IMPROVING COMMUNITY HEALTH

SINAI

SINAI HEALTH SYSTEM

IMPROVING COMMUNITY HEALTH SURVEY

REPORT 2

SEPTEMBER 2005

This report was produced by:

SINAI URBAN HEALTH INSTITUTE

Kristi Allgood, M.P.H.
Jade Dell, M.A.
Melanie Estarziau, M.P.H.
Ami M. Shah, M.P.H.
Abigail Silva, M.P.H.
Steven Whitman, Ph.D.

Send comments, questions and requests for additional copies to:

Ami M. Shah, Project Director
Sinai Urban Health Institute
Mount Sinai Hospital
1500 South California, K-439
Chicago, IL 60608
773-257-6569 (phone)
773-257-5680 (fax)
suhi@sinai.org
http://www.sinai.org/urban/index.asp

Print version available for $30; CD-ROM for $5
Make checks payable to Sinai Health System
All proceeds go toward the publication of additional Sinai reports

This report is also availble on the web at:
http://www.sinai.org/urban/publications.asp

Suggested Citation:

Shah AM, Whitman S. Sinai Health System's Improving Community Health Survey: Report 2. Chicago, IL: Sinai Health System, September 2005.

Sinai Health System's Improving Community Health Survey

REPORT 2

SEPTEMBER 2005

SINAI

Funded through generous support from The Robert Wood Johnson Foundation
Grant #043026 and The Chicago Community Trust Grant #C2003-00844

SINAI

Sinai Health System

To Our Colleagues and to Those We Serve:

For over 85 years, the Sinai Health System has been dedicated to providing medical care and social services to some of Chicago's poorest communities. We not only provide health care but also take pride in our efforts to understand, reach out, and improve the overall health of the communities in which our patients live.

In 2000, the Sinai Health System created the Sinai Urban Health Institute (SUHI) for several reasons. One of them was because we believe it is necessary to understand how an individual's living situation, community resources, and access to services all interact to help determine his/her health.

In an effort to better understand the many factors influencing the health of a community, SUHI conducted *Sinai's Improving Community Health Survey* in 2002-2003, supported by The Robert Wood Johnson Foundation. The information gathered revealed important community-level risk factors and some never before documented disparities in health. Ten key findings were published as Report 1 of the survey findings (in January, 2004) and ten additional findings are described in the pages that follow.

The goal, however, was not to merely publish another research report. With support from The Chicago Community Trust during the past year, the Sinai Health System has been able to demonstrate substantial success in using community level health information from Report 1 to bring greater resources and more equitable health policies to some of the surveyed communities, and others beyond them. We hope that the data and analyses presented in this report will have a similar impact.

The Sinai Health System has a vision of becoming a national model for the delivery of urban healthcare. We measure community health because we value and care about not only the individuals that walk through our doors but also the larger community we serve.

We are thus pleased to present ten more key findings in *Sinai's Improving Community Health Survey: Report 2*. We hope that we (in the largest collective sense) will be able to use this information to continue to improve the health of the communities and many like them in urban settings across the nation.

Sincerely,

Alan H. Channing
President and CEO
Sinai Health System

Table of Contents

Executive Summary i

Section 1. Introduction 1

Section 2. The Communities 4

Section 3. Development of the Survey 6

Section 4. Data Collection and Analysis 9

Section 5. Ten Key Survey Findings 12

- Topic 1. High Blood Pressure 13
- Topic 2. Arthritis 18
- Topic 3. Adult Physical Activity 22
- Topic 4. Child Physical Activity 26
- Topic 5. Healthy Eating 30
- Topic 6. Food Shopping 34
- Topic 7. Binge Drinking 38
- Topic 8. Breast Cancer Screening 42
- Topic 9. Cervical Cancer Screening 46
- Topic 10. Colorectal Cancer Screening 50

Section 6. Racial and Ethnic Disparities 54

Section 7. Overarching Policy Implications 56

Section 8. Translating Survey Findings Into Action 58

List of Figures and Tables

Section 2. The Communities

Figure 1 Chicago Community Area Map 4
Table 1 Demographic Characteristics of Six Community Areas Compared to Chicago and U.S., Census 2000 4

Section 3. Development of the Survey

Box 1 Survey Design Committee Members 6
Box 2 Survey Topics 7

Section 4. Data Collection and Analysis

Figure 1 Survey Logo 10
Table 1 Number of Adult and Child Interviews 10

Section 5. Ten Key Findings from the Survey

Topic 1. High Blood Pressure

Figure 1.1 Percent of Adults Diagnosed With High Blood Pressure (Age-Adjusted) 13
Figure 1.2 Percent of Adults Diagnosed With High Blood Pressure by Age Group 14
Figure 1.3 Percent of Adults Diagnosed With High Blood Pressure Who Are Currently Taking Prescription Medications 15
Table 1.1 Percent of Adults Affected by Selected Health Conditions With and Without Diagnosed High Blood Pressure 15

Topic 2. Arthritis

Figure 2.1 Percent of Adults With Physician Diagnosed Arthritis (Age-Adjusted) 18
Table 2.1 Risk Factors Associated With Arthritis 19
Table 2.2 Burden of Disease Among Adults (≥ 45 Years) With Physician Diagnosed Arthritis 19

Topic 3. Adult Physical Activity

Figure 3.1 Percent of Adults Who Are Active, Somewhat Active and Inactive 22
Figure 3.2 Percent of Adults Who Are Active 23
Figure 3.3 Reasons Why Some Say They Get Less Physical Activity Than Needed 23

Topic 4. Child Physical Activity

Table 4.1 Television Viewing and Participation in Physical Education Among Children (6-12 Years) 26
Figure 4.1 Percent of Children (6-12 Years) Who Played On At Least One Sports Team During The Past 12 Months 27

Topic 5. Healthy Eating

Figure 5.1 Percent of Adults Who Eat Fast Food or Fried Foods Four or More Times A Week and Percent Who Are Obese 30
Table 5.1 Reasons Adults Say They Do Not Eat Healthier 31
Figure 5.2 Percent of Adults Who Say They Eat Too Much Most of the Time or Always by Weight Status 31

Topic 6. Food Shopping

Figure 6.1 Percent of Adults Who Commute to the Grocery Store 34
Figure 6.2 Percent of Adults Who Grocery Shop Once A Month or Less 35
Figure 6.3 Percent of Adults Who Rely on Public Transportation 36

Topic 7. Binge Drinking

Figure 7.1 Percent of Adults Who Are Binge Drinking By Race/Ethnicity 38
Figure 7.2 Percent of Adults Who Are Binge Drinking By Sex 39
Figure 7.3 Percent of Adults Who Are Binge Drinking By Age 39

Topic 8. Breast Cancer Screening

Figure 8.1 Female Breast Cancer Mortality, Chicago 1980-2001 (Age-Adjusted) 42
Figure 8.2 Percent of Women (≥ 40 Years) Who Had A Mammogram In the Last 2 Years 43
Figure 8.3 Reasons Why Women Never Had A Mammogram 43

Topic 9. Cervical Cancer Screening

Figure 9.1 Cervical Cancer Incidence and Mortality, U.S. 1973-2001 (Age-Adjusted) 46
Figure 9.2 Percent of Women Who Had A Pap Smear In the Last 3 Years 47

Topic 10. Colorectal Cancer Screening

Figure 10.1 Percent of Adults (≥50 Years) Who Ever Had A Fecal Occult Blood Test (FOBT) 50
Figure 10.2 Percent of Adults (≥50 Years) Who Had A Sigmoidoscopy or Colonoscopy Screening Exam 51

Executive Summary

Introduction

This report presents ten key findings from what is likely the largest door-to-door, community health survey ever carried out in Chicago. It was conducted by Sinai Health System's research arm, the Sinai Urban Health Institute, and presents information about 1,700 scientifically selected households in six Chicago community areas. Many of the findings from the survey reveal dramatic, never-before-known information about the health and well-being of the residents of the city. In addition, many findings are illuminating in their comparison to national and citywide statistics and in advancing our knowledge about health disparities in Chicago.

More importantly, this report offers insights on how to improve community health. We suggest policy considerations, which describe ways of improving the delivery of health care services, encouraging individual healthy behavior, and better understanding the broader context of societal factors that influence urban health.

In January 2004, we published the first set of results from this survey as *Sinai's Improving Community Health Survey: Report 1*. Report 1 contains information on ten key topics, including insurance status, diabetes, smoking, asthma, obesity, HIV/AIDS, and health-related quality of life. This publication, Report 2, contains analyses of ten more, including high blood pressure, arthritis, physical activity, healthy eating, food shopping, binge drinking and cancer screening.

Background

Surveys are frequently conducted to collect information about health. Some are conducted for the country as a whole, some are conducted on a state-by-state basis, and a few are available to describe the health of counties or cities. No survey data, however, are routinely gathered to describe health at the local level, even though it is at this level that health improvement interventions are best implemented. This limits our ability to understand and improve the health of communities. If we do not understand the health of individuals within specific communities, it becomes challenging to develop effective interventions to improve the health and quality of life of Chicago residents. Furthermore, without this type of information, it is difficult to prioritize where efforts are most needed, to create community-level solutions that reflect the beliefs and every-day realities of local residents, and to address existing health disparities.

This is especially important in a city like Chicago. In this city, information is collected and health services are arranged according to 77 community areas (as designated by sociologists at the University of Chicago more than 60 years ago and recognized officially by the city of Chicago and virtually all public health organizations). Health in these local areas varies significantly. Thus, what is true for Chicago as a whole is not necessarily true for each community area. In fact, studies carried out at the Sinai Urban Health Institute demonstrate that even adjacent communities, like North Lawndale and South Lawndale, may differ substantially in many aspects of health. Failure to appreciate these differences will greatly limit any attempts to improve the health of Chicago residents.

Based on this need for local health information, the Sinai Urban Health Institute decided to implement a door-to-door household survey of selected community areas in Chicago. Generous funding from The Robert Wood Johnson Foundation (for the period January 2002-May 2004) enabled this survey to be conducted. The work funded by this grant had two main goals:

- To document the health status of selected community areas;
- To use this community level information to improve access to health care and the delivery of health services; attract additional resources; and stimulate new, collaborative efforts to improve the health of Chicago residents.

As of May 2004, the survey data had been collected and we had just begun to implement efforts to stimulate new interventions and reshape policy initiatives to achieve these project goals. At this point, Ada Mary Gugenheim of The Chicago Community Trust stepped forward and expressed an interest in receiving a proposal to continue these efforts. We were fortunate to have our proposal accepted and to receive two more years of funding. One of the many activities that has been facilitated by this funding is the preparation of this report.

Methodology

Section 2 of this report introduces the six community areas selected for this study. They are North Lawndale, South Lawndale, Humboldt Park, West Town, Roseland, and Norwood Park. Four of these areas are located slightly west of the downtown area, one is on the far south side and another is on the far north side. One of the main reasons these communities were chosen is because they represent the rich racial, ethnic and socioeconomic diversity of Chicago.

Section 3 describes the survey design process. A survey design committee (SDC) was organized and met bi-weekly for three months to select the topics that would appear on the survey. The SDC consisted of community members who were affiliated with social service agencies, government and educational programs, local community-based organizations and three vice presidents of the Sinai Health System. Ultimately, the committee members agreed on a final list of topics for the survey, with 469 questions in the Adult Module and 144 in the Child Module. These topics can be categorized as follows:

- health conditions (e.g., hypertension, depression, other chronic conditions)
- health behaviors and attitudes (e.g., eating habits, tobacco or alcohol use, physical activity)
- health care access (e.g., insurance coverage, access to primary care)
- quality of life (e.g., perceived stress, self-rated health)
- and other social or environmental factors (e.g., perceived racism, violence, acculturation).

The questions were selected (whenever possible) to be comparable to questions asked on national and state surveys. This assumes that the questions have been validated and allows us to make comparisons with the data we obtained from these six community areas.

Section 4 describes data collection and analyses. Respondents were chosen by first selecting census blocks from each community area, then households from each block, and then adults and children from each household. Households were chosen in a scientific manner to try to guarantee that the sample is representative of each community area surveyed. Interviews were conducted in the homes of the respondents in either English or Spanish and lasted approximately one hour. Each household was given $40 for completing the adult portion of the survey and $20 for the child portion. A substantial packet of health literature was also left with each household.

The survey was conducted between September 2002 – April 2003. A total of 1,699 adult interviews and 811 child interviews were completed.

Ten Survey Findings

The basic demographics of the respondents were similar to those indicated by the 2000 Census (Section 2). Almost all of the respondents in North Lawndale and Roseland were African American, while most of those in South Lawndale were Mexican and most in Norwood Park were White. In Humboldt Park, about half were African American, a quarter were Mexican and a quarter were Puerto Rican. In West Town about half were White, a quarter were Mexican and a quarter were Puerto Rican.

Ten separate (though inter-related) findings from the survey are presented in Section 5 of this report (adding to the ten that were presented in Report 1). For each topic we present background, survey data and related policy considerations.

Topic 1. High Blood Pressure

The prevalence of high blood pressure (HBP) is on the rise. Consistent with national surveys, we asked adults if they were ever told by a health professional that they have HBP. Nationally, 24% of adults report that they have been diagnosed with HBP compared to approximately 40% of adults in certain community areas, specifically North Lawndale and Roseland, two predominately African American communities. The survey also identified important disparities in the prevalence of HBP by race/ethnicity and age. For instance, 33% of Puerto Ricans surveyed have been told that they have HBP compared to 17% of Mexicans surveyed and 24% of Hispanics nationally. Younger adults in African American communities were more likely to have ever been diagnosed with HBP compared to younger adults in other communities.

The survey also highlights important gaps in the management of HBP. Only two-thirds of those told they have HBP are taking any prescription medication to control it. Lastly, those diagnosed with HBP are also more likely to have other chronic conditions such as diabetes, heart problems and obesity.

Policy Considerations

Addressing high blood pressure involves changes not only by the individual, but also by society. First, individuals should become more aware of the risk

factors for HBP (such as smoking). They should also be better informed on how to monitor their blood pressure, avoid risk factors associated with HBP, and recognize signs of pre-hypertension. A particular focus should be placed on young African Americans who are at increased risk of suffering from hypertension and its consequences. Second, there are societal level changes that are necessary. These include access to universal health coverage, the ability to engage in daily physical activity, the availability of healthy food options, and access to mental health services and stress management programs. Without these societal level resources that reinforce healthy and stress-free lifestyles, controlling one's blood pressure will continue to be a challenge.

Topic 2. Arthritis

Arthritis is a chronic medical condition that causes pain, stiffness, and swelling in and around the joints. Risk factors associated with arthritis are obesity, infection, and occupational and sports injuries. Because arthritis limits the daily activities of millions of adults and children, it is widely considered the leading cause of disability in the U.S.

Community residents were asked, "Have you ever been told by a doctor or other health professional that you have arthritis?" Residents in West Town reported the highest proportion of physician diagnosed arthritis (PDA) (27%) and those in South Lawndale reported the lowest (9%). Four of the six community areas surveyed have rates higher than the U.S. (20%). The survey found that women were more likely to report PDA than men (21% vs. 14%). The prevalence of arthritis increased with age, ranging from 7% among adults 18-44 years to 53% among adults 65-75 years. Non-Hispanic Blacks (26%) and Puerto Ricans (29%) were more likely to report PDA than Mexicans (5%) and non-Hispanic Whites (17%). The survey also found that quality of life measures (such as self-rated health, depression, activity limitations, and experience of pain) were all compromised for persons with PDA compared to those without PDA.

Policy Considerations

Early and appropriate diagnosis, access to ongoing care, and education about the importance of regular physical activity and weight management will go a long way toward preventing and managing arthritis. Access to such programs and services must be available and affordable if improvements in quality of life are to be made. Lastly, equal opportunity in access to joint replacement must be extended to all who seek this medical option.

Topic 3. Adult Physical Activity

It is recommended that adults engage in some level of moderate physical activity. Adults are classified as being *active* if they report engaging in 30 minutes of moderate physical activity for 5 or more days of the week. The survey found that respondents from South Lawndale were least active (15%) and respondents from West Town were most active (36%), compared to 47% nationally. Although the proportions of *active* respondents were low, the proportions stating that they are *somewhat active* (that is, not meeting the *active* requirements but engaging in some level of activity) were fairly high (44-65%). Overall, men and women reported similar levels of moderate physical activity. In South Lawndale, 42% of individuals were inactive, reporting no physical activity. Motivation (39%), time constraints (33%) and health (12%) were cited as the main reasons for not getting enough physical activity.

Policy Considerations

We recommend greater social awareness and educational campaigns that utilize the TV, radio and print media to promote physical activity. These campaigns should explain how and why it is important to lose weight and maintain a healthy weight. Second, policy makers need to promote mixed land use, such as building parks with safe walking and biking trails for every new road or building. Ensuring that individuals have access to affordable fitness centers or gymnasiums is also important in promoting physical activity. Such urban planning has been shown to increase physical activity by up to 70 minutes per week. Lastly, research suggests that physicians are only counseling about one-third of adult patients to become more active and only 42% of obese patients are advised to lose weight. Thus, we also recommend that clinics, hospitals, medical schools, and Continuing Medical Education programs offer courses or seminars on exercise and weight counseling. While promoting physical activity requires a change in individual behavior, society is likewise responsible for creating an environment that is conducive to active living.

Topic 4. Child Physical Activity

In general, children view 2 or more hours of TV a day. The average number of hours ranged from 2 hours in Norwood Park to 4.3 hours in Roseland compared to 4.4 hours per day nationally. Since TV time is generally inactive time, we also looked at the proportion of children attending daily physical education (PE) class. The survey found that only 3% of elementary school students in West Town and 20% in North Lawndale are participating

in daily PE compared to 8% nationally. Unfortunately, the small proportion of children participating in daily PE combined with the high proportion of children watching a lot of daily TV leads to many children becoming increasingly overweight and obese. The survey also found that participation in organized sports varies widely. For instance, 63% of children in Norwood Park participated in an organized sport during the last 12 months compared to 33% in Roseland, 25% in Humboldt Park, and 16% in South Lawndale.

Policy Considerations

While the focus on reducing TV time is important, it must be done concurrently with an increase in time engaged in physical activity. Because these two factors go hand in hand, we encourage school-based interventions that challenge children to "turn off" the TV and increase participation in daily PE class. We recommend that programs for children also involve parents. Parents and caretakers of children must know how to recognize a child with an unhealthy weight and understand how to intervene appropriately. It is up to health professionals and program developers to inform the public about the dangers of pediatric inactivity and to educate parents and children how to be active from an early age. We recommend that parents participate in physical activities with their children, for example biking or walking together as a family. This will not only increase the activity levels of those involved, but also promote family time and make parents role models for their children.

Lastly, Illinois is currently the only state that mandates daily PE for all public schools. However, applying for a PE waiver to eliminate or significantly reduce PE is too easy. Thus, we encourage parents, teachers, and community members to advocate for having daily PE incorporated back into their community's school curriculum. They can do this by contacting their local representatives and discouraging them from granting PE waivers so easily.

Topic 5. Healthy Eating

Eating a healthy diet plays a major role in maintaining good health, increasing quality of life, and preventing the onset of several chronic conditions. Data from the survey show that community areas with the highest rates of obesity also consume the most fast foods or fried foods. For example, residents from North Lawndale, the community area with the highest obesity rate, were more than two times as likely to eat fast food or fried foods as residents from Norwood Park, the community area with the lowest obesity rates. We also asked adults how often they eat too much at meal times. Those who are obese (Body Mass Index (BMI) ≥30) were about 6 times more likely to eat too much at meal times compared to normal or underweight respondents (BMI <25).

Furthermore, we asked why respondents were not eating healthier. The survey found that between 13% and 39% of adults reported that they do not understand the nutrition guidelines and 10%-38% said that nutritious foods are too costly. Residents from the mostly minority communities were three times more likely to report that the cost of nutritious foods was a reason for not eating healthier compared to respondents from Norwood Park.

Policy Considerations

Many actions are needed to encourage individuals in Chicago to adopt healthier eating habits. In order to do this, we need to change individual behavior as well as the environment. A good place to start is by increasing the involvement of the food industry, including fast food restaurants, in the effort to improve our nation's health. They can do this in many ways but, at a minimum, should begin by offering a wider variety of nutritious menu options and controlling portion sizes. Furthermore, customers and advocacy groups should encourage executives at fast food chains to eliminate the use of unhealthy oils (those containing saturated and trans fats) in their cooking. We should also support policies which require (and regulate) nutrition labels, which list the serving size, calorie and fat content in the packaging of fast food items. Finally, we urge workplaces and schools to only offer healthy snacks and 100% fruit juices in their vending machines.

Topic 6. Food Shopping

While studies have not established the exact determinants of healthy eating, improving access to and awareness of healthy options are likely to improve diet and health. In examining survey data, we found that there are significant structural barriers that deter people living in certain communities from adopting healthier eating habits. For instance, the majority of residents in Norwood Park (88%) travel less than 15 minutes for their food shopping while the majority of residents in Roseland (59%) commute more than 15 minutes and 16% commute more than 30 minutes. The survey also found that residents who had the farthest commute were more likely to shop only once a month. This suggests that they may be less likely to purchase and consume healthier food options, such as fresh fruits and vegetables, that are often perishable.

Policy Considerations

It is important to understand that many factors affecting an individual's health exist at the community level. For example, much attention has been paid to the prevalence of billboards advertising smoking and drinking in disadvantaged neighborhoods. However, the absence of conveniently located supermarkets and/or of fresh produce in supermarkets is less apparent, but just as important. It is imperative that large chain grocery stores stocked with a wide variety of healthy foods be located in underserved areas. We suggest that policies preventing a more equal distribution of grocery stores (such as conditions set by grocery stores that move out of a building yet prohibit the use of the building for future grocery stores) be eliminated. Tax incentives could also be used to persuade stores to open in underserved areas.

Topic 7. Binge Drinking

Binge drinking is defined as having consumed five or more alcoholic beverages on at least one occasion in the past month. In general, binge drinking was higher in the six Chicago communities compared to the U.S. average. The highest rates were reported in West Town (38%) and Norwood Park (28%), compared to 15% nationally. The survey found that the prevalence of reported binge drinking was higher among non-Hispanic Whites (38%) and Mexicans (27%) compared to non-Hispanic Blacks and Puerto Ricans (20%, among both groups). The survey also found that younger adults (<34 years) were more likely to report binge drinking than older adults, as were men compared to women.

