Cost Pressures Threaten Access for the Uninsured. Issue Brief (March), no. 19. Available at <http://www.hschange.com>.
- Collins, Karen Scott, Allyson Hall, and Charlotte Neuhaus. 1999. *Minority Health: A Chartbook*. The Commonwealth Fund. 14 May. Available at <http://www.cmwf.org>.
- Gulzar, Laila. 1999. Access to Health Care. *Image: Journal of Nursing Scholarship* 31, no. 1:13-19.
- Guyer, Jocelyn and Cindy Mann. 1999. *Employed But Not Insured: A State-By-State Analysis of the Number of Low-Income Working Parents Who Lack Health Insurance*: Center on Budget and Policy Priorities. Washington D.C.
- Kongstvedt, Peter R., ed. 1996. *The Managed Care Handbook*. 3rd ed. Gaithersburg, Maryland: Aspen Publishers.
- Lesser, Cara and Peter Cunningham. 1997. Access to Care: Is It Improving or Declining? Center for Studying Health System Change Data Bulletin (September), no. 1. Database on-line. Available at <http://www.hschange.com>.
- Louis Harris and Associates, Inc. n.d. *Health Care in Arizona 1995 vs. 1989*. The Flinn Foundation, Phoenix, Arizona.
- Maternal and Child Health Bureau. 1994. *Primary Care for Children and Adolescents: Definitions and Attributes*. Rockville, Maryland: Health Resources and Services Administration, DHHS.
- World Health Organization (WHO). 1978. *Primary Health Care*. Report of the International Conference on the Primary Health Care, Alma Ata, 6-12 September. Geneva, Switzerland: Author.



- 19% (20) All Outcomes Over Average
- 6% (6) ASC & IM Over Average
- 10% (11) ASC & LBW Over Average
- 16% (17) ASC Only Over Average
- 7% (7) IM & LBW Over Average
- 10% (11) IM Over Average
- 4% (4) LBW Over Average
- 28% (29) No Outcomes Over Average

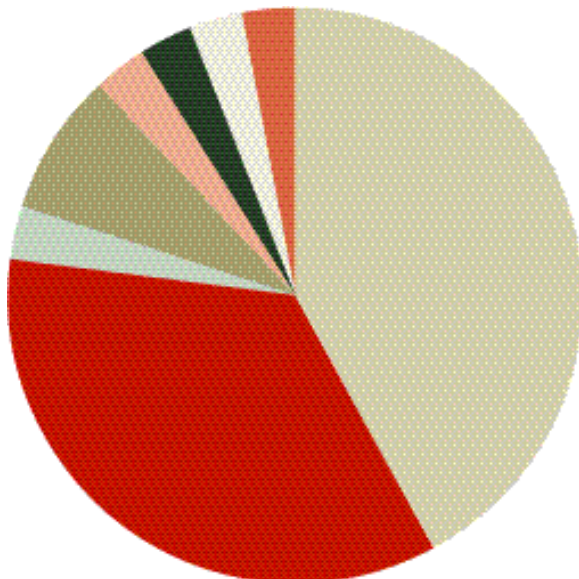
Breakdown of Characteristics by Zip Code Percentages for Zip Codes with All Health Outcomes Above Average



- 40% (8) All Characteristics Over Average
- 20% (4) Low Race, Income & Pop: PCP Over Average
- 25% (5) Low Race, Income & Trans Over Average
- 10% (2) Low Income, Trans & Pop: PCP Over Average
- 5% (1) Low Income & Trans Over Average

EXHIBIT C

Breakdown of Characteristics for 29 Zip Codes with No Health Outcomes Above Average



- 42% (12) No Characteristics Over Average
- 35% (10) Pop: PCP Over Average
- 3% (1) Race, Low Income Over Average
- 8% (2) Race, Income & Pop: PCP Over Average
- 3% (1) All Characteristics Over Average
- 3% (1) Race & Pop: PCP Over Average
- 3% (1) Race & Trans Over Average
- 3% (1) Race Over Average

EXHIBIT D