Policy Considerations

First, we recommend that providers implement screening tools to help identify patients who may have a drinking problem. Once identified, research has shown that patients within a primary care setting can be referred and treated successfully. At the societal level, excise taxes on alcohol can be an effective means to gain revenue from the public health hazards imposed by excessive alcohol consumption. We encourage revenue generated from these taxes to be used to fund programs aimed at reducing excessive alcohol consumption. We also recommend that policies limit outdoor advertising of alcohol, particularly on college campuses, at sporting events, and within Chicago's minority communities. Lastly, communities must be mobilized to promote socially responsible drinking habits. To reduce high-risk alcohol consumption and alcohol-related injuries, we support comprehensive community-based programs that would reduce underage drinking by limiting access to alcohol and increasing local enforcement of drinking and driving laws, to name a few.

Topic 8. Breast Cancer Screening

Mammography is an effective exam used to screen women for breast cancer. Nationally, the incidence of breast cancer is highest among non-Hispanic White women. However, non-Hispanic Black women are more likely to die from it. This might suggest that cancers of the breast among these minority women are not detected appropriately, however mammography rates found in the survey suggest otherwise. We found that non-Hispanic Black women are receiving mammograms just as often as Hispanic and non-Hispanic White women. The same trend holds true in national data. While this is important to know, it is still unclear why some groups of women are dying from breast cancer more often than others.

Policy Considerations

We recommend further investigation of how and why some women in Chicago are disproportionately dying from breast cancer. Since data found that the majority of all women are receiving routine mammograms, we should first assess the quality of these mammograms by monitoring the detection rates at facilities where they are offered. If the detection rates are comparable then we should track follow up rates and determine how to deliver services so that delays in treament and/or differences in quality do not result in disparities in breast cancer morbidity and mortality.

Topic 9. Cervical Cancer Screening

Widespread use of the Pap smear screening exam has resulted in substantial decline in death and disability from cervical cancer in the U.S. Survey data report that the vast majority of women in the six communities had had a screening exam in the last 3 years. Data also noted that women who have higher birth rates are more likely to be in contact with the health system, and thus more likely to receive preventative health care services. It is also noteworthy that women who are uninsured are least likely to have ever had a Pap smear, placing them at greatest risk of cervical cancer.

Policy Considerations

Since Human Papilloma Virus (HPV) is the leading risk factor for developing cervical cancer, we encourage

primary prevention efforts to focus on early detection and treatment of HPV. Greater awareness and screening of HPV could identify the presence of the viral infection and genital warts symptomatic of the infection in women. While general screening of HPV could result in over-treatment, it can also prevent the onset of pre-cancerous lesions, which lead to cancer of the cervix. We thus highly recommend routine screening, coupled with HPV testing, particularly for high risk women.

Topic 10. Colorectal Cancer Screening

Important screening exams for colorectal cancer are the fecal occult blood test (FOBT) and sigmoidoscopy /colonoscopy, which are recommended for adults 50 years and older. The survey found that the proportion of adults who reported ever having had a FOBT exam ranged from 42% in South Lawndale to 70% in North Lawndale compared to only 45% nationally. Similarly, the proportion of adults who reported ever having had a sigmoidoscopy ranged from 36% in Humboldt Park to 53% in Norwood Park compared to 51% nationally. Even fewer had a sigmoidoscopy/colonoscopy exam within the last 2 years. Survey data also showed that insurance played an important role in accessing timely screening for colorectal cancer.

Policy Considerations

We encourage routine screening for colorectal cancer. Educational campaigns that provide information on the importance of screening and how to get screened would be beneficial for both providers and patients. Increasing Medicare reimbursements for colorectal cancer would alleviate patient concerns regarding out-of-pocket costs and universal health coverage would ensure that all patients were appropriately screened. Such public funding could also guarantee that patients needing follow-up receive treatment and services without the burden of high costs. Lastly, we encourage health care systems to implement measures that will help providers and patients comply with testing procedures and referrals.

Discussion

Sections 6-8 discuss the implications of these survey findings. We first describe the impact these data can have on eliminating racial and ethnic health disparities and shaping overarching health policies in Chicago. Then we offer examples of ways in which survey findings from *Sinai's Improving Community Health: Report 1* have been translated into action by various groups in an effort to improve health in Chicago.

Racial and Ethnic Disparities

The overarching goal of our work is to understand the health of local communities and to improve our ability to effectively raise the level of health for all. Within this effort, we realize that one of the main objectives of the Healthy People Initiative (a set of about 500 goals developed by the leading national health agencies that guide much of the public health work in the U.S.) is to reduce and then eliminate disparities among different racial and ethnic groups. Yet, despite the effort that the nation is committing to this task, there has been little success to show for this work. In fact, disparities have been found to be worsening in Chicago, rather than improving. In Section 6, findings from this survey expand our understanding of these disparities.

Together we must find a way to improve the health of all people and eventually arrange matters so that health and even life and death are not driven by the color of one's skin, how much money one has, or where one lives.

Overarching Policy Implications

In Section 7, we discuss overarching policy implications of the ten topics presented in this report. We hope that these recommendations will lead to positive changes in health-related policies.

1) We suggest that national, state, and local governments conduct local area surveys like this one on a regular basis. In an environment of financial constraint, it is essential that resources be applied where they can do the most good.

2) We urge Chicago (and, indeed, the country) to turn its attention and resources toward prevention and screening measures rather than concentrating almost exclusively on treatment. The costly treatment of chronic diseases is crippling our health care system. We can be better served by prevention, early detection, and intervention.

3) We urge a greater investment in educating both health professionals and the public aimed at changing and improving lifestyle choices. Although all health behavior must be understood within its societal context, incentives to avoid unhealthy choices and encourage personal responsibility have the potential to reshape our approach to a healthy, productive life.

4) We must work to establish universal access to quality health care. Every other industrialized country in the world has a system that pursues this goal and we recommend it for the U.S. If our country does not have the will to provide such a system, then Illinois must take action on its own.

5) We must recognize and then eliminate racial and other societal disparities in health in Chicago.

Although structural issues like poverty and racism are responsible for many of the negative findings in this survey, we should not wait until these issues are eliminated before we act. We need to take on health issues one at a time, at the local level, beginning now, regardless of how daunting the task may seem.

Translating Survey Findings Into Action

The ultimate goal of this report is to empower people with the health information necessary to develop targeted interventions and advocate for improved health in Chicago. We believe the survey findings presented here have the potential to inform legislation, grant proposal writing and the media.

In the final section of this report, we describe how the survey findings from *Sinai's Improving Community Health Survey: Report 1* have been analyzed, disseminated and translated into action. We hope that these examples, along with the dramatic survey findings presented here, will inspire communities, political leaders and health care providers to lead the way in improving health for many Chicago residents.

Section 1. Introduction

This report presents many key findings from what is likely the largest door-to-door health survey ever conducted in Chicago. It is the second of a series of reports presenting illuminating health information about the health and well being of some of Chicago's residents. Most importantly, the findings point us to steps that can be taken to improve the health status of Chicago residents. These steps include developing policy initiatives, finding ways of improving medical care, changing individual behaviors, and having a wider context for understanding the societal factors that influence our health. It is believed that findings from this survey will have both local (that is, Chicago and its communities) and national significance.

Background

Three years ago, the research arm of the Sinai Health System,[1] called the Sinai Urban Health Institute (SUHI),[2] pursued funding to better understand and improve the health of the communities they served. The first step was to gather necessary local level health information.

While some data on health are readily available, much is still lacking. For instance, public health departments provide adequate information about the mortality rates of a given area through good death certificate files. We also have helpful information about births from birth certificate files. The third existing source of local health information comes from registries on some communicable diseases like TB, HIV/AIDS and other sexually transmitted diseases (e.g., syphilis, gonorrhea, chlamydia). The information contained in these data files can be analyzed in a number of ways allowing us to know, for example, the leading causes of death, how many babies die in the first year of life (infant mortality), how many babies are born at low birth weight, whether the syphilis rate has been increasing or decreasing, and which age group has the highest chlamydia rate. This information can be further broken down and analyzed at the local community level so that we can begin to understand how these issues vary among different communities.

However, there is a great deal of information that is not readily available from any of the three sources of information described above. For example, we know how many people *die* from diabetes each year by looking at death certificates, however we do not know how many people *have* diabetes, making it difficult to target prevention efforts. The only way to obtain such important information is to conduct surveys and ask people directly.

Many surveys are conducted in the U.S. to determine this type of information. In fact, such data are routinely available through national and statewide surveys, such as the Behavioral Risk Factor Surveillance System (BRFSS), the National Health Inventory Survey (NHIS) and the National Health and Nutrition Examination Survey (NHANES). However, these surveys are not generally designed to provide information at the local (e.g. county, city or neighborhood) level, where they could be most useful in planning and shaping health policies and interventions. County or city-level data may suffice in accurately representing the health status of homogenous geographic areas, but this is inadequate for diverse areas such as Chicago and most other large U.S. cities. In the latter instance, a great deal of variation may exist that is missed by city-level data.[3] Thus, what is true for Chicago as a whole is not necessarily true for each community. In fact, early publications by the Sinai Urban Health Institute demonstrate that even adjacent communities, like North Lawndale[4] and South Lawndale,[5] may differ substantially in mortality and rates of communicable diseases. The lack of local-level health data leaves those of us who want to understand and improve the overall health of communities at a substantial disadvantage.

It was with this in mind that SUHI pursued a grant to implement a health survey in selected community areas of Chicago. We applied for and were fortunate to receive funding from The Robert Wood Johnson Foundation to initiate this work. The project had two main goals:

- To document the health status of selected community areas in Chicago;
- To use this community level information to improve access to health care and the delivery of health services; attract additional resources; and stimulate new, collaborative efforts to improve the health of Chicago residents.

A health survey was developed by a community panel in the Spring of 2002 and implemented between September 2002 thru May 2003. Data were gathered door-to-door from nearly 1,700 randomly selected households in six of Chicago's 77 community areas. Data presented about

each community area represent the health status of that community and others like it.

In January 2004, we published the first set of survey findings as Report 1,[6] which presents survey findings on ten key health topics, including insurance, diabetes, smoking, asthma, obesity, depression, HIV/AIDS and self-rated health. Report 1 is available from: http://www.sinai.org/urban/publications.asp

Just as we had hoped, the findings from Report 1 started to take on a life of their own. For instance, many of the findings on childhood asthma, adult smoking and overall obesity in these communities have inspired community based organizations, activities and leaders to address these issues. We distributed over 700 copies of Report 1 and believe that these local level data have facilitated funding efforts and guided people to devise ways of improving the health of the surveyed communities and others like them.

Report 2

We are pleased to present *Sinai Health System's Improving Community Health Survey: Report 2*, the second of a series of reports on the survey findings. This report introduces ten additional survey findings, including data on HBP, arthritis, physical activity, eating habits, binge drinking, and cancer screening. For each topic, we present with some background information, the survey data and policy considerations.

The structure of Report 2 is similar to that of Report 1.

In Section 2, we describe the study design, how the communities were selected for study, and delineate some of the social and demographic characteristics of these communities.

In Section 3, we describe how the survey questionnaire was constructed.

In Section 4, we explain how the survey data were collected, analyzed, and are presented in this report.

In Section 5, we present ten important findings from the survey. Topics include high blood pressure, arthritis, adult and child physical activity, healthy eating, food shopping, binge drinking and cancer screening.

In Section 6, we offer some observations about the vitally important matter of racial and ethnic disparities in Chicago.

In Section 7, we discuss some overarching policy implications that stem from the survey and suggest next steps.

In Section 8, we present a few examples of how data from Report 1 have been translated into activities to improve health in some of Chicago's most vulnerable communities. We hope that these stories will inspire readers in ways to use survey findings described in this report.

Many Thanks

A massive project like this could not have happened without the hard work, input, support, and consultations of many people. We will never be able to name them all but we feel we should try.

First and foremost, we thank the residents of these six communities who allowed us into their homes and were willing to spend quite a lot of time with us answering many questions and sharing their insights.

We also wish to thank members of the Survey Design Committee who took a great deal of time out of their busy lives to help make this project a success. The work of this Committee is described in detail in Section 3.

Next, we'd like to recognize the Survey Research Laboratory at the University of Illinois at Chicago for their hard work in managing the data collection process. This project could not have been completed without the dedication shown by the interviewers who went to the households and sat and talked with the respondents, helped them feel at ease, and who elicited so much helpful information. As one of them noted, "It was sometimes difficult to get admitted to the homes. But then it was sometimes even more difficult to leave since the people had so much they wanted to tell us."

In addition to the many individuals we thanked in *Sinai's Improving Community Health Survey: Report 1*, we would like to recognize and thank Jocelyn Hirschman, MPH and Helen Margellos-Anast, MPH for their unlimited technical assistance and time in preparing this report.

Finally, we would like to thank the foundations that have supported our work in so many ways:

- The Robert Wood Johnson Foundation, for providing the initial funds needed to carry out the survey and for believing in the project. In particular, we would like to thank Dr. James Knickman for giving us the go-ahead to submit a

proposal and Dr. Kimberly Lockner, our Program Officer, who guided us through the major steps leading up to funding and remained a consultant for us throughout. Carol Chang has since taken over the project at the Foundation, and we also appreciate her support and attention.

- The Michael Reese Health Trust, for providing continuing support and inspiration for many activities of the Sinai Urban Health Institute. The critical generosity of Dorothy Gardner, President, and Elizabeth Lee, Senior Project Officer, along with their belief in Mount Sinai and our mission, could never be replaced.

- The Chicago Community Trust, for agreeing to provide support for ongoing dissemination, policy development, and the stimulation of interventions. We especially would like to thank Ada Mary Gugenheim, Senior Project Officer, for her continuing belief in the possibility of an equitable health system. Without them, this report and the continuation of our efforts would not have been possible.

References

[1] Sinai Health System. Welcome to Sinai Health System [Internet]. Chicago, IL: Sinai Health System; 2005. Available from: http://www.sinai.org.

[2] Sinai Urban Health Institute (SUHI) [Internet]. Chicago, IL: Sinai Health System; May 2005. Available from: http://www.sinai.org/urban/index.asp.

[3] Dell J, Whitman S, Shah AM, Silva A and Ansell D. Smoking in 6 diverse Chicago communities - a population study. Am J Public Health 2005; 95(6): 1036-42.

[4] Sinai Urban Health Institute [SUHI]. Chicago community health profiles: North Lawndale. Chicago, IL: Sinai Health System; 2001. 83p.

[5] Sinai Urban Health Institute [SUHI]. Chicago community health profiles: South Lawndale. Chicago, IL: Sinai Health System; 2001. 96p.

[6] Whitman S, Williams C, Shah AM. Sinai Health System's improving community health survey: report 1. Chicago, IL: Sinai Health System; January 2004. 54p.

Section 2. The Communities

It was recognized from the beginning that in order to be effective, the survey would have to draw on the health measures and experiences that reflect the vast diversity of the residents that comprise Chicago's population. In 2000, Chicago was the third largest city in the U.S., with a population of almost 3,000,000, consisting of 36% non-Hispanic Black (NHB) people, 31% non-Hispanic White (NHW) people, and 26% Hispanic people (of which 4% are Puerto Rican, 18% Mexican and 4% Other Hispanic). Chicago is also one of the most segregated cities in the U.S., having been labeled "hyper-segregated" by a seminal study.[1] Understanding health in these diverse community areas is therefore essential.

More than 60 years ago, sociologists at the University of Chicago divided the city into 75 community areas based on social, cultural, and geographic factors (such as census tracts). These soon became officially designated and two more were added, producing a total of 77 community areas.[2] Six of these were selected for this survey: North Lawndale, South Lawndale, Humboldt Park, West Town, Roseland, and Norwood Park. As Figure 1 indicates, four of these communities are located slightly north and west of the downtown area, one is on the far south side and another is on the far northwest side.

Figure 1. Chicago Community Area Map

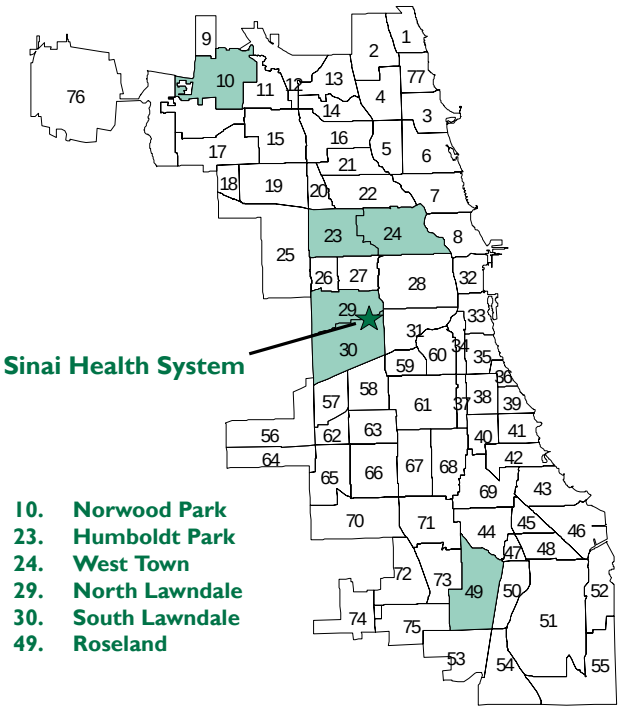


Table 1 demonstrates how these communities compare with one another on basic social and demographic characteristics. North Lawndale and Roseland are almost entirely African American, South Lawndale is almost entirely Mexican, Humboldt Park is about half African American and half Puerto Rican and Mexican,

Table 1. Demographic Characteristics of Six Community Areas Compared to Chicago and U.S., Census 2000

	Humboldt Park	West Town	South Lawndale	North Lawndale	Roseland	Norwood Park	Chicago 2000	US 2000
Total Population	65,836	87,435	91,071	41,768	52,723	37,669	2,896,016	281,421,906
NH Black[a]	47%	9%	13%	94%	98%	1%	36%	12%
NH White	3%	39%	4%	1%	1%	88%	31%	69%
Hispanic[b]	48%	47%	83%	5%	1%	6%	26%	13%
Mexican	24%	25%	76%	3%	0%	3%	18%	7%
Puerto Rican	18%	16%	1%	0%	0%	0%	4%	1%
Median HH Income ($)	28,728	38,915	32,320	18,342	38,237	53,402	38,625	41,994
High School Graduates[c]	50%	70%	37%	60%	77%	83%	72%	80%
Unemployment Rate[d]	18%	7%	12%	26%	17%	3%	10%	6%
Individual Poverty Rate[e]	31%	21%	27%	45%	18%	4%	20%	12%

[a] NH Black, NH White, and Hispanic do not add up to 100% as other racial/ethnic groups are not included in the table.
[b] Mexicans and Puerto Ricans do not make up all Hispanics.
[c] High school graduates among those 25 years and older.
[d] Unemployment rate is the percent of resident civilians over age 16 who are without work and actively seeking work.
[e] Individual poverty rate is the percent of residents with annual incomes below the federally defined poverty level in 1999.

West Town is about half White and half Puerto Rican and Mexican, and Norwood Park is almost all White. The median household incomes (from the 2000 Census) for the six community areas ranged from $18,000 to $53,000 and may be compared with about $42,000 for the U.S. and $39,000 for Chicago. Overall, three of the community areas fall below the median household income for Chicago and three are either at it or above (Table 1). As can be seen, the percent of the population that is Black in each community area in general is closely correlated with median household income, the poverty rate, and the unemployment rate. Humboldt Park and West Town are undergoing rapid demographic transitions and their demographic compositions have changed notably since 1990. The compositions of the other four communities have remained stable over the past 10 years.

It is important to note that these community areas were selected to reflect the diversity of Chicago but not to be representative of the city as a whole. For example, North and South Lawndale were selected because they are neighboring communities to Mount Sinai. Humboldt Park and West Town were selected because they are both undergoing demographic transitions (and would be interesting from an epidemiological point of view) and are communities with which the Sinai Health System would like to work. Finally, Roseland and Norwood Park were selected to add both geographic and racial diversity to the survey. Thus, if we average the results of these six community areas they will not necessarily tell us about all of Chicago. Similarly, if we average the results for Black (or White or Hispanic) people in this survey they will not necessarily represent all Black (or White or Hispanic) people in the city. Saying this another way, this study was not designed to assess the health of the totality of our "Big City," but rather to understand and improve the health of specific population groups.

Another reason that some of these community areas were selected for the survey was the strong belief on the part of their local elected officials that health conditions could and should be improved for their constituents. Several of these officials wrote letters of support for the project and have advocated for wide dissemination of the survey results.

We cannot thank them enough. They are:

William Delgado
Illinois State Representative
3rd District

Roberto Maldonado
Commissioner
Cook County Board of Commissioners
8th District

Susana A. Mendoza
Illinois State Representative
1st District

Billy Ocasio
Chicago Alderperson
Chicago City Council
26th Ward

Cynthia Soto
Illinois State Representative
4th District

Arthur Turner
Illinois State Representative
9th District

References

[1] Massey DS, Denton NA. American Apartheid: Segregation and the Making of the Underclass. Cambridge, MA: Harvard University Press; 1993. 304p.

[2] The Chicago Fact Book Consortium. Local Community Fact Book: Chicago Metropolitan Area, 1990. Chicago, IL: Academy Chicago Publishers; 1995.

Section 3. Development of the Survey

Community-based participatory research (CBPR) is one approach to strategically designing and implementing initiatives to improve community health.[1] Partnering with community agencies to conduct community-based research has proven not only to be most beneficial for the quality of the research,[2,3] but also, and more significantly, for the purpose of education and bringing about social change.[4] In balancing research with action, CBPR demonstrates how the research process is just as important as the final outcome of eliminating health disparities because it empowers communities to plan and promote their own health.[5,6,7,8,9] In the field of CBPR there is a spectrum of participation levels. We believe that in designing and implementing this community survey, we adhered to this methodology and benefited from the process. We also believe that with appropriate local-level data, as presented in this report, and active community participation, communities and policy makers will be armed with adequate and specific health information to guide health plans and strategically target interventions for improved health.

The Survey Design Committee

Participatory research defines a working collaboration in which those affected by an issue are involved with the generation, practice, and impact of research on policy and social change.[10] A Survey Design Committee (SDC) was organized with this in mind, based on professional contacts with community leaders from the targeted community areas. The SDC was comprised of public health epidemiologists, community members and advocates, policy makers, and health administrators.

Community representatives were invited to join the SDC by the co-principal investigator of this study (Cynthia Williams), who is the Director of Family Education at the Sinai Community Institute, an organization that coordinates more than 25 community-based programs for the Sinai Health System. Community members were affiliated with social service agencies, government and educational programs, and other local community-based organizations from the target community areas and/or their neighboring areas. In addition to the community members, three vice presidents of the Sinai Health System were active members of the SDC. The Committee was staffed by members of the Sinai Urban Health Institute, a group of researchers at the Sinai Health System. Box 1 presents a list of the SDC members and their affiliations.

Designing the Survey

Regular meetings were held over 15 weeks to develop a survey instrument that would capture the social forces and individual risk factors affecting the health of people living in these community areas. Though there was no monetary incentive, the majority of the committee members attended all six meetings. When unable to attend, they often offered input via email or phone.

Box 1. Survey Design Committee Members

Joe Ann Bradley
Community Action Group

Concepcion Chavarria
El Hogar del Niño

Jaime Delgado
UIC School of Public Health

Angela Ellison
Westside Futures

Jamila-Ra
Westside District Health Council

Cassandra Robinson
Chicago Youth Centers

Phil Smith
Big Brothers Big Sisters

Feliz Villafane de Palacios
Block Club Federation

Anna Yuan
Cook County Community Health Council

Ed Rafalski
Vice President, Planning

Maurice Schwartz
Vice President, Medical Affairs

Linda Miller
Vice President, Care Management
Sinai Health System

The principal investigator (Steven Whitman) and co-principal investigator of the project facilitated the meetings, which initially revolved around selecting topics for the survey. Proposed survey topics included health conditions such as hypertension, asthma, and diabetes, and well-known behavioral risk factors such as smoking, alcohol, diet, and exercise. There was an energetic dialogue about the relevance of specific topics to committee members' work and the health of the communities they serve. For instance, drug abuse was presented as an issue known to be a problem in some community areas. However, it was decided by the SDC not to include this topic on the survey because they felt that adequate information about community drug use was already available and that asking sensitive questions to individuals in their homes would not be appropriate or realistic.

Similarly, the SDC agreed to keep or eliminate certain topics depending upon whether answers to specific questions seemed relevant to policy improvements or potential interventions. At the same time, many members of the committee proposed topics they felt were important to learn about, such as reusing cooking oils, grocery shopping habits, mental health services, needle exchange programs, and the use of alternative medicines. These ideas illustrate the crucial nature of tailoring the survey for the targeted communities and demonstrate the importance of involving community representatives in survey design. Many of the topic areas would have been overlooked or misunderstood had the SDC not been involved in designing the survey.

Ultimately, the committee members agreed on a final list of topics for the survey with 469 questions in the Adult module and 144 in the Child module. These topics (Box 2) can be categorized as: health conditions (e.g., hypertension, depression, other chronic conditions), health behaviors and attitudes (e.g., eating habits, tobacco or alcohol use, and physical activity), health care access (e.g., insurance coverage, use of alternative medicines, having a primary care physician), quality of life (e.g., perceived stress and anger management), and other social or environmental factors (e.g., acculturation, perceived racism, and other SES measures).

Questions for each topic were then selected or created. To ensure comparability of the survey findings with city, state, and national data, whenever possible questions were adopted from existing surveys such as the Behavioral Risk Factor Surveillance System, the National Health and Nutrition Examination Survey, the National Health Interview Survey, and the Medicare Health Outcomes Survey. Other questions came from validated scales used in social science research (e.g., Perceived Stress Scale, Experienced Racism Scale, the Anger Scale, and the Health Related Quality of Life Scale). When questions were not readily available in the literature, such as questions on cooking habits, these were developed by the SDC drawing from its epidemiological expertise and community experience.

Each member of the committee played a critical role in the survey design. Community members brought to

Box 2. Survey Topics

Health Conditions
Asthma
Diabetes
Hypertension
Depression
Obesity

Health Behaviors and Attitudes
Alcohol Use
Tobacco Use
Diet/Nutrition
Physical Activity
SIDS Knowledge
Parenting
HIV/AIDS

Health Care Access
Primary Care
Health Coverage
Prenatal Care
Cancer Screening
Complementary/Alternative Medicines

Quality of Life
Health-Related Quality of Life
Perceived Stress
Anger Management

Other Social or Environmental Factors
Education
Occupation
Poverty
Acculturation
Perceived Racism
Food Availability
Violence

the table health concerns unique to residents in their communities. They generated new ideas on potential risk factors and offered a knowledge base unknown to researchers and policy makers. Health care providers offered a service delivery angle and addressed challenges often experienced in reaching populations at risk. Finally, public health researchers contributed knowledge of existing surveys and assessment tools and skills in validating questions to ensure reliable data results.

Although some of the discussions about which topics and questions to include became energetic and even heated, collegiality and respect ruled these meetings. As a result they were always productive and effective since all were free and comfortable to speak their own minds.

Overall, committee members also learned from one another, which is another outcome of CBPR. Researchers and health care providers described having a unique opportunity to 'break out of the institutional' walls of research and service delivery in order to better understand the needs and experiences of those they served. They believed they gained some community perspective to conducting research. Community representatives stated that they learned how to measure health indicators and how to identify information that might be most relevant for changing policy and seeking funding.

References

[1] U.S. Department of Health and Human Services [HHS]. Healthy People 2010: understanding and improving health. 2nd edition. Washington, DC: HHS; November 2000. 2 vols.

[2] Minkler M, Wallerstain N, editors. Community-based participatory research for health. San Francisco, CA: Jossey Bass; November 2002. 512p.

[3] U.S. Department of Health and Human Services [HHS]. Building community partnerships in research: recommendations and strategies. Washington, DC: HHS; April 1998.

[4] Green LW, George MA, Daniel M, Frankish CJ, Herbert CJ, Bowie WR, et al. Study of participatory research in health promotion. Ottawa: The Royal Society of Canada; 1994.

[5] Israel BA, Schulz AJ, Paker EA, Becker AB. Review of community based research: assessing partnership approaches to improve public health. Annu Rev Public Health 1998; 19: 173-202.

[6] McTaggart R. Principles for participatory action research. Adult Education Quarterly 1991; 41: 168-87.

[7] Cornwall A, Jewkes R. What is participatory research? Soc Sci Med 1995; 41: 1667-76.

[8] Fielding JE, Sutherland CE, Halfon N. Community health report cards: results of a national survey. Am J Prev Med 1999; 17: 79-86.

[9] Fielding JE, Lamirault I, Nolan B, Bobrowsky J. Changing the paradigm: planning for ambulatory care expansion in Los Angeles County using a community-based and evidence based model. J Ambul Care Manage 2000; 23: 19-27.

[10] Cheadle A, Sullivan M, Krieger J, Ciske S, Shaw M, Schier JK, Eising A. Using a participatory approach to provide assistance to community-based organizations: the Seattle Partners Community Research Center. Health Educ Behav 2002; 29: 383-94.

Section 4. Data Collection and Analysis

Some studies have shown that sampling through residential telephone lines may not locate members of vulnerable populations, who most often have the worst health.[1] Therefore it was decided that in order to accurately reflect the health profile of these community areas and to capture populations at risk, this survey needed to be conducted face-to-face in the respondents' homes. The Survey Research Laboratory (SRL), an experienced survey organization housed at the University of Illinois at Chicago, was responsible for implementing the survey for us. That is, they randomly selected the survey households, trained the interviewers, and conducted the survey.

Sampling

In gathering the study sample, our main concern was to conduct interviews that would best represent each of the communities. That is, we wanted to assure, as well as we could, that we were not interviewing a special or selected group of people. We thus exercised great caution to create a representative sample for each community area. This is how we proceeded:

- First, 15 census blocks were sampled proportionate to size from each of the six targeted CAs.
- Second, from these blocks, 37 households were randomly selected. Each selected household received an advance letter informing them about the project and the interviewer's planned visit. Letters were signed jointly by a community SDC member, the co-principal investigator (Cynthia Williams), and the principal investigator (Steven Whitman).
- Third, at each household visit, an initial screening was conducted to select an adult respondent age 18-75 at random from each household. This person may or may not have been the person who answered the door and may or may not have been a person who was home at the time of the initial household contact.
- Fourth, a child age 12 or younger was randomly selected from each household (about half the households contained children) and then the adult in the household with the most knowledge about that child was interviewed. This adult may or may not have been the adult who was interviewed about his or her own health.

On average, the adult interviews lasted about one hour and the child interviews lasted about 20 minutes. Respondents were given the option to conduct the interview in either English or Spanish.

With the plan of visiting each household for the interview already established, the community members on the Survey Design Committee (SDC) recognized a unique opportunity to distribute much-needed health information to each participating household. We felt that this would benefit the residents of the communities, and that it was our responsibility in carrying out community-based research. Educational materials and brochures on a variety of health topics were obtained from the Illinois and Chicago Departments of Public Health. Information was included on health topics such as diabetes and asthma management, cancer screening, cholesterol and high blood pressure, child immunizations, health insurance, and accessing local resources. These information packages were distributed in English or Spanish to each surveyed household. Because it was impossible to address all health concerns, a note card was also included in each package describing how to request additional free materials from the Sinai Community Institute.

In addition to the information packages, respondents were given $40 for their time and feedback on the Adult portion of the survey, and $20 for the Child portion.

Quality Assurance

Following the development of the survey, the instruments were pre-tested in English and Spanish. Interviewers were solicited from the community areas through local newspapers. About 20 interviewers were trained and hired to administer the survey. More than half came from or resided in one of the six community areas. All 20 were culturally sensitive to the communities in which they interviewed. Every interviewer who worked in a community in which people spoke Spanish was fluent in Spanish. For most, Spanish was their first language. Ten percent of each interviewer's work was validated at random.

Finally, the proposal for this work was submitted to and approved by all relevant institutional review boards. Informed consent was obtained from every participant prior to the interview.

Introducing the Survey to the Community

In conveying information about the survey to respondents and others, the need for a project logo emerged. The SDC had already agreed that it would be best for the advance letters to be from the SDC members participating in the research process. The logistics of this however became difficult and inconsistent because households from each CA would receive stationery from different organizations. After many considerations, an image was agreed upon to capture the underlying aim of the project, 'Improving Community Health' (Figure 1). In keeping with the participatory approach of designing the survey, the artwork illustrates the many hands involved in building the survey and ultimately in achieving the goals of the project.

Response Rate

A total of 4,888 households were initially selected for study. By the time the interviewers returned to solicit participation in the survey, some households were vacant, some no longer existed (e.g., had burned down), and in some no one ever answered the door. Twelve attempts, on different days and at different times, were made to reach selected households. Over 85% of all interviewing was conducted during evening and weekend hours.

Figure 1. Survey Logo

Because this was a complex sampling design that took place in six diverse communities, we describe multiple aspects of the participation rates. About 10% of the originally selected 4,888 addresses did not represent households; in about 24% of the existing households no one could ever be located; when people could be located about 24% refused to answer any of the screening questions or to otherwise speak with the interviewers. Notably, a total of 1,953 eligible persons were contacted for this survey, of which 1,699 agreed to participate and complete the survey. Thus, 87% of the people who were contacted fully participated. This might be termed the "participation rate." The overall study response rate, calculated according to standard definitions,[2,3] was 43.2%. This includes those households that no longer existed, those where we were unable to locate anyone, etc., in addition to those people who refused to participate. Table 1 presents the number of completed interviews for each community area.

Table 1. Number of Adult and Child Interviews

Community Area	Adult	Child*
Humboldt Park	300	160
West Town	303	82
South Lawndale	300	198
North Lawndale	304	172
Roseland	302	129
Norwood Park	190	70
Total	**1699**	**811**

*The primary caretaker of the child was interviewed about the child's health.

Source: Improving Community Health Survey

The response rates and their components varied substantially among the six community areas. For example, in North Lawndale, the poorest of these community areas, the "occupancy/residential" rate was 85%, while the refusal rate was 10%. In Norwood Park, the richest of these community areas, the "occupancy/residential" rate was 98% while the refusal rate was 35%. Thus, although many houses in North Lawndale were vacant (or burned down), when we located potential participants, 90% of them completed the survey. In Norwood Park virtually all of the houses were occupied but only 65% of them agreed to participate and completed the survey.

Data Analysis

Observations were weighted, according to established survey design theory, to account for the probability of selection (at the block, household and respondent levels) and to adjust or post-stratify to assure that the sample best represented each community area. Data were converted from the original CAPI database into both SAS[4] and STATA[5] data sets for analysis.

Whenever samples are drawn from larger populations, as we have done in this study, one important question is how much random variability may be involved in the

process. We all know that when we say something like "23% of all adults were smokers," based upon a sample, that the real value for the larger population may not be exactly 23% but will quite likely be included in some interval, like 19% - 27%.

We associate such an interval with a certain degree of confidence that we have in our answer. Since statisticians usually select 95% as that level of confidence, these ranges of values are called "95% confidence intervals." This defines the range of proportions that would be obtained if we repeated this process over and over again and gives us a good sense of how precisely we know the answer we are seeking. We can return to our smoking example to illustrate this point. Our best estimate was 23%. For one sample, the 95% confidence interval may be 19% - 27% and for another sample it may be 21% - 25%. Clearly, the second interval is better because it is narrower. How narrow (or wide) a confidence interval for a proportion is depends upon the number of people in both the numerator and the denominator. Confidence intervals for all proportions presented in this report are available and may be obtained by emailing us at **suhi@sinai.org**.

References

[1] Aneshensel CS, Frerichs RR, Clark VA, Yokopenic PA. Telephone versus in-person surveys of community health status. Am J Public Health 1982; 72: 1017-21.

[2] American Association for Public Opinion Research [AAPOR]. Standard definitions: final dispositions of case codes and outcome rates for surveys. Ann Arbor, MI: AAPOR; 2000. 51p.

[3] Johnson TP, Owens L. Survey response rate reporting in the professional literature. In: American Statistical Association [ASA]. 2003 Proceedings of the section on survey research methods. Alexandria, VA: ASA; 2004. p.127-33.

[4] SAS/STAT. Version 8.2. Cary, NC: SAS Institute, Inc; 2003.

[5] INTERCOOLED STATA. Version 8.0. College Station, TX: Stata Corporation; 2003.

Section 5. Ten Key Survey Findings

With 469 questions on the adult module and 144 questions on the child module it would be overwhelming to summarize all of our findings from the survey in this report. We have thus decided to proceed by presenting ten key findings. For each finding we present three sections:

- Background
- The Survey Data
- Policy Considerations

Topic 1. High Blood Pressure

Obesity, sedentary lifestyles, and the cardiovascular risk factor cluster including hypertension are not inevitable consequences of aging. – Brent M. Egan, M.D.[1]

Background

Hypertension is a chronic condition describing consistent high blood pressure (HBP). It is one of the leading causes of cardiovascular morbidity and mortality in the U.S. While blood pressure can fluctuate throughout the day with exercise and change in emotions or stress levels, when left untreated, chronic HBP (generally greater than 140/90 mm Hg) can cause serious damage to vital organs of the body. It can lead to life-threatening conditions, such as stroke, heart disease and kidney failure.[2]

Since many of its symptoms may go undetected for years, hypertension is often referred to as the 'silent killer.' In fact, in 2002, it was directly responsible for 49,700 deaths in the U.S. and contributed to more than 200,000 others.[3]

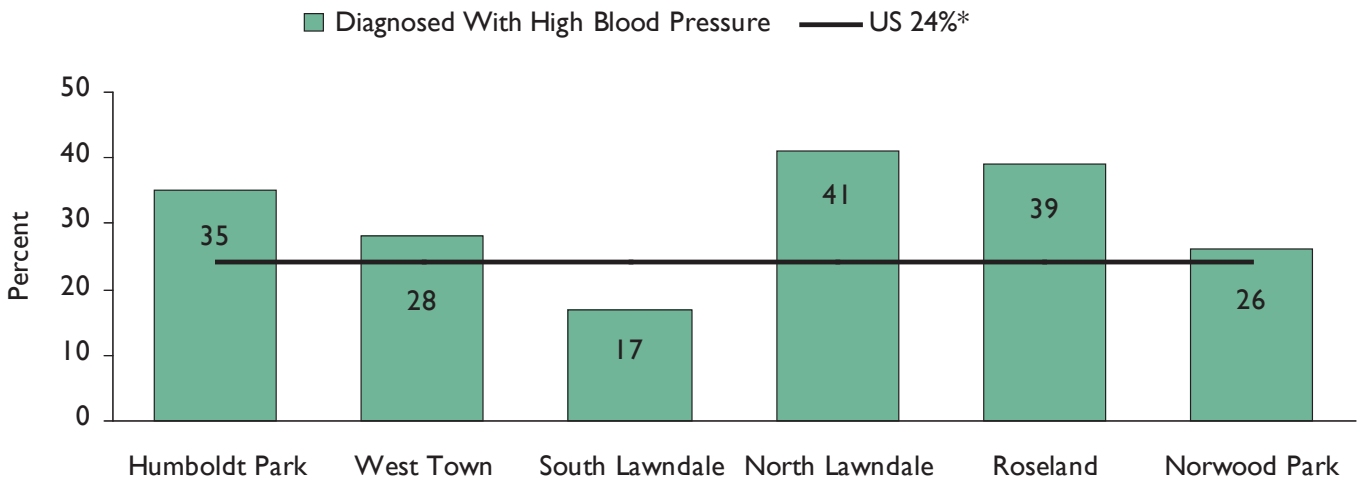
Recent national surveys have found that about one quarter of U.S. adults report they have ever been told they have HBP.[4] More importantly, about one-third of all people who have HBP are not even aware of their condition.[5] When we apply this estimate, the 24% *reported prevalence* of HBP rises to 38% for *actual prevalence* of HBP in the U.S.

In the past decade, the prevalence of HBP has increased partly due to the aging U.S. population. In addition, the lack of exercise and poor eating habits behind the growing obesity epidemic have contributed to the rise in hypertension. The condition also disproportionately affects African Americans compared to Whites and Mexican Americans.[4] Other risk factors associated with HBP include diabetes, lack of physical activity, smoking and social stressors such as poverty,[6] and racism.[7,8]

The Survey Data

The adult survey contained several questions related to hypertension and its management. We first asked adults, "Have you ever been told by a doctor, nurse or health professional that you have high blood pressure?" This is the exact question asked on the national Behavioral Risk Factor Surveillance System (BRFSS) survey. To assess treatment of HBP, we then asked those diagnosed with HBP if they were currently taking any prescription medication to manage it. Lastly, we analyzed and present risk factors associated with HBP, including diabetes and obesity, both of which were described in detail in Report 1.[9]

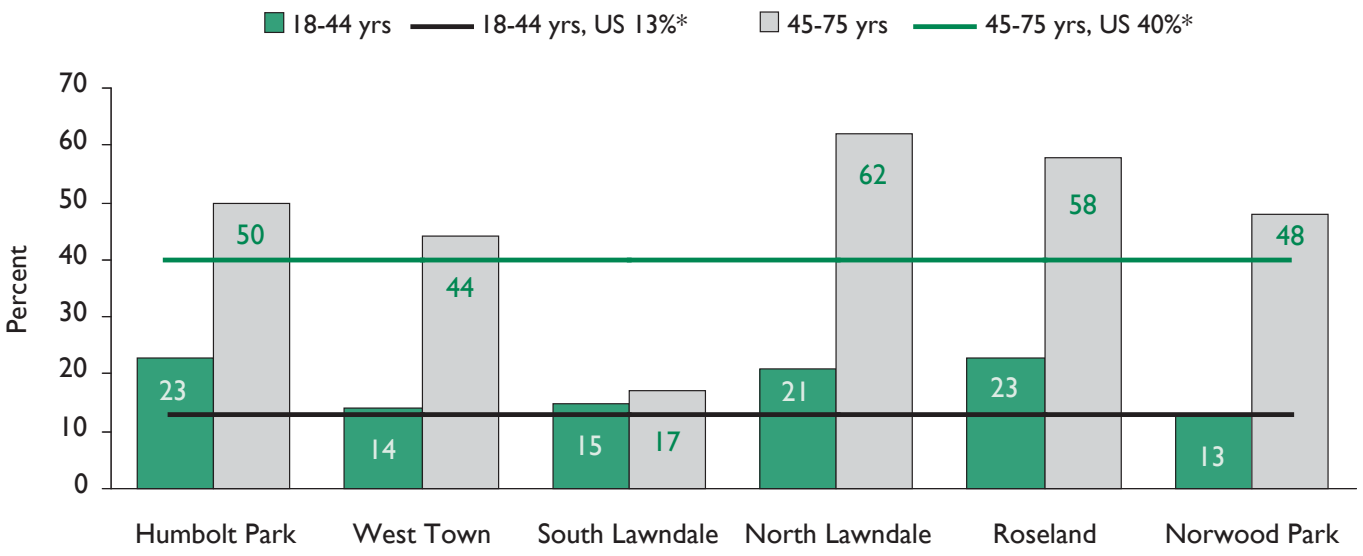
Figure 1.1 Percent of Adults Diagnosed With High Blood Pressure (Age-Adjusted)



* Behavioral Risk Factor Surveillance System, 2003 (Age-Adjusted)

Source: Improving Community Health Survey

Figure 1.2 Percent of Adults Diagnosed With High Blood Pressure by Age Group



* Behavioral Risk Factor Surveillance System, 2003

Source: Improving Community Health Survey

Figure 1.1 presents the age-adjusted prevalence of HBP in the six surveyed communities. The reported rates ranged from 17% in South Lawndale to 41% in North Lawndale compared to 24% in the U.S.

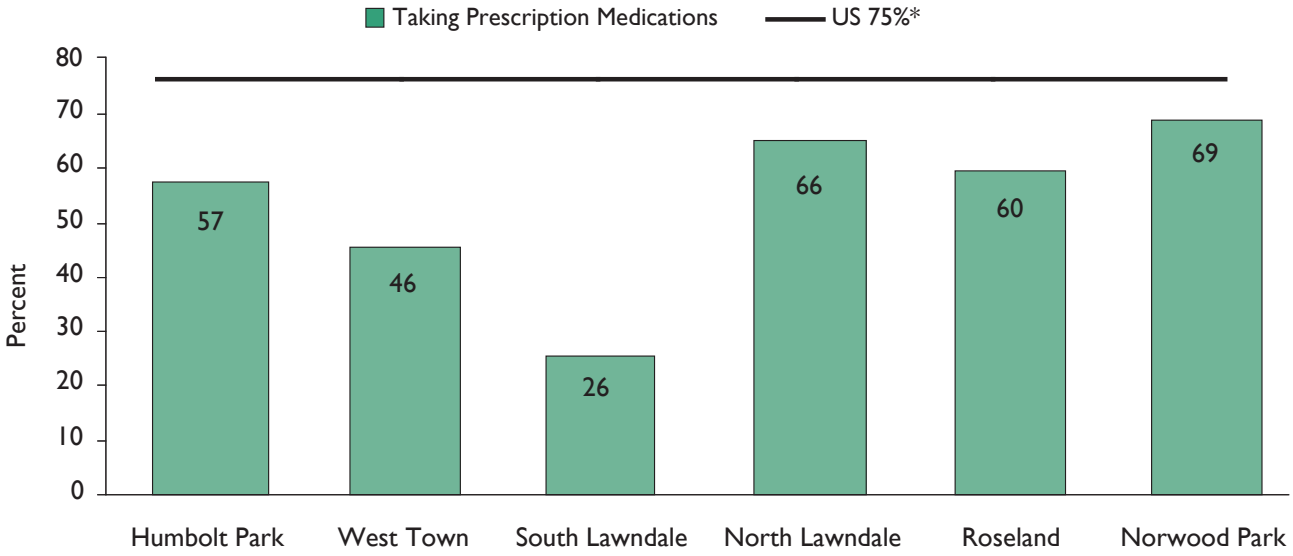
While racial and ethnic disparities have been documented at the national level, survey data suggest that the disparities in these Chicago communities are far worse. Nationally, 35% of non-Hispanic (NH) Blacks report having ever been diagnosed with HBP compared to 23% of NH Whites and 24% of Hispanics.[10] The HBP proportions in two Black communities, North Lawndale (41%) and Roseland (39%), are higher than the U.S. reported average for NH Blacks (35%). The U.S. Hispanic rate (24%) substantially masks differences in rates observed between Mexicans living predominately in South Lawndale (17%) and Puerto Ricans living predominately in Humboldt Park and West Town (33%). The magnitude of HBP among Puerto Ricans in these communities is substantial and not captured by existing U.S. data. Lastly, the rate of HBP in Norwood Park (26%), a mostly White community area, is about the same as the U.S. White rate (23%). Differences in the prevalence of HBP by race or ethnicity in these communities are unacceptable and must be addressed. With such local survey data, we now know some places to begin our efforts.

Note also that the reported prevalence of HBP underestimates the actual prevalence because it does not include those who are unaware of their condition. Applying the one third estimate described earlier in the Background section, we see that the best estimate of the actual prevalence of hypertension among adults in North Lawndale and Roseland, for example, rises to about 60%. These are extraordinarily high proportions. They suggest that almost two out of every three adults in these African-American communities are affected by hypertension. These are among some of the highest proportions we have ever seen reported.

In addition, because the likelihood of developing hypertension increases with age, we also present the prevalence of HBP for each of the six communities by age group (Figure 1.2). Nationally, 40% of older adults (45-75 years) report that they have HBP. Locally, as many as 62% of older adults living in North Lawndale and 58% in Roseland report having HBP. Overall, older adults in five out of six communities reported higher prevalences of HBP than national estimates would suggest.

Since high blood pressure quietly damages vital organs over time, early detection is crucial to the prevention of serious and possibly deadly consequences. Figure 1.2 also presents the proportion of young adults (18-44 years) affected by HBP. Survey data show that there are many more young adults who have ever been diagnosed with HBP in Roseland (23%), Humboldt Park (23%) and North Lawndale (21%) compared to the other three communities and the national average (13%). Young adults in these minority communities appear to be at an increased risk of developing hypertension and many of the disabilities associated with it. These data thus call

Figure 1.3 Percent of Adults Diagnosed With High Blood Pressure Who Are Currently Taking Prescription Medications



* Behavioral Risk Factor Surveillance System, 2003

Source: Improving Community Health Survey

for preventive efforts targeting young adults in all of these communities, but especially in Roseland, Humboldt Park and North Lawndale.

Figure 1.3 presents the proportion of adults diagnosed with HBP who are currently taking prescription medications to manage it. While the goal is 100%, few are close to meeting it. In fact, survey data suggest that adults with HBP in South Lawndale (26%) are far less likely to report taking prescribed medications compared to Norwood Park (69%) and the U.S. average (75%). This may be indicative of the low insurance rate reported in South Lawndale (44%, Report 1, page 13), which further reinforces the importance of health care coverage in managing chronic and life-threatening conditions such as HBP. Overall, survey data indicate gaps in treatment and room for improvement in managing hypertension for all six communities.

Lastly, hypertension is associated with other chronic conditions. Table 1.1 presents the proportion of adults with and without HBP who have been diagnosed with diabetes, heart problems, or obesity. Data show that adults with HBP were more than four times as likely to have been diagnosed with diabetes and heart problems and two times as likely to be obese compared to those never diagnosed with HBP. Those with HBP were also much more likely to report fair/poor health, which is predictive of increased hospitalizations and 5-10 year mortality.

Table 1.1 Percent of Adults Affected by Selected Health Conditions With and Without Diagnosed High Blood Pressure

	Among Those Ever Diagnosed With High Blood Pressure n=515	Among Those Never Diagnosed With High Blood Pressure n=1179
Ever Diagnosed With Diabetes	21%	5%
Ever Diagnosed With Heart Problems	17%	4%
Obese	51%	24%
Fair/Poor Self-Rated Health	44%	27%

Source: Improving Community Health Survey

Policy Considerations

We can mitigate the impact of HBP in several ways: by preventing it from occurring; by diagnosing it in everyone that has it; and then by treating it effectively once it is diagnosed. As with all health conditions, these three steps contain aspects that rely on individual responsibility, aspects that rely on the medical system, and aspects that rely on structural social conditions that can only be remedied by society. All of these must be called into play to stem the epidemic of hypertension.

Issues such as diet, exercise and stress are paramount. In these areas, one can make important lifestyle changes, including lowering salt intake, reducing consumption of processed foods, exercising daily, eating more fruits and vegetables, and maintaining a healthy weight status. All of these behavioral changes can lower blood pressure and help keep it at a healthy level (120/80 mm Hg). As discussed in Report 1 and in Topics 3, 4, 5 and 6 to follow, lifestyle is important but so are structural issues that can facilitate the availability of healthy food, the ability to exercise, etc. For instance, stress, which has been identified as an important risk factor for HBP, often results from structural issues like poverty and racism. In fact, many studies have identified racism as a prominent causes of HBP, which explains at least in part why Black people have higher proportions of HBP.

The medical system must also do its part. All at-risk people should be tested for HBP and, when diagnosed, must be *effectively* treated. It is a stain on our health system that even after people are diagnosed, they are not effectively treated. Whether this is because of inadequate health education, inability to afford the medications or other measures, the problem must be remedied.

There are also local or community level steps that can be taken. For example, employers can encourage healthy work environments by supporting lunch hour walks and healthier foods in cafeterias. Community based organizations can support educational campaigns to raise awareness of HBP and lobby for the installation of more blood pressure machines in local pharmacies and community centers. Churches and other community groups can hold seminars to teach adults how to read and interpret their blood pressure and how lifestyle and stress impacts health.

Given the widespread prevalence of hypertension, there is much that can be done to improve health in this area. To do otherwise is tantamount to watching people become sick, and perhaps even die from a disease that is preventable and curable.

References

[1] Egan, BM. Hypertension in the 21st century: the tide is rising; our daze must end [Editorial]. Hypertension 2004; 44: 389.

[2] US Dept of Health and Human Services; National Institute of Health, National Heart, Lung and Blood Institute [HHS, NHLBI]. High blood pressure: who is at risk? [Internet]. Bethesda, MD: HHS, NHLBI; August 2004. Available from: http://www.nhlbi.nih.gov/health/dci/diseases/hbp/hbp_whoisatrisk.html.

[3] American Heart Association [AHA]. High blood pressure statistics [Internet]. Dallas, TX: AHA; 2005. Available from: http://www.americanheart.org/presenter.jhtml?identifier=212.

[4] Centers for Disease Control and Prevention. Racial/ethnic disparities in prevalence, treatment and control of hypertension -- United States, 1999-2002. MMWR 2005; 54(01): 7-9.

[5] Hyman, DJ, Pavlik VN. Poor hypertension control: let's stop blaming the patients. Cleve Clin J Med 2002; 69(10): 793-9.

[6] Beilin LJ. Stress, coping, lifestyle and hypertension: a paradigm for research, prevention and non-pharmacological management of hypertension [Review]. Clin Exp Hypertens 1997; 19(5-6): 739-52.

[7] Krieger N, Sidney S. Racial discrimination and blood pressure: the CARDIA Study of young black and white adults. Am J Public Health 1996; 86(10): 1370-8.

[8] Cooper, RS, Kaufman JS. Race and hypertension. Hypertension 1998; 32: 813-6.

[9] Whitman S, Williams C, Shah AM. Sinai Health System's improving community health survey: report 1. Chicago, IL: Sinai Health System; January 2004. 54p.

[10] Centers for Disease Control and Prevention [CDC]. Behavioral Risk Factor Surveillance System Survey 2003. Atlanta, GA: CDC; 2005.

[11] American Heart Association [AHA]. Heart disease and stroke statistics-2005 update. Dallas, TX: AHA; 2005. Report No. KC-0078. 63p.

Topic 2. Arthritis

Clinical advances are important, but let's not lose sight of public health programs. These programs have great potential today to improve the quality of life for people living with arthritis and reduce costs for both individual families and society. - Carol Henderson, PhD RD LD, President, Association of Rheumatology Health Professionals, American College of Rheumatology[1]

Background

Arthritis is a chronic condition that causes pain, stiffness, and swelling in and around the joints, and osteoarthritis is the most common form. There are over 100 different diseases that affect the joints. Therefore, national surveys like that conducted by the Behavioral Risk Factor Surveillance System (BRFSS) define arthritis as present if the patient was ever told by a doctor or other health professional that she had "some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia."[2] Arthritis limits the daily activities of millions of adults and children, making it the leading cause of disability in the U.S.[3]

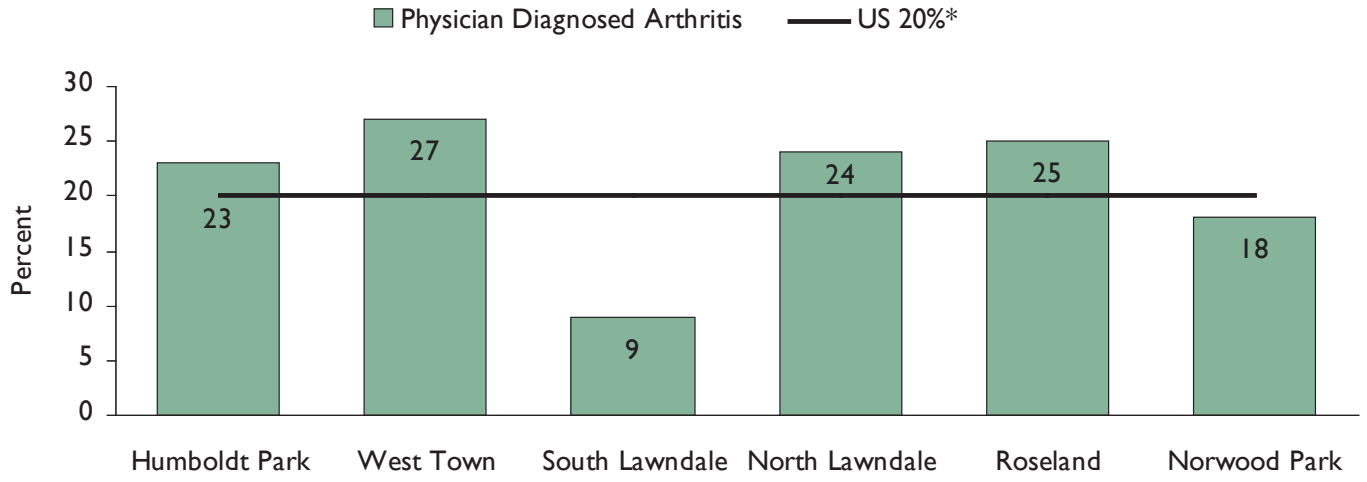
In 2002, it was estimated that 43 million adults in the U.S. had physician-diagnosed arthritis (PDA), and another 23 million reported chronic joint symptoms (undiagnosed, persistent joint pain, aching, stiffness or swelling during the past 12 months[4]), making arthritis one of the nation's most common health problems.[5] While arthritis can affect people at any age, it is most common among adults 45 years of age and older. Thus, the number of people affected by arthritis will likely increase as the U.S. population ages.[3] Other risk factors associated with arthritis are excessive weight, infectious microbial agents that settle in the joints, and occupational and sports injuries.[6]

Arthritis exerts a tremendous economic burden on society and on individuals and their families. The Centers for Disease Control and Prevention (CDC) has estimated that due to arthritis, $51 billion was spent on medical care and $35 billion was lost in the earning power of workers aged 18 and over, resulting in a total yearly cost of $86 billion.[7] On a more personal level, those living with arthritis are more likely to report fair or poor self-rated health than those who do not have arthritis. In 2001, the BRFSS survey reported that 9% of persons with no arthritis reported fair or poor health compared to 21% of those with PDA.[4]

The Survey Data

The adult module of our survey asked several questions to measure the burden of arthritis in the six surveyed community areas. We defined PDA by asking, "Have you

Figure 2.1 Percent of Adults With Physician Diagnosed Arthritis (Age-Adjusted)



* Behavioral Risk Factor Surveillance System, 2003 (Age-Adjusted)

Source: Improving Community Health Survey

ever been told by a doctor or other health professional that you have arthritis?" An identical question was asked on the BRFSS survey enabling us to compare our CA prevalence proportions with those for the U.S. We also asked several other questions about risk factors associated with arthritis and the impact it may have on quality of life; they are described below.

Figure 2.1 presents the age-adjusted prevalence of PDA in the six community areas compared to the U.S. Residents in West Town reported the highest proportion of PDA (27%) and those in South Lawndale reported the lowest (9%). Four of the six community areas surveyed have proportions slightly higher than the U.S. (20%).

Table 2.1 presents risk factors associated with PDA among all residents surveyed in the six communities. In general, women were more likely to report PDA than men (21% vs. 14%), a relationship that prevails across U.S. data.[5] The prevalence of arthritis increased with age, ranging from 7% among adults 18-44 years to 53% among adults 65-75 years. This also reflects U.S. trends. Non-Hispanic (NH) Blacks (26%) and Puerto Ricans (29%) were more likely to report PDA than Mexicans (5%) and NH Whites (17%). According to the 2001 BRFSS survey, national NH Black and NH White prevalence proportions are quite similar, 23% and 21% respectively.

It is well established that excess weight exacerbates arthritis by putting extra pressure on weight-bearing joints like the hips and knees.[8,9] Data from the survey support this observation (Table 2.1). Twenty-seven percent of obese persons were diagnosed with arthritis, compared to 17% of overweight persons and 11% of normal or underweight persons. Thus, given that obesity was shown in Report 1 to disproportionately affect minority communities,[10] we can see one reason why the burden of arthritis may be more severe in these communities with a higher proportion of people of color.

Table 2.1 Risk Factors Associated With Arthritis

	Diagnosed With Arthritis
SEX	
Female	21%
Male	14%
AGE	
18-44	7%
45-64	35%
65-75	53%
ETHNICITY/RACE	
Non-Hispanic Black	26%
Non-Hispanic White	17%
Mexican	5%
Puerto Rican	29%
WEIGHT STATUS	
Obese	27%
Overweight	17%
Under/Normal	11%

Source: Improving Community Health Survey

We asked several questions about quality of life including: self-rated health, depression, activity limitations and experience of pain. Table 2.2 presents this information for adults from all six communities aged 45 and over with PDA. Here, we focus on this age group because adults 45 years and over are most at risk. BRFSS reports that those who suffer from arthritis report poorer quality of life than those without the disease.[2] In the survey, when asked to rate their own health, 53% of older adults with PDA said their health was fair or poor compared to 35% without PDA. Likewise, depression is often associated with chronic illness because of the pain and functional limitations that can result from the disease symptomatology.[11,12] Thirty-four percent of older adults in our survey with PDA report they have been diagnosed with depression compared to 15% without PDA.

Table 2.2 also describes one's activity limitations and experience with pain. Twenty-four percent of older adults with PDA felt that their health limits their ability to engage in moderate activity "a lot" compared to only 9% of older adults without PDA. The most striking comparison is that close to half (46%) of older adults with PDA report that pain interferes "extremely, quite a bit or moderately" with normal work compared to only 17% of those without PDA.

Table 2.2 Burden of Disease Among Adults (≥ 45 Years) With Physician Diagnosed Arthritis (PDA)

	With PDA	Without PDA
Reported Fair/Poor Health	53%	35%
Diagnosed With Depression	34%	15%
Health Limited Moderate Activity A Lot	24%	9%
Pain Interfered With Normal Work	46%	17%

Source: Improving Community Health Survey

Policy Considerations

As outlined by eight Healthy People 2010 Objectives,[13] there are several areas to which policies around preventing and managing arthritis can be applied. First, early and appropriate diagnosis of arthritis is essential during initial stages of joint disease to minimize future disability. Second, arthritis sufferers must have access to ongoing care to maintain control of the chronic aspects of arthritis, such as pain management and depression. Third, appropriate self-management and knowledge of the condition are important prevention measures. Adults with arthritis need education from their primary care providers about the importance of regular physical activity to maintain joint flexibility, to lessen pain, and to reduce the number of doctor visits.[14] Because obesity is a strong risk factor for arthritis, especially osteoarthritis, physicians must encourage patients to reduce their weight or maintain normal weight to avoid the extra stress on vulnerable joints.[8,15] This of course circles back to the need for physical activity and the role that health care providers can play in helping their patients to comply with these imperative health behaviors. Fourth, avoiding occupational or sports injuries is a key preventive measure. This could mean that workers who perform repetitive movements in their jobs should be allowed regular rest breaks, appropriate safety equipment, and work areas designed to protect them from stress injuries. Also, anyone involved in sports activities that put joints at risk should use protective equipment.

Another arena in which to address arthritis policy is within the context of racial health disparities. National hip and knee replacement rates are 0.97% for Hispanic adults, 0.98% for Black adults, and 1.48% for White adults.[16] This means that Whites are about 1.5 times as likely to receive joint replacement surgery as Blacks or Hispanics. We did not ask our survey respondents if they desired or obtained hip or knee replacement, but if we apply the national rates to our survey data, the NH Blacks and Puerto Rican adults with higher prevalence of arthritis might be less likely to receive hip and knee replacement opportunities even though, as was noted in Table 2.1, the prevalence of arthritis in NH Black adults is 1.5 times higher than in NH White adults, and 1.7 times higher in Puerto Rican adults than in NH Whites. Equality of opportunity in access to joint replacement must be extended to all who seek this important medical option.

There are many organizations and resources that can be accessed by individuals and by community organizations for assistance and guidance in managing arthritis. The Arthritis Foundation has a dynamic website (www.arthritis.org) that offers many programs to reduce the burden of arthritis such as ASHC (Arthritis Self-Help Courses), the PACE (People with Arthritis Can Exercise) Plan, and other events and services. One can also obtain the "National Arthritis Action Plan – a Public Health Strategy" from this website.[15] It is unfortunate that nationally only 1% of Americans with PDA participate in these programs.[1] This is brought about by failures on both the part of the health care providers to share knowledge, and arthritis sufferers to be proactive in seeking information. But it is also the case that not all areas of the country offer these programs and not everyone has access to a computer and the Internet.

Chicago arthritis patients do have some excellent options. The CDC has established a cooperative agreement with the Illinois Department of Public Health to develop state-based programs for people with arthritis. These can be accessed through the Arthritis Foundation website (www.arthritis.org) or by calling 800-283-7899. More information about arthritis diagnoses, symptomatology, and treatment can be accessed from the National Institute of Arthritis and Musculoskeletal and Skin Diseases (http://www.nih.gov/niams/).

References

[1] US Dept of Health and Human Services. Targeting arthritis: the nation's leading cause of disability. Atlanta, GA: Centers for Disease Control and Prevention; 2004. Available from: www.cdc.gov/nccdphp/arthritis.

[2] Feinglass J, Nelson C, Lawther T, Chang RW. Chronic joint symptoms and prior arthritis diagnosis in community surveys: implications for arthritis prevalence estimates. Public Health Rep 2003; 118: 230-9.

[3] Centers for Disease Control and Prevention. Prevalence of doctor-diagnosed arthritis and possible arthritis – 30 states, 2002. MMWR 2004; 53(18): 383-6.

[4] Feinglass J, Lee C, Durazo-Arvizu R, Chang R. Health status, arthritis risk factors, and medical care use among respondents with joint symptoms or physician diagnosed arthritis: findings from the 2001 Behavioral Risk Factor Surveillance System. J Rheumatol 2005; 32(1): 130-6.

[5] Centers for Disease Control and Prevention [CDC]. Data and statistics-arthritis related statistics [Internet]. Atlanta, GA: CDC; May 20, 2005. Available from: www.cdc.gov/arthritis/data_statistics/arthritis_related_statistics_htm.

[6] Centers for Disease Control and Prevention [CDC]. Arthritis-risk factors [Internet]. Atlanta, GA: CDC; May 20, 2005. Available from: www.cdc.gov/arthritis/arthritis/risk_factors.htm.

[7] Centers for Disease Control and Prevention. Update: direct and indirect costs of arthritis and other rheumatic conditions – United States, 1997. MMWR 2004; 53(18): 388-9.

[8] Felson DT, Zhang Y, Anthony JM, Naimark A, Anderson JJ. Weight loss reduces the risk for symptomatic knee osteoarthritis in women: the Framingham Study. Ann Intern Med 1992; 116: 535-9.

[9] Mehotra C, Naimi TS, Serdula M, Bolen J, Pearson K. Arthritis, body mass index, and professional advice to lose weight: implications for clinical medicine and public health. Am J Prev Med 2004; 27(1): 16-21.

[10] Whitman S, Williams C, Shah AM. Sinai Health System's improving community health survey: report 1. Chicago, IL: Sinai Health System; January 2004. 54p.

[11] Dunlop DD, Lyons JS, Manheim LM, Song J, Chang RW. Arthritis and heart disease as risk factors for major depression: the role of functional limitation. Med Care 2004; 42(6): 502-11.

[12] Centers for Disease Control and Prevention [CDC]. Data and statistics: NHIS arthritis surveillance [Internet]. Atlanta, GA: CDC; May 20, 2005. Available from: www.cdc.gov/arthritis/data_statistics,

[13] US Department of Health and Human Services [HHS]. Healthy People 2010 (Conference Edition). Focus area 2: arthritis, osteoporosis, and chronic back conditions. Washington, DC: HHS; January 2000. v1 of 2.

[14] Lorig KR, Mazonson PD, Holman HR. Evidence suggesting that health education for self-management in patients with chronic arthritis has sustained health benefits while reducing health care costs. Arthritis Rheum 1993; 36: 439-46.

[15] National Office of Public Policy and Advocacy. Arthritis prevention, control, and cure act of 2004. S 2338/HR 4610. Atlanta, GA: Arthritis Foundation. Available from: www.arthritis.org.

[16] Dunlop DD, Song J, Manheim LM, Chang RW. Racial disparities in joint replacement use among older adults. Med Care 2003; 41(2): 288-98.

Topic 3. Adult Physical Activity

Lack of activity destroys the good condition of every human being, while movement and methodical physical exercise save it and preserve it. - Plato

Background

There is evidence that suggests from the earliest times of human life on earth, physical activity (PA) was promoted not only for survival but also for leisure.[1] Recently, however, technology has made work life more sedentary, which has impacted both personal and leisure time PA.[2] Second to quitting smoking, the promotion of PA in recent decades has been seen as essential for preventing chronic illnesses. With the increasing trend in obesity and the high cost of health care to treat chronic diseases, increasing PA is more important than ever. In 1990, 14% of deaths in the U.S. were attributable to lack of PA and poor diet. By 2000 that proportion had increased to 17%, representing an increase of 100,000 preventable deaths.[3,4]

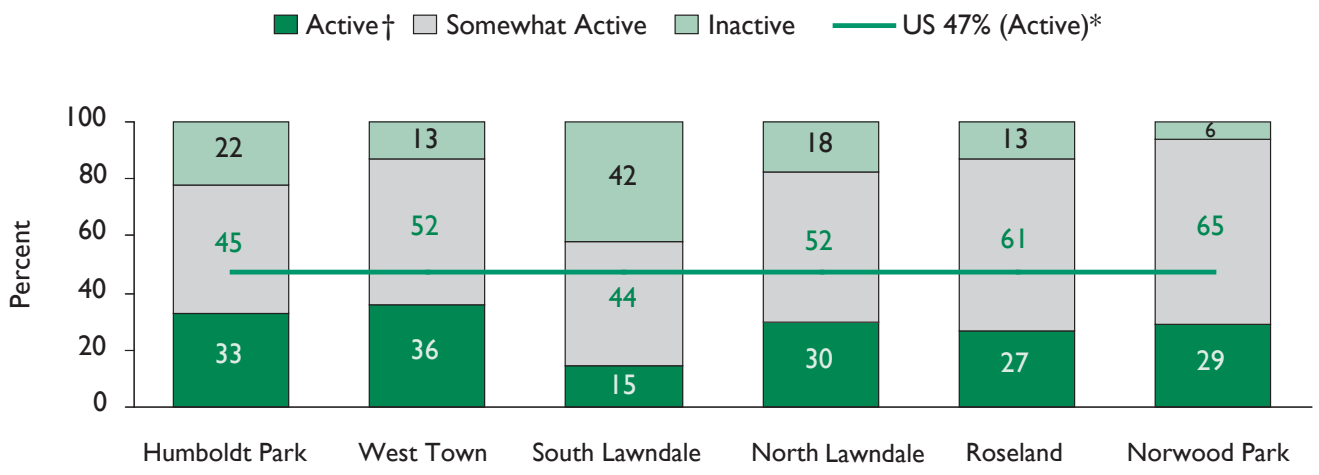
PA is associated with numerous health benefits. It impacts health on multiple levels by reducing the risk of developing chronic and life-threatening conditions such as heart disease, high blood pressure, diabetes, and colon cancer.[5,6] It can control weight, prevent obesity, delay the progression of arthritis and osteoporosis, prevent falls by building and maintaining stronger bones, muscles and joints, and reduce feelings of depression and anxiety.[6] Furthermore, routine daily activity can enhance one's ability to perform daily tasks throughout an entire lifespan.[1]

The Survey Data

Moderate PA increases breathing and the heart rate slightly or moderately. Examples include brisk walking, bicycling, vacuuming, or gardening. It is recommended that, in order to maintain general health, one should engage in 30 minutes of moderate PA on most days of the week.[7]

To assess PA levels, we asked respondents if they were moderately active for 30 minutes at a time at least 5 days a week, which is the current minimal definition of moderate PA.[7] Respondents were classified as *active* if they reported meeting this recommendation; *somewhat active* if they reported being moderately active between 1-4 days per week for 30 minutes at a time; and *inactive* if they reported no moderate activity. In order to assess barriers to being physically active, we asked: "What is your main reason for not getting more exercise?"

Figure 3.1 Percent of Adults Who Are Active, Somewhat Active and Inactive

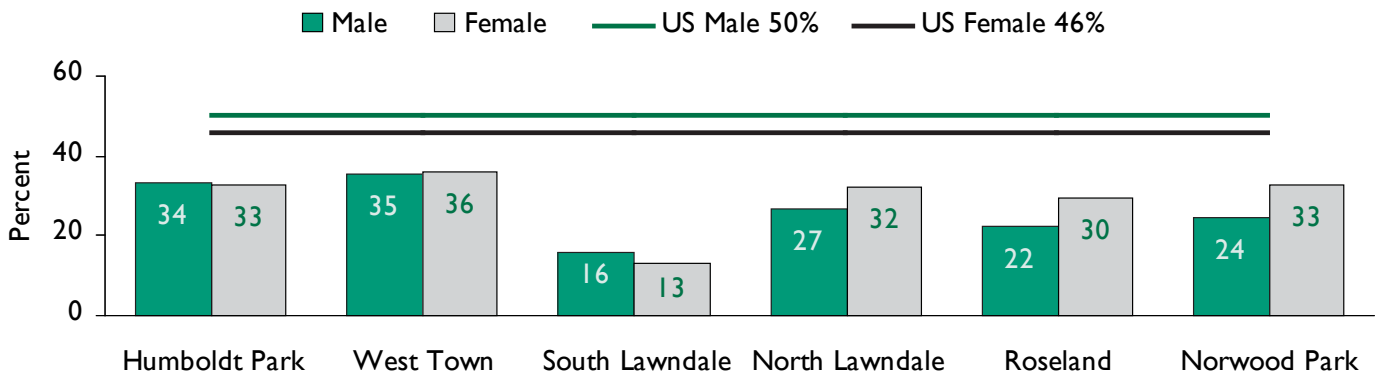


† As defined by Centers for Disease Control and Prevention moderate physical activity.

* Behavioral Risk Factor Surveillance System, 2003

Source: Improving Community Health Survey

Figure 3.2 Percent of Adults Who Are Active



† As defined by Centers for Disease Control and Prevention moderate physical activity.

* Behavioral Risk Factor Surveillance System, 2003

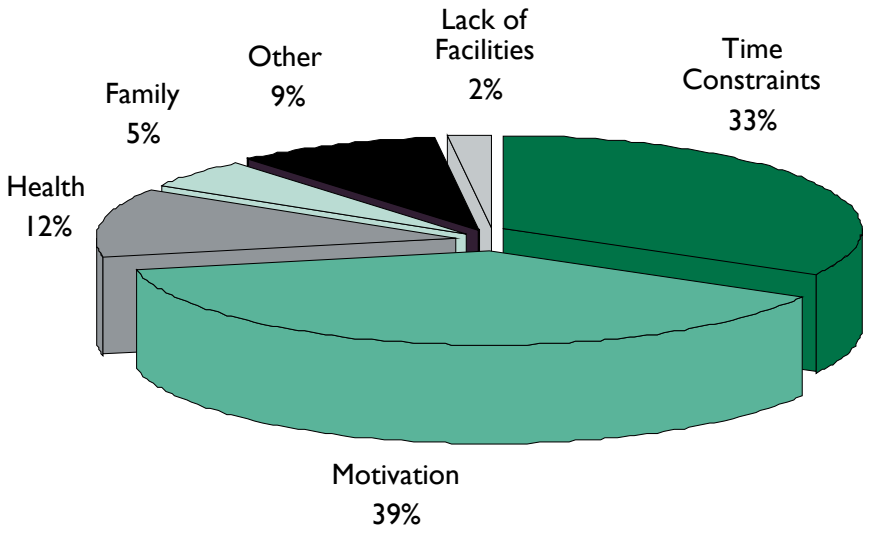
Source: Improving Community Health Survey

Figure 3.1 represents the proportions of active, somewhat active, and inactive adults in each community area. The proportion of adults who are active ranged from 15% in South Lawndale to 36% in West Town, all of which fall below the national rate of 47%.[8] However, the majority of adults (59-94%) in these community areas are active to somewhat active. The least active community area is South Lawndale where 42% of adults reported no PA.

Figure 3.2 presents the percent of adults who were moderately active for the six community areas by gender.[8,9] With the exceptions of Norwood Park and Roseland, men and women are about equally likely to engage in moderate PA. Across community areas, the proportion of active women ranged from 13% in South Lawndale to 36% in West Town, compared to 46% nationally. Similarly, the proportion of active males ranged from 16% in South Lawndale to 35% in West Town, compared to 50% nationally. The data again show a small proportion of adults engaging in physical activity in South Lawndale.

Lastly, we asked respondents who felt they were not getting enough PA (n=899), "What is your main reason for not getting more exercise?" Motivation (39%) and time constraints (33%) were the most common reasons given among these respondents (Figure 3.3). Another major barrier to PA was health limitations (12%). When we examined these barriers for each community area separately, we found that while these were generally the three main reasons given for not being more physically active, limitations in one's health was more prominent in North Lawndale (23%) and Roseland (21%).

Figure 3.3 Reasons Why Some Say They Get Less Physical Activity Than Needed



Source: Improving Community Health Survey

Policy Considerations

Government websites are possibly the best and most reliable resources for up to date and reliable information about exercise, yet studies suggest that these sites may not be reaching the general population. Evidence demonstrating the use of the Internet in seeking health information is limited. However, there are data available that report only 53% of people are using the Web, and of them, only 68% are searching for information about a particular illness, nutrition and/or fitness.[10] These data thus suggest that 47% may either have limited access to the Internet or choose not to use it. Once a program intending to promote physical activity is developed, Web-based information often becomes the main means to promote the program. In general, Internet health seekers are more likely to be White, educated, have a higher income, and report excellent/good health than are those who seek health information "offline."[10,11] Instead of relying on Web-based health promotion, programs should also employ social marketing strategies, which send proper messages on how to lose weight safely, what is considered PA, why PA is important, and how to be active. The strategies should include the Internet, television, and radio, as well as grass root efforts to inform the community and schools.

The built environment plays a major role in the activity levels of those residing in a community. Recent studies suggest that people are more likely to be active if they have places to walk that are less than 10 minutes away from their home, such as a grocery store or other local businesses (e.g., running errands).[12,13] Walkable neighborhoods include the use of mixed land diversity and access (a good mix of restaurants and local stores/businesses), short distances between intersections, higher residential density, automobile and pedestrian safety, and well-maintained sidewalks. Residents that live in highly walkable areas are active 70 minutes per week more than those in low walkable areas.[19] Thus, to promote active neighborhoods, policy makers should be promoting increased mixed land use particularly in communities where obesity and/or lack of physical activity is highly prevalent.

Lastly, studies show that only 34% of physicians are counseling adult patients to become physically active,[14] and only 42% of obese patients are being advised to lose weight.[15] In addition, some studies suggest that physician counseling is beneficial to increasing PA in the long term.[16,17] The American Medical Association has taken steps to promote PA in children, adolescents and adults by endorsing PA recommendations and promoting physician education on the U.S. Dietary Guidelines, which include PA recommendations. In addition to the American Medical Association endorsements, residency programs, medical schools, Continuing Medical Education courses and individual hospitals and practices should provide classes and/or seminars to train doctors or students on how to educate their patients on proper modes of PA. Providers should also be trained in how to prescribe exercise plans to patients using current medical evidence to combat many chronic illnesses. Finally, these courses should include training on PA counseling which uses sensitive and culturally appropriate methods to discuss the prevention and treatment of obesity and the general health benefits of an active lifestyle.

References

[1] US Department of Health and Human Services, National Center for Chronic Disease Prevention and Health Promotion. Physical activity and health: a report of the surgeon general. Atlanta, GA: International Publishing Inc; 1996. 278p.

[2] Committee of Physical Activity, Health, Transportation, and Land Use, Institute of Medicine of the National Academies. Does the built environment influence physical activity? Examining the evidence. Washington, DC: Transportation Research Board (TRB); 2005. Special Report #282. 269p. Available from: http://trb.org/publications/sr/sr282.pdf.

[3] McGinnis JM, Foege WH. Actual causes of death in the United States. JAMA 1993; 270(18): 2207-12.

[4] Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. JAMA 2004; 291(10): 1238-44.

[5] National Center for Chronic Disease Prevention and Health Promotion. The link between physical activity and morbidity and mortality [Internet]. Atlanta, GA: Centers for Disease Control and Prevention; November 1999. Available from: www.cdc.gov/nccdphp/sgr/mm.htm.

[6] American College of Sports Medicine (ACSM). ACSM's guidelines for exercise testing and prescription, 6th edition. Franklin BA, Whaley MH, Howley ET, editors. Philadelphia, PA: Lippincott Williams and Wilkins; 2000.

[7] Pate RR, Pratt M, Blair SN, Haskell WL, Macera CA, Bouchard C, Buchner D, Ettinger W, Heath GW, King, AC, et al. Physical Activity and Public Health. A recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. JAMA 1995; 273(5): 402-7.

[8] Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention [CDC], Behavioral Risk Factor Surveillance System Online Prevalence Data 2003 [Internet]. Atlanta, GA: CDC; June 2005. Available from: http://apps.nccd.cdc.gov/brfss.

[9] Illinois Department of Public Health [IDPH]. Illinois Behavioral Risk Factor Surveillance System 2001. Springfield, IL: IDPH; February 2005. Available from: http://app.idph.state.il.us/BRFSS/statedata.asp?selTopic=physact&area=il&yr=2001&form=strata&show=freq.

[10] Dickerson W, Reinhart AM, Feeley TH, Bidani R, Rich E, Garc VK, Hershey CO. Patient internet use for health information at three urban primary care clinics. J Am Med Inform Assoc 2004; 11: 499-504.

[11] Cotton SR, Gupta SS. Characteristics of online and offline health information seekers and factors that discriminate between them. Soc Sci Med 2004; 59: 1795-1806.

[12] Saelens BE, Sallis JF, Black JB, Chen D. Neighborhood-based differences in physical activity: an environmental scale evaluation. Am J Public Health 2003; 93(9): 1552-8.

[13] Powell KE, Martin LM, Chowdhury PP. Places to walk: convenience and regular physical activity. Am J Public Health 2003; 93(9): 1519-21.

[14] Wee CC, McCarthy EP, Davis RB, Phillips, RS. Physician counseling about exercise. JAMA 1999; 282(16): 1583-88.

[15] Serudla MK, Khan LK, Dietz WH. Weight loss counseling revisited. JAMA 2003; 289(14): 1747-50.

[16] The Writing Group for the Activity Counseling Trial Research Group. Effects of physical activity counseling in primary care: the activity counseling trial: a randomized controlled trial. JAMA 2001; 286(6): 677-87.

[17] Bull FC, Jamrozik K. Advice on exercise from a family physician can help sedentary patients to become active. Am J Prev Med 1998; 15(2): 85-94.

Topic 4. Child Physical Activity

True enjoyment comes from activity of the mind and exercise of the body; the two are ever united.
- Wilhelm von Humboldt (1767 - 1835); brother to Alexander von Humboldt, the man Humboldt Park is named after, German scholar, philosopher, diplomat, educator

Background

With the introduction of newer, faster, cheaper and more technological entertainment/communication devices (video games, computers, cell phones, etc.), adults and children are finding new ways to spend their free time. Unfortunately, these new technologies may interfere with active lifestyles. For example, nationally, about 33% of children are inactive, and about 29% are either at risk of being overweight or are already overweight.[1] Trends over time show that children are more overweight than they were just 10 years ago.[1] The pediatric obesity epidemic is, in part, related to a lack of physical activity.

Overweight children are at risk of becoming overweight adults.[2,3,4] In addition, children are not immune to "adult diseases." For instance, inactivity and/or obesity among children can increase the chances of developing high blood pressure, diabetes, poor body image, depression, anxiety, and can lead to an increase in overall mortality.[5] Thus, it is pressing that inactive and/or obese children avoid the obesity cycle in order to have the opportunity to live long, healthy lives.[6]

It is recommended that children under 12 engage in at least 60 minutes of age appropriate physical activity (PA) every day.[7,8] A simple way for children to get their recommended dose of PA is to participate in daily physical education (PE). Although this is the easiest way for children to meet PA recommendations, trends suggest that the proportion of high school children enrolled in daily PE classes has been declining for some time, from 42% in 1991 to 28% in 2003.[1] Though similar data is unavailable at the elementary school level, we assume that the trends are similar. The declining proportion of children participating in daily PE classes, coupled with an increase in the time spent watching television (TV), has led to many children being relatively inactive.

Table 4.1 Television Viewing and Participation in Physical Education Among Children (6-12 Years)

	N	Mean Number Of Daily TV Viewing Hours [range: 0-12]	Proportion Watching More Than 2 Hours Of TV Daily	Proportion Participating In Daily Physical Education (PE)
Humboldt Park	79	3.2	64%	7%
West Town	43	2.1	33%	3%
South Lawndale	97	2.5	43%	9%
North Lawndale	89	3.5	68%	20%
Roseland	64	4.3	83%	9%
Norwood Park	41	2.0	30%	5%
Comparison	---	**4.4**[a]	**43%**[b]	**8%**[c]

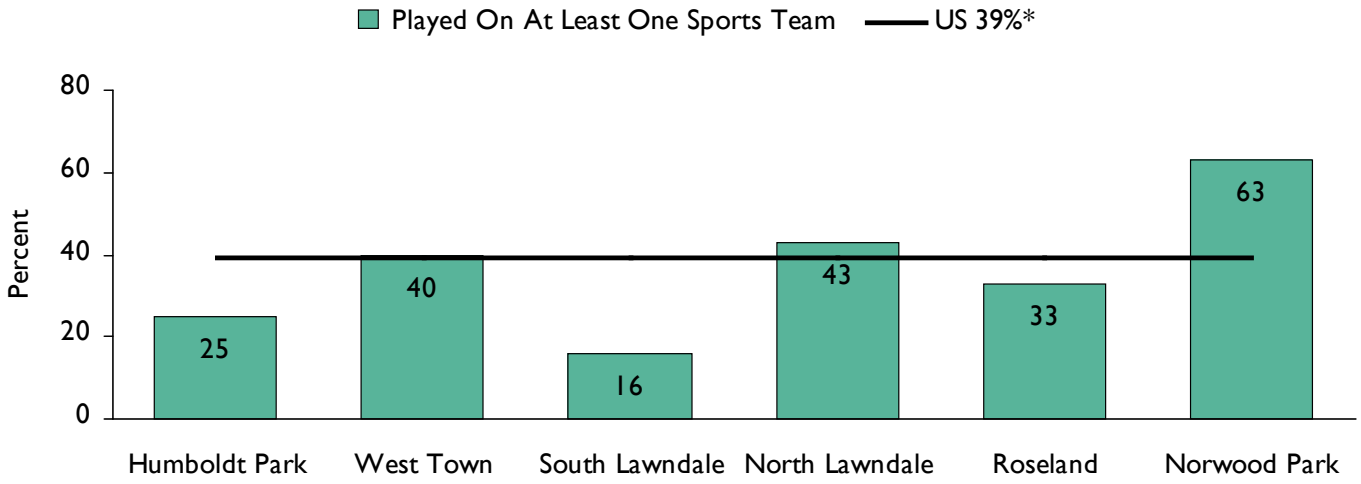
[a] Roberts DF, Foehr UG, Rideout V. Generation M: media in the lives of 8-18 year olds. Menlo Park, CA: The Henry J. Kaiser Family Foundation; March 2005. Pub. # 7251.145.

[b] US Department of Health and Human Services [HHS]. Healthy People 2010. Focus Area 22: Physical Activity and Fitness [Internet]. Washington, DC: HHS; November 2000. Available from: http://www.healthypeople.gov/document/HTML/volume2/22physical.htm#_Toc490380803.

[c] Burgeson CR, Wechsler H, Young JC, Spain, CG. Physical education and activity: results from the School Health Policies and Programs Study 2000. J of School Health 2001; 71(7): 279-293.

Source: Improving Community Health Survey

Figure 4.1 Percent of Children (6-12 Years) Who Played On At Least One Sports Team During the Past 12 Months



* Youth Media Campaign Longitudinal Survey (YMCLS) 2002[10]

Source: Improving Community Health Survey

The Survey Data

To assess PA, we asked four questions about TV viewing time, physical education in school, and participation in organized physical activity. The data reflected in this section are for children aged 6-12 years (n=413).

To determine daily TV viewing, we asked: "On an average day, how many hours does your child watch TV?" Survey data show that, regardless of which community area one lives in, viewing more than two hours of TV per day is prevalent (Table 4.1). North Lawndale (3.5 hrs) and Roseland (4.3 hrs) children are watching much more TV than children in Norwood Park (2.0 hrs) and West Town (2.1 hrs). The question regarding TV viewing does not include other screen times (e.g., video games or computer time) so this data is an underestimate of the "screen time" to which these children are exposed.

To determine physical activity acquired through school, we asked, "In an average week, when your child is in school, on how many days does s/he go to PE classes?" Table 4.1 shows that in general, children in these communities are 3 to 11 times more likely to watch more than 2 hours of television than to participate in daily PE. For example, in Roseland 83% of children watch at least 2 hours of television a day while only 9% participate in daily PE. In addition, when looking at the prevalence of pediatric obesity, Roseland had the highest obesity rate (55%) among the six CAs (Report 1[9]), a high proportion of children watching a lot of television each night, and a low proportion of students participating in daily PE. These findings imply that TV viewing and a lack of PE may play a significant role in determining a child's weight status.

Another way for children to engage in PA is through supervised or organized activities, such as sports and dance. To determine participation in organized physical activities we asked, "During the past 12 months, did your child play on any sports teams or participate in other organized physical activities?" The proportion of children having engaged in team sports over the last 12 months ranged from 16% in South Lawndale to 63% in Norwood Park (Figure 4.1). Comparatively, a recent report stated that only about 39% of 9-13 year old U.S. children are participating in organized physical activities, and the two main reasons for lack of participation in organized activities were transportation and expense.[10] The report also showed that NH Black and Hispanic children are less likely than White children to participate in organized physical activities, which is consistent with our survey results.[10]

Policy Considerations

One major barrier to PA seems to be the amount of time children spend watching TV or sitting in front of a screen (i.e., video games and computer time). Children that report more TV hours (not including computer time and time spent doing homework) than active hours are more likely to be overweight or obese.[11,12] One successful intervention carried out in the school environment trained teachers to integrate program activites into their regular curriculum. Children were asked to budget TV/screen time to 7 hours per week, or one hour daily, and to participate in a "TV turn off challenge." The "challenge" of the program was to not watch any TV for 10 days.[13] The theory behind this intervention is simple: the reduction of sedentary behaviors will increase more active behaviors.[14] The intervention resulted in reductions in weight, in meals eaten in front of the TV, and in overall TV viewing hours. No change in activity level was noted. However, the goal of the study was not to increase PA, but rather to decrease TV viewing and calories consumed. The authors suggest that low intensity activities might have replaced TV viewing. Although this intervention did not demonstrate an increase in PA, it is simple and inexpensive to implement, may decrease pediatric obesity, and might increase PA if a PA component is added to the program.

It is very difficult to address childhood PA without teaching parents about the health consequences of inactivity. Programs must incorporate educational components that describe what a physically inactive child looks like and what the consequences are. Unlike adult PA, the information available for children is vast but vague. It is very difficult to find information on what age appropriate active play means, or even what is developmentally appropriate. It is up to health professionals and program developers to inform the public about the dangers of pediatric physical inactivity and to educate them on how to promote an active lifestyle from the start of life.

Physical education (PE) classes suffer most when schools are overcrowded or underfunded. Minimizing or eliminating these programs is detrimental to both the education and health of increasingly overweight and inactive children. Though Illinois mandates daily PE classes for all public school students (in fact, it is the only state that does so), individual school districts can (and do) apply for waivers to evade it.[15,16] Schools claim to seek waivers due to shortages in facility space or staff. In response, some state legislators have advocated for PE and general wellness in Illinois schools, including Sen. Mattie Hunter and Reps. Tom Cross and William Delgado. In fact, Sen. Mattie Hunter was recently quoted as saying, "I've visited schools that use the lunchrooms, the hallways, every part of their facilities for exercise. If the schools are committed to it, they can make it happen."[18] A recent bill has been proposed to amend school policy regarding waivers. The bill does not call to eliminate the waiver, but rather proposes to reduce how long a waiver can be in effect (House Bill 1534) and make individual schools instead of entire districts responsible for applying for the waiver (House Bill 0376).[17]

In addition to these policy efforts aiming to make PE waivers more difficult to attain, the Chicago Board of Education can also hinder school districts and/or individual schools from applying for these PE waivers. That is, parents, teachers and community members can advocate to have PE put back into the school curriculum by encouraging local and state lawmakers to make PE a priority. Most importantly, PE should be viewed as a vital part of a child's education and development, plus another step toward combating obesity.

Lastly, since children spend most of their time at home, we cannot expect the schools to be solely responsible for children's physical activity levels. Therefore, we recommend that parents participate in physical activities with their children. For example, parents and children can go on bike rides or walks together. These increases in physical activity will likely be beneficial for both adults and children; not only would parents be an active role model for their children but their own health will also likely benefit.

References

[1] National Center for Chronic Disease and Prevention. Youth Risk Behavior Surveillance Survey. Youth Online: Comprehensive Results [Internet]. Silver Springs, MD: Centers for Disease Control and Prevention, Healthy Youth: 2003. Available from: http://apps.nccd.cdc.gov/yrbss.

[2] Freedman DS, Khan LK, Serdula MK, Dietz WH, Srinivasan SR, Berenson GS. The relation of childhood BMI to adult adiposity: the Bogalusa Heart Study. Pediatrics 2005; 115 (1): 22-7.

[3] Ferraro KF, Thorpe RJ, Wilkinson JA. The life course of severe obesity: does childhood obesity matter? J Gerontol B Psychol Sci Soc Sci 2003; 58: S110-19.

[4] Must A, Strauss RS. Risks and consequences of childhood and adolescent obesity. Int J Obes 1999; 23 (2 Suppl): S2-11.

[5] US Dept of Health and Human Services [HHS]. Physical activity fundamental to preventing disease [Internet]. Washington, DC: HHS, Office of the Assistant Secretary for Planning and Evaluation; 2002. Available from: http://www.aspe.hhs.gov/health/reports/physicalactivity/index.shtml.

[6] Fontaine KR, Redden DT, Wang C, Westfall AO, Allison DB. Years of life lost due to obesity. JAMA 2003; 289: 187-93.

[7] National Association for Sport and Physical Activity (NASPE). Physical activity for children: a statement of guidelines for children age 5-12, 2nd edition [Internet]. Reston, VA: American Alliance for Health, Physical Education, Recreation and Dance; 2004. Available from: http://www.aahperd.org/naspe/template.cfm?template=ns_children.html.

[8] Division on Nutrition and Physcial Activity, National Center for Chronic Disease Prevention and Health Promotion. Physical activity for everyone: are there special recommendations for young people? [Internet]. Atlanta, GA: Centers for Disease Control and Prevention; July 2005. Available from: http://www.cdc.gov/nccdphp/dnpa/physical/recommendations/young.htm.

[9] Whitman S, Williams C, and Shah A. Sinai Health System's improving community health survey: report 1. Chicago, IL: Sinai Health System; January 2004. p41.

[10] Centers for Disease Control and Prevention. Physical activity levels among children aged 9-13 years, United States, 2002. MMWR 2003; 52(33): 785-8.

[11] Anderson RE, Crespo CJ, Bartlett SJ, Cheskin LJ, Pratt M. Relationship of physical activity and television watching with body weight and levels of fatness among children: results from the Third National Health and Nurtition Examination Survey. JAMA 1998; 279(12): 938-42.

[12] Gortmaker SL, Must A, Sobol AM, Peterson K, Colditz GA, Dietz WH. Television viewing as a cause of increasing obesity among children in the United States, 1986-1990. Arch Ped Adol Med 1996; 150(4): 356-62.

[13] Robinson, TN. Reducing children's television viewing to prevent obesity: a randomized controlled trial. JAMA 1999; 282(16): 1561-7.

[14] Epstein LH, Paluch RA, Gordy CC, Dorn J. Decreasing sedentary behaviors in treating pediatric obesity. Arch Pediatr Adolesc Med 2000; 154: 220-6.

[15] Thomas DQ. The physical education waiver process [presentation of unpublished data]. Delivered to Consortium on Lowering Obesity in Chicago Children [CLOCC]: presented December 2, 2004 in Chicago, IL.

[16] Illinois State Board of Education [ISBE]. Overview of the waiver process. Springfield, IL: ISBE; August 2004. Available from: http://www.isbe.net/cgi-bin/printerfriendly.pl?filename=isbewaivers/html/overviewqa.htm.

[17] Illinois Compiled Statutes no. 105ILCS 5/2-3.25g, Rep. Tom Cross (House Bill 1534) and Rep. Renee Kosel (House Bill 0376) [Internet]. 94th Illinois General Assembly, February 10, 2005. In rules committee, 3/10/2005. Available from http://www.ilga.gov/legislation/ilcs/fulltext.asp?DocName=010500050K2-3.25g.

[18] Healthy Schools Campaign. Healthy Schools: focus on foods [Internet]. Chicago, IL: Healthy Schools Campaign; May 2005. Available from: http://www.healthyschoolscampaign.org/news/newsletter/2005-05-healthy-schools.pdf.

Topic 5. Healthy Eating

The whole experience of buying fast food has become so routine, so thoroughly unexceptional and mundane, that it is now taken for granted, like brushing your teeth or stopping for a red light. It has become a social custom as American as a small, rectangular, hand-held, frozen, and reheated apple pie. - Eric Schlosser, Fast Food Nation[1]

Background

While the general consensus is that the diet of Americans needs improvement, this is complicated by the fact that more than 45 percent of food dollars are spent on meals prepared away from home.[2] As lives get busier, more people are relying on the convenience and quick service that fast food restaurants provide. In fact, on any given day in the U.S. about one-quarter of the adult population visits a fast food restaurant. In addition, the average American eats three hamburgers and four orders of fries every week.[1] This is disconcerting because studies have found a positive association between foods that are eaten away from home, such as at fast food restaurants, and body fat.[3,4,]

Trends show that Americans consume more calories than they did in the past.[5] The cause of this is not entirely clear, but it has been suggested that portion sizes of foods eaten away from home are increasing.[6] Furthermore, these larger portions not only contain more calories, but also encourage people to eat more.[7,8] Portion sizes have increased not only at fast food restaurants, but in the home as well.[9] One report suggests that the prevalence of overweight and obesity continues to rise in the US, yet activity levels have not changed substantially in the past decade. Thus, the increase in body weight is caused by the increasing imbalance between energy intake and energy output.[5]

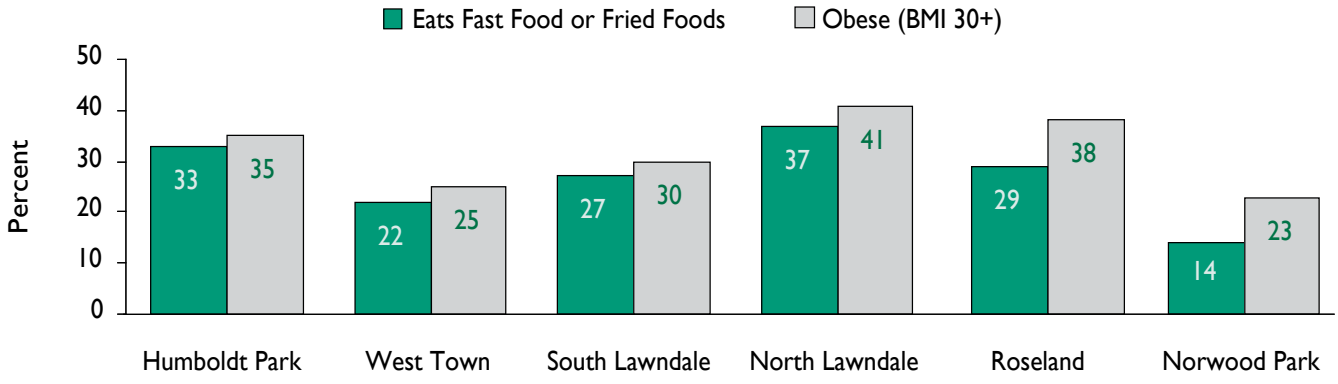
Eating a healthy diet plays a major role in maintaining good health, increasing quality of life, and in the prevention of several chronic diseases. In fact, healthy eating and physical activity together may be able to prevent as many as 400,000 deaths each year.[10] A healthy diet can play an especially important role in the communities surveyed here because a poor diet is a risk factor for many diseases, including obesity and diabetes, both of which were higher than the national average in several of the communities.[11]

The Survey Data

The survey asked numerous questions about respondents' eating habits such as how often respondents eat fast food, fried foods or chips. It also asked questions about overeating at typical meals and barriers to eating healthier.

Figure 5.1 shows the proportion of respondents who reported eating fast food or fried foods four or more

Figure 5.1 Percent of Adults Who Eat Fast Food or Fried Foods Four or More Times A Week and Percent Who Are Obese



Source: Improving Community Health Survey

Table 5.1 Reasons Adults Say They Do Not Eat Healthier

	Do Not Understand Nutrition Guidelines	Nutritious Foods Are Too Costly
Humboldt Park	30%	28%
West Town	24%	38%
South Lawndale	33%	29%
North Lawndale	39%	27%
Roseland	29%	34%
Norwood Park	13%	10%

Source: Improving Community Health Survey

times per week compared to the proportion of obese adults in each community area. The figure suggests that there is a relationship between the consumption of fast food or fried foods and obesity. For example, people in North Lawndale, the community area with the highest obesity prevalence, were more than two times as likely to eat fast food or fried foods than respondents from Norwood Park, the community area with the lowest obesity prevalence.

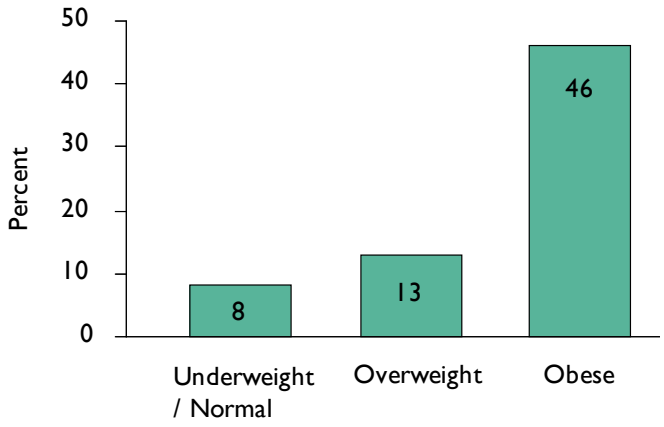
Also noteworthy is the fact that the community area with the lowest median household income, North Lawndale, eats the most fast food and fried foods, while Norwood Park, the community with the highest median household income, eats the least amount of fast food and fried foods. It is not surprising that a relationship exists between income and eating habits because diets high in fat, like fast food or fried foods, provide dietary energy at a comparatively low cost when compared to healthier diets including fresh fruits and vegetables, lean meats, and fish.[12] Thus, eating fast food and fried foods in general is closely correlated with both median household income and obesity.

When respondents were asked why they were not eating healthier, between 13% and 39% reported that they do not understand the nutrition guidelines and 10%-38% said that nutritious foods are too costly (see Table 5.1). Unfortunately, it is possible that nutrition information campaigns are not reaching everyone, but rather the information is being received by more advantaged residents who are likely already knowledgeable about nutrition guidelines. If we assume that this type of knowledge would encourage residents to make healthier eating choices, providing nutrition information in a more effective manner may have a big impact in five of the six communities surveyed here.

Table 5.1 also shows that respondents from Norwood Park, a predominantly NH White community, were three to four times less likely to report that the cost of nutritious foods is a barrier to healthier eating when compared to respondents from the other five, mostly minority, community areas. Once again we see a relationship between income and eating habits. Although we note above that respondents with lower median household incomes were more likely to eat fast food and fried foods, we now see that, in many cases, the healthy alternatives may simply be too costly. This is certainly a concern. Although we can make efforts to teach people how to eat healthier, that information can only go as far as their wallets will allow.

Respondents were also asked how often they eat too much at meal times. (Possible answers were "never," "rarely," "sometimes," "most of the time," and "always.") Figure 5.2 shows the proportion of respondents that report eating too much at meal times "most of the time" or "always" by weight status. There is a clear association between food consumption and weight status. Respondents who are obese (BMI ≥30) are six times more likely to eat too much at meal times compared to normal or underweight respondents (BMI <25).

Figure 5.2 Percent of Adults Who Say They Eat Too Much Most of the Time or Always by Weight Status



Source: Improving Community Health Survey

Policy Considerations

It is evident that eating fast food has become a way of life for many Americans and for a large proportion of the people from the six communities that we surveyed. Americans continue to be bombarded with advertisements for unhealthy foods and there are fast food restaurants on nearly every corner. It is unfair to expect individuals to adopt healthy eating habits if their environment is not conducive to such a change. In order to fight the obesity epidemic and reduce the burden of chronic disease that is associated with diet, we must not only change individual behavior, but the environment as well.

A good place to start is by increasing the involvement of the food industry, particularly fast food restaurants, in the effort to improve our nation's health. They can do this in many ways but, at a minimum, should begin offering a wider variety of nutritious menu options and controlling portion sizes. Fast food chains should be encouraged to continue their efforts to eliminate the use of unhealthy oils (those containing trans fats[13]) in their cooking. While trans fats have been removed from certain menu items, McDonald's 2002 pledge to stop using trans fats in the production of French fries has not been upheld. Customers and advocacy groups should continue to make executives at this chain, and others, aware of the importance of this issue.

At the same time, it is important that individuals are taught how to make the healthiest possible choices when eating away from home. Requiring (and regulating) the use of nutrition labels that list the serving size, calorie and fat content on the packaging of fast food items would be a good first step. This should be accompanied by an education campaign explaining the relevance of good nutrition and teaching people how to read food labels.

Finally, since many people spend a large portion of their day at work, we urge workplaces to offer healthy snacks and 100% fruit juices in their vending machines. In addition, adult weight status is strongly related to childhood weight, so the same steps should be taken in schools. Local and state school boards, as well as parents, should insist on the removal of fast foods from school cafeterias, as well as the placement of healthy snacks and drinks in vending machines. Soda machines, in particular, should be discouraged. Furthermore, the importance of nutrition should be stressed in health classes and every effort should be made to maintain physical education classes.

References

[1] Schlosser E. Fast food nation. New York, NY: Houghton Mifflin, 2002. 288p.

[2] National Restaurant Association. 2004 Restaurant industry forecast: executive summary. Washington, DC: National Restaurant Association; 2004. Available from: http://www.restaurant.org/pdfs/research/2004_forecast_execsummary.pdf.

[3] Binkley JK, Eales J, Jekanowski M. The relation between dietary change and rising US obesity. Int J Obes 2000; 24: 1032-9.

[4] Fung T, Anyan WR. In: Tamborlane WV, Editor. The Yale guide to children's nutrition. New Haven, CT: Yale University Press; 1997. 415p.

[5] Young LR, Nestle M. The contribution of expanding portion sizes to the US obesity epidemic. Am J Public Health 2002; 92: 246-9.

[6] Young LR, Nestle M. Portion sizes in dietary assessment: issues and policy implications. Nutr Rev 1995; 53: 149-58.

[7] Diliberti N, Bordi PL, Conklin MT, Roe LS, Rolls BJ. Increased portion size leads to increased energy intake in a restaurant meal. Obes Res 2004; 12(3): 562-8

[8] Rolls BJ, Engell D, Bircj LL. Serving portion size influences 5-year-old but not 3-year-old children's food intakes. J Am Diet Assoc 2000; 100: 232-4.

[9] Nielsen SJ, Popkin BM. Patterns and trends in food portion sizes, 1977-1998. JAMA 2003; 289: 450-3.

[10] Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. JAMA 2004; 291(10): 1238-44.

[11] Whitman S, Williams C, Shah A. Sinai Health System's improving community health survey: report 1. Chicago, IL: Sinai Health System, January 2004. 54p.

[12] Drewnowski A, Darmon N, Andre B. Replacing fats and sweets with vegetables and fruits - a question of cost. Am J Public Health 2004; 94: 1555-9.

[13] US Food and Drug Administration [FDA]. FDA fact sheet: what every consumer should know about trans fatty acids. [Internet]. Rockville, MD: FDA; July 2003. Available from: http://www.fda.gov/oc/initiatives/transfat/q_a.html.

Topic 6. Food Shopping

I can walk out my door and buy a semi-automatic weapon or narcotics, but I can't find organic tomatoes or lettuce anywhere... I need to get in my car and drive to Oak Park. – Ladonna Redmond, resident of West Garfield Park[1]

Background

A healthy diet is essential to healthy living. Along with adequate physical activity, eating foods with an appropriate amount of calories and sufficient nutrition is necessary for maintaining a healthy weight and avoiding illness. In fact, there is evidence that diets rich in fruits, vegetables, whole grains, poultry, and fish are associated with a lower risk of heart disease, stroke, diabetes, and cancer, as well as with better overall health status.[2,3,4]

However, in order to adopt a healthy diet, it is imperative to have access to healthy food choices. Given the disproportionate rates of chronic diseases related to diet in certain areas, it is likely that some communities have more opportunity to select healthy foods than others. In fact, previous research has shown that some communities have better access to supermarkets with healthy food options, including fresh fruits and vegetables. More specifically, a recent survey of over 200 neighborhoods around the country found that there were more supermarkets in high-income neighborhoods than in low-income neighborhoods.[5] There were four times as many supermarkets in predominately White neighborhoods as in Black neighborhoods. Furthermore, even if a neighborhood has a supermarket, there is no guarantee it will offer healthy food options like fruits and vegetables at affordable prices. There is evidence to suggest that it may be cost prohibitive for low-income consumers to increase the amount of fruit and vegetables they purchase weekly.[6]

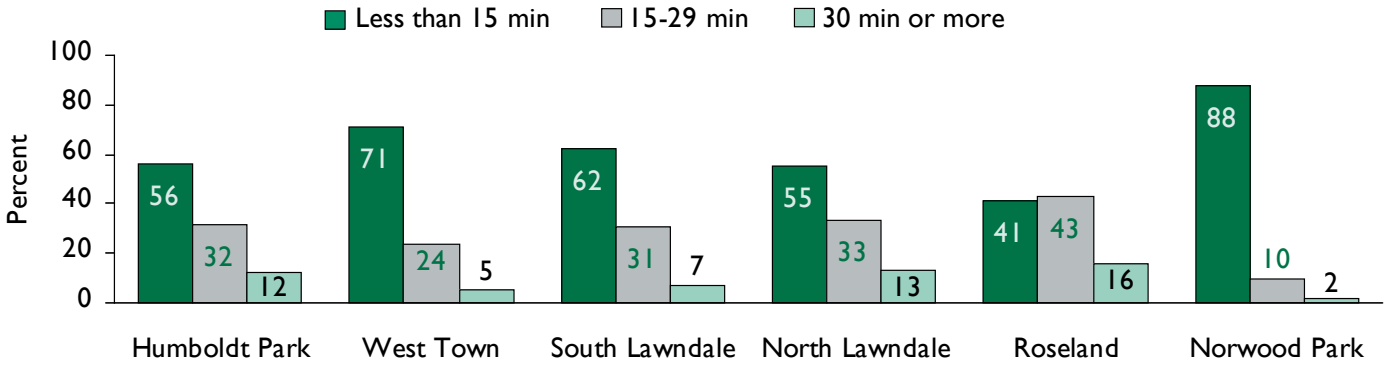
Since what we eat is limited by the food choices available to us, such unequal access suggests that residents of higher income living in White neighborhoods have more opportunities and/or options when trying to achieve a healthy diet.[5] Limited access thus presents a real barrier to adopting a healthier lifestyle.

The Survey Data

The adult survey contained several questions on the accessibility and availability of food stores in the six surveyed communities.

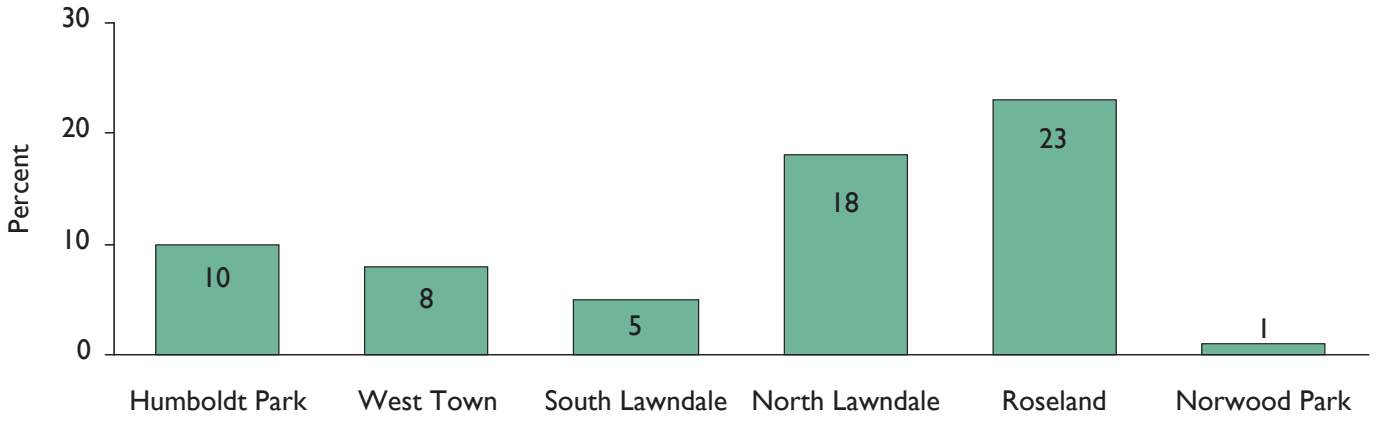
While studies have not established the exact determinants of healthy eating, improving access to and awareness of healthy options are likely to improve diet and health. To assess residents' access to food stores, we first asked respondents if most of their grocery shopping was done at a supermarket (such as Jewel, Dominick's, Cub Foods, and Aldi) or at a convenience store (such as 7-11, White

Figure 6.1 Percent of Adults Who Commute to the Grocery Store



Source: Improving Community Health Survey

Figure 6.2 Percent of Adults Who Grocery Shop Once A Month or Less



Source: Improving Community Health Survey

Hen, or a gas station). We found that 10% of residents from South Lawndale, a primarily Mexican community, regularly shopped at a convenience store compared to less than 1% of residents from Norwood Park, which is mostly White (data not shown). Unfortunately, these smaller stores tend to offer a limited selection of foods at higher prices.

A recent study by the Metro Chicago Information Center (MCIC) on the locations of "major player" grocery stores (Jewel, Dominick's, Cub Foods, and Aldi) supports our survey findings. The study examined the distribution of these grocery stores city-wide and found that there are 3.4 major stores per 100,000 people in majority White wards, yet only 2.6 stores per 100,000 people in majority Black wards and even fewer, 2.3 per 100,000 in majority Latino wards.[7]

Similarly, a report by the Chicago Urban League, *Still Separate, Unequal: Race, Place, Policy and the State of Black Chicago*, found stark disparity in the spatial distribution of Dominick's and Jewel's grocery stores across Chicago neighborhoods. It stated, "Of 23 Dominick's stores listed in the 2003 Chicago Yellow Pages, 20 were located in disproportionately white neighborhoods that are heavily concentrated on the North Side... Of the city's 40 Jewel's, 33 or 83 percent are located in disproportionately white neighborhoods....Ten of the city's 27 low-cost Aldi's Grocery stores can be found in disproportionately black community areas."[8]

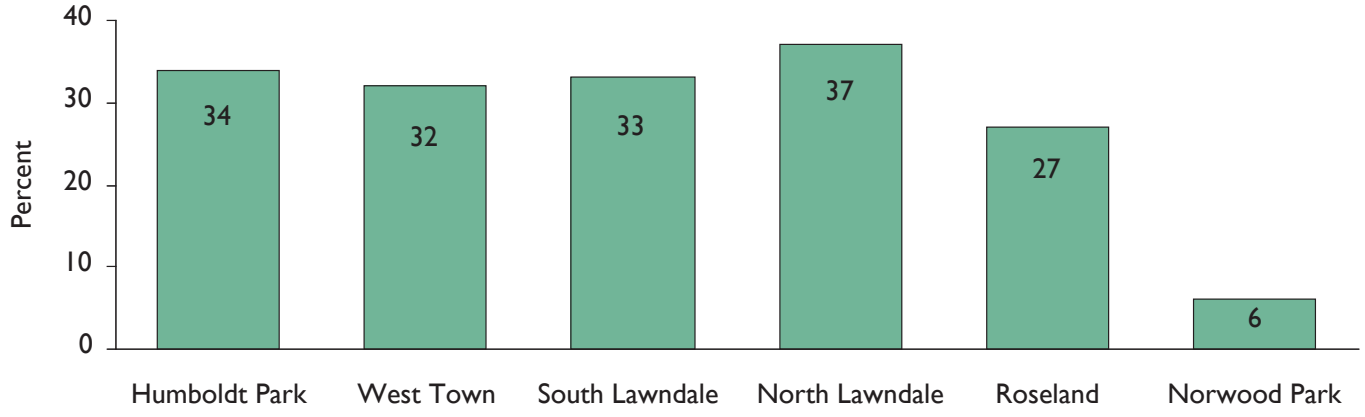
The lack of close proximity to full-service grocery stories suggests that residents from primarily Latino and Black neighborhoods may have a more difficult time purchasing healthy, high quality foods compared to residents from White neighborhoods. In fact, in North Lawndale, a mostly Black community, there are more corner and convenience stores than there are supermarkerts, and over half of the food stores carried fewer than five varieties of produce.[9]

We also examined how far residents had to travel to shop at these food stores. Figure 6.1 shows that the vast majority of residents in Norwood Park (88%) commute less than 15 minutes for their grocery shopping while the majority of residents in Roseland (59%), a Black community on the south side of Chicago, commute more than 15 minutes and 16% commute 30 or more minutes. Longer commutes are also seen in North Lawndale (a predominately Black community) and Humboldt Park (a mixed community of Black, Mexican, and Puerto Rican residents).

Note that distance may be a factor in how often residents go food shopping. For instance, respondents were asked: "How often do you buy food at the store you usually go to?" While the vast majority shop at least once a month, individuals from the two communities that had the farthest commute, Roseland and North Lawndale, shopped less frequently (Figure 6.2).

Additionally, we asked respondents, "What is your primary mode of transportation?" We found that residents from minority communities were four times as likely to rely on public transportation as residents from Norwood Park (Figure 6.3). This highlights another explanation for the longer commute time and fewer shopping trips for residents of Black communities like Roseland and North Lawndale. In fact, a recent report by the Chicago Department of Public Health noted that 26% of the total population of North Lawndale lives a half mile or further to the closest store with fresh produce yet 38% of residents do not own a car.[9] If this is the situation,

Figure 6.3 Percent of Adults Who Rely on Public Transportation



Source: Improving Community Health Survey

one can understand the plight of one Chicago mother of three who does not own a car. She stated, "I've tried to get on the bus carrying grocery bags with the kids, and it was a nightmare. I like to cook for the family, but if I can't walk somewhere to buy the ingredients, we end up eating a lot of unhealthy food that's fattening and greasy."[1]

In examining these data, we have found that there are significant structural barriers that deter individuals from certain communities from adopting healthier eating habits. The link between the availability of full-service food stores in the community and an individual's health is thus a real one. Most notably, if a community does not offer easy access to healthy food options (i.e., large grocery stores conveniently located), individuals living there may be less likely to grocery shop often (at least once per week), less likely to purchase and eat healthy foods like fresh fruits and vegetables (which are often perishable), and thus, less likely to achieve good health.

Policy Considerations

While individuals need to assume some responsibility for their own health, it is obvious that people do not live in isolation, but rather in the context of social environments, norms, and values. As a result, many factors in health exist at the community not individual level. For example, much attention has been paid to the prevalence of billboards advertising smoking and drinking in disadvantaged neighborhoods. However, the absence of conveniently located supermarkets and/or of fresh produce in supermarkets is less apparent, but just as important.

If unhealthy diets are a consequence of the lack of access to healthy food choices (such as those more readily available at large chain stores), simply teaching individuals in these communities about healthier diets is not enough. It is unreasonable to expect individuals to choose fresh fruits and vegetables over non-perishable and pre-packaged foods when they commute long distances to get to a supermarket and thus shop less frequently. Given that obesity is more common among poor minorities, who (according to the studies discussed here[5,7]) are less likely than Whites to have a supermarket located near their home, it is even more imperative that we have large chain grocery stores stocked with a wide variety of healthy foods located in these communities.

To this end, policies that prevent a more equal distribution of grocery stores (such as conditions set by grocery stores that move out of a building yet prohibit the use of the building for future grocery stores) should be eliminated. Other efforts, such as tax incentives, could also be used to persuade stores to open in disadvantaged areas.

References

[1] Cullotta KA. Cure to child obesity may be nearby food store. Chicago Tribune April 28, 2004, p2.

[2] Hu FB, Rimm EB, Stampfer MJ, Asscherio A, Spiegelman D, Willet WC. Prospective study of major dietary patterns and risk of coronary heart disease in men. Am J Clin Nutr 2000; 72: 912-21.

[3] Joshipura KJ, Hu FB, Manson JE, Stampfer MJ, Rimm EB, Speizer FE, Colditz G, Ascherio A, Rosner B, Spiegelman D, Willett WC. The effect of fruit and vegetable intake on risk for coronary heart disease. Ann Intern Med 2001; 134: 1106-14.

[4] Drewnowski A, Darmon N, Briend A. Replacing fats and sweets with vegetables and fruits-a question of cost. Am J Public Health 2004; 94: 1555-9.

[5] Morland K, Wing S, Roux AD, Poole C. Neighborhood characteristics associated with the location of food stores and food service places. Am J Prev Med 2002; 22(1): 23-9.

[6] Dibsdall LA, Lambert N, Bobbin RF, Frewer LJ. Low-income consumers' attitudes and behaviour towards access, availability and motivation to eat fruits and vegetables. Public Health Nutr 2003; 6(2): 159-68.

[7] Gallagher M. Race and place matter for major Chicago area grocers. Chicago, IL: Metro Chicago Information Center (MCIC); Update Summer 2003.

[8] Street P. Still separate, unequal: race, place, policy, and the state of black Chicago. Chicago, IL: The Chicago Urban League; 2005. p.69.

[9] Chicago Food Systems Collaborative. The challenge to an apple a day: the availabillity of fresh produce in Chicago communities. Chicago, IL: Chicago Department of Public Health; 2005. Available from: http://egov.cityofchicago.org/webportal/COCWebPortal/COC_EDITORIAL/ChgoGroceries_2.pdf.

Topic 7. Binge Drinking

Abuse of alcohol and other substances continues to be one of the most serious public health problems in the United States. [It] exacts a tremendous toll on productivity and destroys individuals, families, and communities. – GR Hanson[1]

Background

Excessive alcohol consumption is the third leading cause of preventable deaths in the U.S.[2] and can lead to dire health consequences such as liver cirrhosis, some cancers, unintentional injuries (e.g., motor vehicle accidents), and intentional injuries (e.g., violence).[3] The Centers for Disease Control and Prevention reported that in 2001 approximately 76,000 deaths were attributable to alcohol. Additionally, 2.3 million years of potential life were lost due to chronic (e.g., alcoholic liver disease, liver cirrhosis) and acute (e.g., motor vehicle traffic injuries, homicide) conditions related to excessive alcohol consumption.[4]

The overall economic impact of alcohol abuse was estimated to be $185 billion in 1998, of which more than 70% was attributed to lost productivity resulting from alcohol-related illness or premature mortality. Another 15% of these costs were due to health care services used to treat alcohol abuse or the medical consequences of the disease. Finally, another 9% of the economic burden was due to property loss and administrative costs of alcohol-related motor vehicle crashes.[3]

Given the serious public health impact of alcohol abuse, the Healthy People 2010 initiative includes some targets for reducing excessive alcohol consumption. For instance, one goal is to reduce the proportion of adults who participate in binge drinking to 6% by 2010. Unfortunately, in 2001 the national rate was 15% and the rates ranged from 7-26% across the 50 states. In general, binge drinking was found to be more common in men, younger persons, urban residents, and persons living in the Midwest, Northeast, and West. Non-Hispanic (NH) Whites (15%) and Hispanics (18%) generally had higher rates than NH Blacks (11%). Also, binge drinking has been increasing over the last several years.[5]

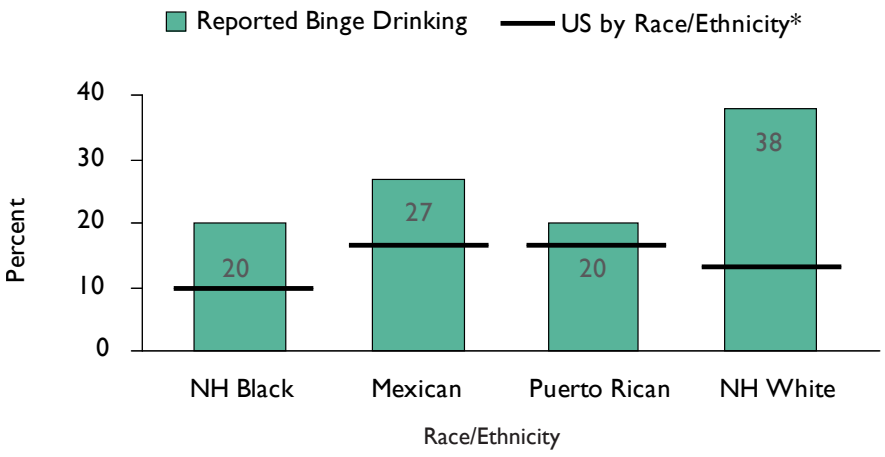
A recent study demonstrated that indeed there is substantial variability in the prevalence of current and binge drinking across 120 metropolitan areas. For instance, the binge drinking rate ranged from 4% to 24% with cities in the Midwest, Texas, and Nevada faring the worst.[6] Chicago had a rate of 17%. Such information at the local level would prove useful in allowing communities to assess the extent of this public health problem, improve planning, and track progress toward the Healthy People 2010 goal.

The Survey Data

The adult module of the survey contained several questions on alcohol consumption. Binge drinking is defined as having consumed 5 or more alcoholic beverages on at least one occasion in the past month. This definition is consistent with the one used by the Behavioral Risk Factor Surveillance System survey, which is conducted by states nationwide.[5]

The prevalence of binge drinking for each of the community areas surveyed were considerably higher than rates of binge drinking for the U.S. as a whole. In particular, West Town (38%) and Norwood Park (28%) had rates that were twice as high as the national rate (15%).

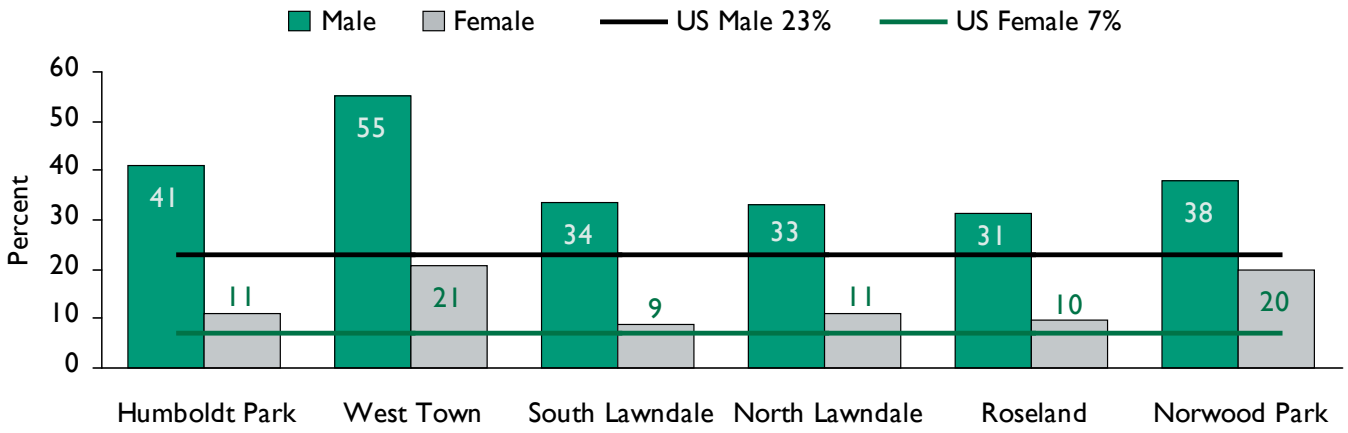
Figure 7.1 Percent of Adults Who Reported Binge Drinking by Race/Ethnicity



* Behavioral Risk Factor Surveillance System, 2002

Source: Improving Community Health Survey

Figure 7.2 Percent of Adults Who Reported Binge Drinking by Sex



* Behavioral Risk Factor Surveillance System, 2002

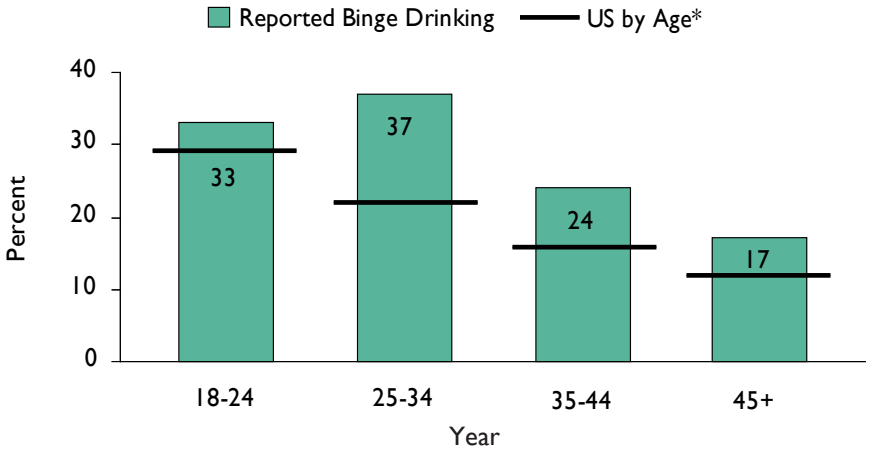
Source: Improving Community Health Survey

The community areas with the lowest rates were Roseland (19%) and North Lawndale (20%). These findings reflect the binge drinking patterns mentioned earlier and confirmed by the data in Figure 7.1, which show that NH White and Hispanic persons (particularly Mexican) in the communities surveyed had the highest rates. Thus, it may not be a surprise that West Town, which is half NH White and half Hispanic, and Norwood Park, which is predominantly NH White, had the highest rates of binge drinking, while the predominantly NH Black community areas of North Lawndale and Roseland had the lowest rates.

Nationally, men have a binge drinking rate 3 times that of women and the community areas surveyed follow this trend (Figure 7.2). However, note that the male and female rates for West Town are well above the national averages. In general, men in the six surveyed community areas had much higher rates than U.S. men, while the women had comparable rates to U.S. women (with the exception of West Town and Norwood Park where the female rate was almost three times the U.S. female rate).

Figure 7.3 illustrates that binge drinking rates are highest in the younger age groups, which again coincides with national patterns. Therefore, West Town's racial/ethnic composition and young population (data not shown) puts it at risk for high rates of binge drinking. Also note that the rates for binge drinking are almost twice as high as the national rates across the 25-34 age group in these community areas. Specifically, while the binge drinking rate is 20% for 25-34 year olds nationally, it is 37% in these community areas.

Figure 7.3 Percent of Adults Who Reported Binge Drinking by Age



* Behavioral Risk Factor Surveillance System, 2002

Source: Improving Community Health Survey

Policy Considerations

Since the prevalence of alcohol abuse and/or disorders is significantly higher among patients visiting a primary care provider than among the general population,[7,8] providers have a unique opportunity to play a key role in detecting alcohol problems and thus initiating prevention or treatment efforts. Several brief screening tools are available to assist providers in identifying patients who may have a drinking disorder, engage in risky drinking behaviors, or are alcohol dependent. Research has shown that such patients within a primary care setting can be referred and treated successfully.[9,10]

The price of alcoholic beverages indirectly influences the rate of consumption and the incidence of alcohol abuse and its related consequences. Therefore, excise taxes on alcohol are an effective control measure that can help promote pubic health and offset at least a small portion of the financial burden imposed by excessive alcohol consumption.[11] The revenue generated from these taxes can be used to fund programs aimed at reducing excessive alcohol consumption.

The alcohol companies disproportionately target African American and Hispanic neighborhoods as well as youths. For example, a study showed that Chicago minority neighborhoods have three times as many alcohol billboards as White neighborhoods do. In addition, 12% of alcohol billboards were found to be within 500 feet of schools, parks, and playgrounds, thus exposing children to advertising that encourages the use of dangerous products.[12] Young adults are also overexposed to alcohol via heavy advertisement on college campuses,[13] at college sporting events,[14] and on television. First, limitations on outdoor advertising should be encouraged by placing public pressure on advertising companies and elected officials to implement and enforce codes that carefully control the placement of billboards advertising alcohol. Placing bans on alcohol advertising at college sports events as well as using counter-advertising can also make an impact in reducing alcohol consumption.

Lastly, research has shown that a comprehensive community-based program can be extremely effective in reducing high-risk alcohol consumption as well as alcohol-related injuries resulting from motor-vehicle accidents and assaults. Such a program would consist of: mobilizing the community to support prevention efforts; encouraging responsible beverage service (e.g., developing policies to reduce driving after drinking); reducing underage drinking by limiting access to alcohol (e.g., by enforcing underage sales laws); increasing local enforcement of drinking and driving laws (e.g., roadside checkpoints); and limiting access to alcohol by zoning.[15]

References

[1] Hanson GR, Li TK. Public health implications of excessive alcohol consumption. JAMA 2003; 289: 1031-2.

[2] Mokdad A, Marks J, Stroup D, Gerberding J. Actual causes of death in the United States, 2000. JAMA 2004; 291: 1238-45.

[3] National Institute on Alcohol Abuse and Alcoholism [NIAAA]. Tenth special report to the US Congress on alcohol and health. Rockville, MD: US Dept of Health and Human Services, Public Health Service, National Institutes of Health, NIAAA; June 2000. Report #023.

[4] Centers for Disease Control and Prevention. Alcohol-attributable deaths and years of potential life lost-United States, 2001. MMWR 2004; 53(37): 866-70.

[5] Centers for Disease Control and Prevention. State-specific prevalence of selected chronic disease-related characteristics-Behavioral Risk Factor Surveillance System. MMWR 2003; 52(SS-8): 1-80.

[6] Nelson DE, Naimi TS, Brewer RD, Bolen J, Wells HE. Metropolitan-area estimates of binge drinking in the United States. Am J Public Health 2004; 94: 663-71.

[7] Fleming MF, Manwell LB, Barry KL, Johnson K. At-risk drinking in an HMO primary care sample: prevalence and health policy implications. Am J Public Health 1988; 88(1): 90–3.

[8] O'Connor PG, Schottenfeld RS. Patients with alcohol problems. N Engl J Med 1998; 338(9): 592–602.

[9] Israel Y, Hollander O, Sanchez-Craig M, Booker S, Miller V, Gingrich R, Rankin JG. Screening for problem drinking and counseling by the primary care physician-nurse team. Alcohol Clin Exp Res 1996; 20(8):1443–50.

[10] National Institute on Alcohol Abuse and Alcoholism [NIAAA]. Alcohol alert no. 43: brief intervention for alcohol problems [Internet]. Rockville, MD: NIAAA; April 1999. Available from: http://www.niaaa.nih.gov/publications/aa42.htm.

[11] Cook PJ, Moore MJ. The economics of alcohol abuse and alcohol-control policies. Price levels, including excise taxes are effective at controlling alcohol consumption. Raising excise taxes would be in the public interest. Health Affairs 2002; 21: 120-33.

[12] Hackbarth DP, Schnopp-Wyatt D, Katz D, Williams J, Silvesteri M, Pfleger M. Collaborative research and action to control the geographic placement of outdoor advertising of alcohol and tobacco products in Chicago. Public Health Rep 2001; 116: 558-67.

[13] Kuo M, Wechsler H, Greenberg P, Lee H. Marketing of alcohol to college students: the role of low process and special promotions. Am J Prev Med 2003; 25: 204-11.

[14] College Athletic Clips. Steroids get the headlines but alcohol is the real problem. March 19, 2005. Available from: http://www.collegeathleticsclips.com/archives/000482.html.

[15] Holder HD, Gruenewald PJ, Ponicki WR, Treno AJ, Grube JW, Saltz RF, Voas S, Reynolds R, Davis J, Sanchez L. Effect of community-based interventions on high-risk drinking and alcohol-related injuries. JAMA 2000; 284: 2341-7.

Topic 8. Breast Cancer Screening

Mammography is an important tool for detecting breast cancer at an early age. When coupled with appropriate treatment, early detection can reduce breast cancer mortality. But in order to maximize the potential benefits of mammography, high standards of quality assurance are necessary.
– Improving Breast Imaging Quality Standards, Institute of Medicine Report 2005[1]

Background

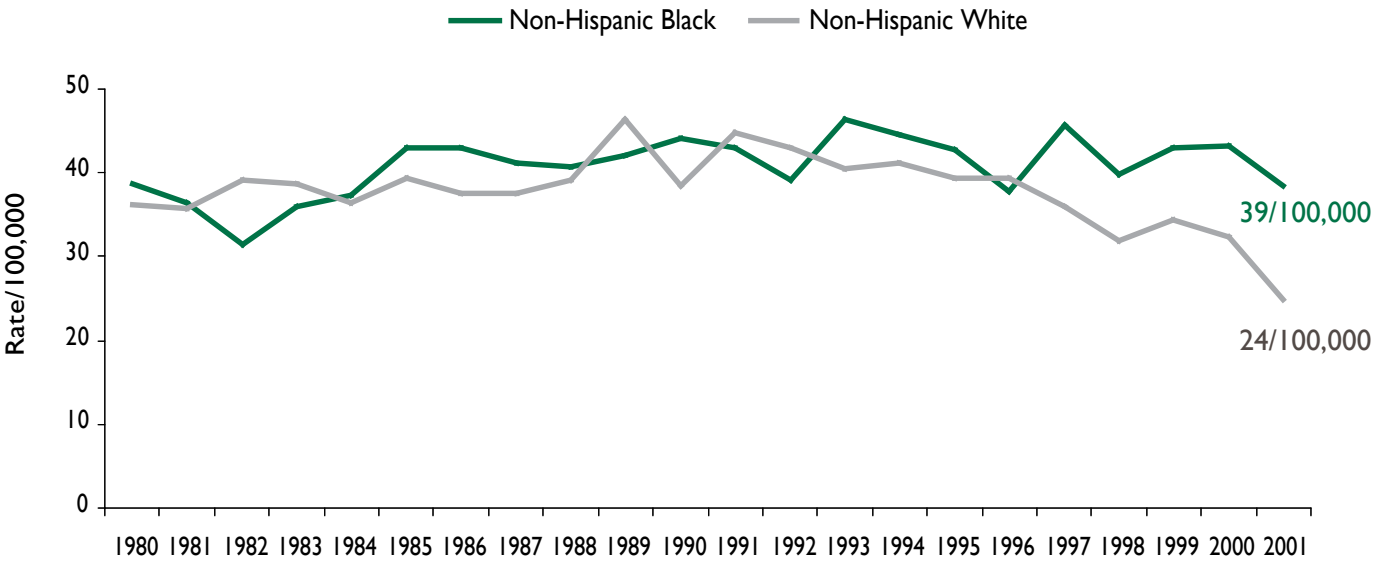
Breast cancer is the second leading cause of cancer death among U.S. women and accounts for nearly one of every three cancers diagnosed. It is estimated that more than 211,000 women will be diagnosed with breast cancer and 40,000 will die from it in 2005.[2] The incidence and death rates from breast cancer increase with age, putting women 40 years and older most at risk.[3]

As with many cancers, national data show that women of racial and ethnic minority groups and those of lower socioeconomic status tend to have poorer health outcomes following a breast cancer diagnosis. That is, they are more likely to report less than optimal treatment and have lower cancer survival rates. So, while the incidence of breast cancer in the U.S. is higher among White women and women of higher socioeconomic status, once diagnosed a women is more likely to die of breast cancer if she is Black and/or from a lower socioeconomic status.[4]

Eliminating disparities in breast cancer mortality is one of our nation's major public health goals, and one of the Healthy People 2010 objectives. In 1980, Black and White women had the same breast cancer mortality rates. However, since then, the Black-White disparity in breast cancer mortality has substantially widened not only nationally, but also for Chicago. Figure 8.1 illustrates this point showing that in 2001 Black women (39 per 100,000) in Chicago were almost twice as likely to die from breast cancer as White women (24 per 100,000), even though the mortality rates were virtually identical 20 years before.

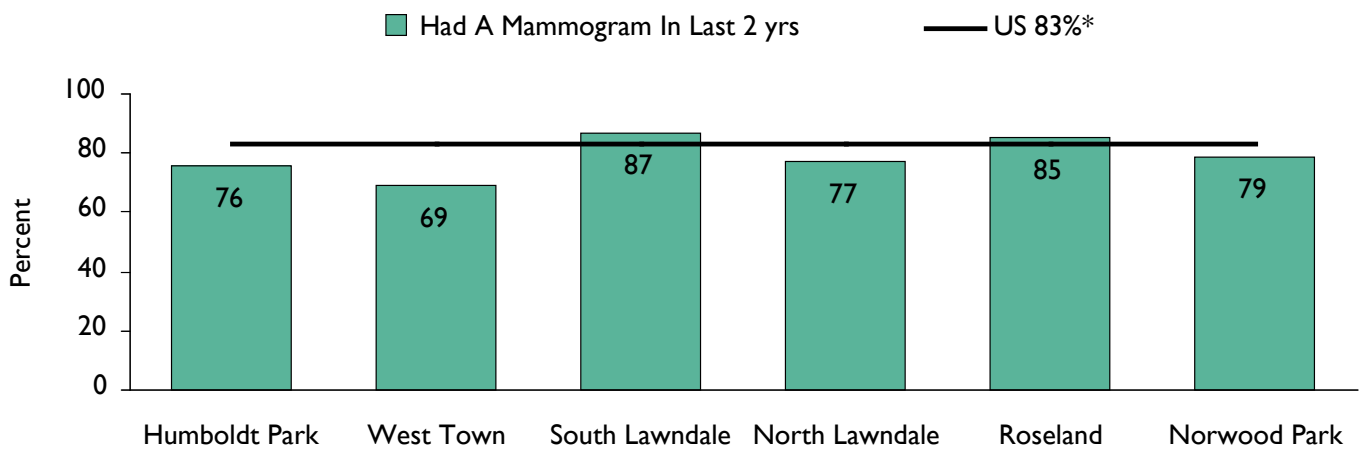
It is generally believed that mammography is effective in reducing breast cancer deaths. A mammogram is a diagnostic and screening exam used to detect and diagnose cancers of the breast. When cancer of the breast is detected early, it is more likely to be cured. For such localized cancers, the five-year survival rate is 94%.[5] However, when cancers are detected later, they may have progressed beyond the breast tissue and would thus

Figure 8.1 Female Breast Cancer Mortality, Chicago 1980-2001 (Age-Adjusted)



Source: Department of Public Health Vital Record Tapes, 1980-2001

Figure 8.2 Percent of Women (≥ 40 Years) Who Had A Mammogram In the Last 2 Years



* Behavioral Risk Factor Surveillance System, 2002

Source: Improving Community Health Survey

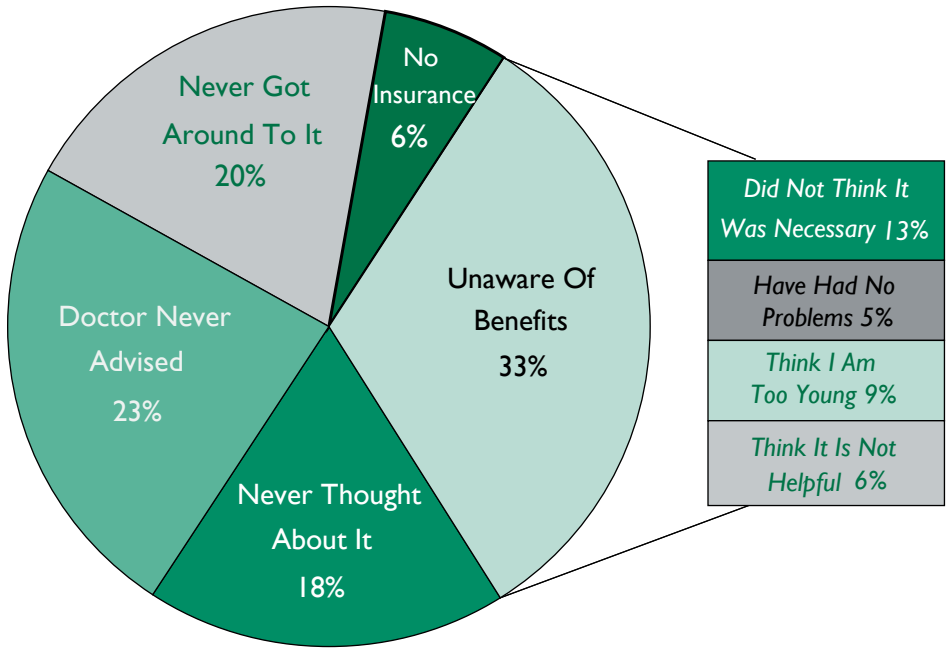
be more difficult to treat and cure, resulting in poorer cancer outcomes, hence lower survival rates.

General recommendations state that women 40 years and over should receive a mammogram at least once every 2 years. National trends report that the proportion of women who have been screened within the past 2 years has increased from about 54% in 1989[6] to 83% in 2002. While these achievements are commendable, mammography use remains low among some minority groups, the uninsured, and newly immigrated women.

The Survey Data

The adult module of the survey contained a series of questions on breast cancer screening. We first asked women (≥40 years), "Have you ever had a mammogram or a breast X-ray?" Then, we asked, "How long ago did you have your last mammogram?" These are the exact questions asked on the national Behavioral Risk Factor Surveillance System survey. Lastly, if they had never been screened, we asked, "What is the main reason why you have not had a mammogram in the past 2 years?"

Figure 8.3 Reasons Why Women Never Had A Mammogram



Source: Improving Community Health Survey

Figure 8.2 presents the proportion of women (≥ 40years) who reported having had a mammogram within the last two years. These screening rates ranged from 87% in South Lawndale to 69% in West Town. Thus, except for West Town, the women in the communities surveyed are meeting the Healthy People 2010 target objective of 70%, and the screening rate is about the same as the rate for the U.S. as a whole (83%).[7]

Insurance plays an important role in whether women receive appropriate screening for breast cancer. Twenty-five percent of uninsured women reported that they never received a mammogram compared to 8% of insured women. Unin-

Policy Considerations

The mammography screening rates obtained in our survey are generally consistent with national data in showing that roughly 80% of age-eligible women in most groups have received a mammogram in the past two years (although some variation exists among different racial and ethnic groups and between insured and uninsured women). At the same time, over the past 20 years, the breast cancer mortality rate has declined substantially for White women but has not declined at all for Black women in both Chicago and the U.S. If differential access to mammography is not causing these differences in breast cancer mortality, then what might be responsible for this racial disparity? Answers to this question have possible policy implications.

First, after diagnosis, poor and Black women often have more difficulty accessing effective care and accessing it in a timely manner. Thus, we need to assure that every woman who is diagnosed with breast cancer receives appropriate care. There are many programs that offer free mammography but they often do not then provide treatment for women who are diagnosed with breast cancer if they do not have health insurance. This is unacceptable. Further, we constantly hear stories of women diagnosed with breast cancer who then have to wait six months for a follow-up appointment. Clearly, this must be remedied.

Another possible explanation for the disparity in mortality rates is that poor and Black women receive mammograms of lower quality, which too often miss cancers. There are several reports documenting that some facilities systematically miss such cancers. For example, the *New York Times* reported in a front-page story about such a clinic in New York City. After the clinic was found to be faulty, the NY State Department of Health recalled women who had been screened at this clinic and re-screened them. An additional 25 new breast cancers were diagnosed, that is, cancers that were missed in the initial screening.[8] Similar data describing screening inadequancies, like those found in this New York City facility, have been documented in Chicago. Thus, far tighter quality control of mammography is needed, and special attention must be paid in this matter to facilities that serve vulnerable women.

sured women were also less likely to receive a mammogram as regularly as recommended, that is, within the last 2 years (59%), compared to 84% of insured women.

Lastly, we asked women ($\geq$ 40years) who had never had a mammogram, why they were never screened (Figure 8.3). Among them (n=45), half of the women were unaware they needed a mammogram (33%). Some responses included "didn't think it was necessary," "didn't experience any problems or symptoms," "didn't think it would be helpful," and "thought I was too young." Twenty-three percent of women said that their doctors never advised them to have a mammogram and another 20% said they never got around to it. Eighteen women stated that they "never even thought about it." Thus, while our nation sets health objectives and establishes recommendations for breast cancer screening, many women may not even understand the benefits of receiving a routine mammogram and the health care system may not be adequately providing services.

References

[1] Nass S, Ball J, editors. Improving breast cancer imaging quality standards. Washington, DC: National Academies Press; 2005. 230p.

[2] Mayo Clinic Staff; Women's top health threats: a surprising list [Internet]. Rochester, MN: Mayo Foundation for Medical Education and Research; February 2005. Available from: http://www.mayoclinic.com/invoke.cfm?id=WO00014.

[3] American Cancer Society. Cancer facts & figures-2004. Atlanta, GA: American Cancer Society, inc; 2004. Report No. 5008.04. 56p.

[4] Gordon, NH. Socioeconomic factors and breast cancer in black and white Americans. Cancer Metastasis Rev 2003; 22(1): 55-65.

[5] Lawson HW, Henson R, Bobo JK, Kaeser MK. Implementing recommendations for the early detection of breast and cervical cancer among low-income women. In: CDC recommendations regarding selected conditions affecting women's health. MMWR 2000; 49(No. RR-2): 43.

[6] Blackman DK, Bennett EM, Miller DS. Trends in self-reported use of mammograms (1989-1997) and papanicolaou tests (1991-1997) - Behavioral Risk Factor Surveillance System. In: CDC surveillance summaries. MMWR 1999; 48 (No. SS-6): 8.

[7] Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion. Behavioral Risk Factor Surveillance System Online Prevalence Data, 2002. Atlanta, GA: Centers for Disease Control and Prevention; June 2005.

[8] Moss M, Steinhauer J. Mammogram clinics flaws highlight gaps in US rules. New York Times; October 24, 2002.

Topic 9. Cervical Cancer Screening

Cervical cancer is unquestionably a success story in the history of cancer control... Because of the Pap test, which is inexpensive, easily administered and effective, and because proven treatment for precancerous cervical lesions and localized invasive cancers is available, virtually all cervical cancer deaths should be avoidable.
- Excess Cervical Cancer Mortality: A Marker for Low Access to Health Care in Poor Communities[1]

Background

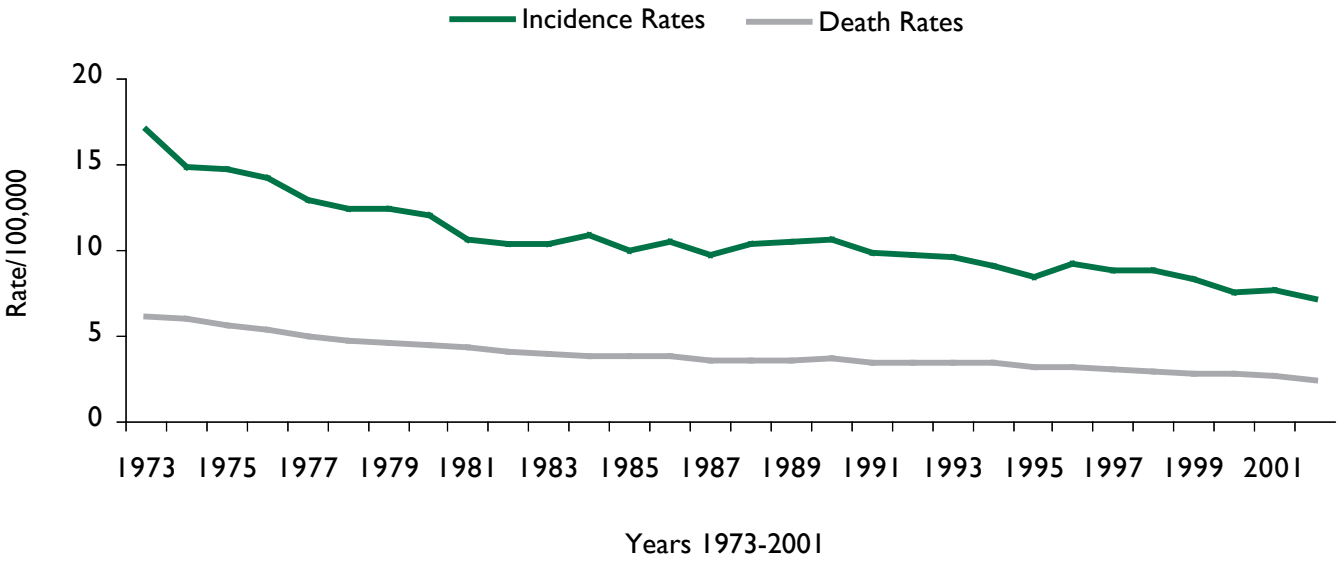
Now more than ever, death and disability from cervical cancer are preventable. Cancers of the cervix often take many years to develop and effective screening techniques are available. Therefore, there is a high likelihood of detecting pre-cancerous signs and successfully treating detected cancers. The Papanicolaou (Pap) smear is the principal procedure for cervical cancer screening. It detects asymptomatic precancerous lesions (i.e., dysplasia) and preinvasive lesions, which can progress to cancer if left untreated.

The substantial decline in death and disability from cervical cancer in the U.S. has been attributed to the widespread use of routine Pap smear screening since its introduction in 1941. Figure 9.1 shows how cervical cancer incidence and mortality rates in the U.S. have dropped sharply between 1973-2001.[2] Despite such success, approximately 16,000 women are diagnosed with cervical cancer each year, and about 5,000 women die from it, resulting in a total loss of 100,000 potential life-years.[3]

Research has shown that unscreened women are 2-10 times more likely to develop cervical cancer than women who are screened.[4] Routine screening tests are thus recommended for all women beginning when they become sexually active (but no later than age 18 years) and repeated every 3 years for women at normal risk for cervical cancer. The interval may be shorter (annually or every 2 years) for women at higher risk for the disease.[5,6] The recommendations argue that screening may not be necessary for women after age 65 years, nor for women who have undergone total hysterectomies for diseases unrelated to cervical cancer or its precursors.[7]

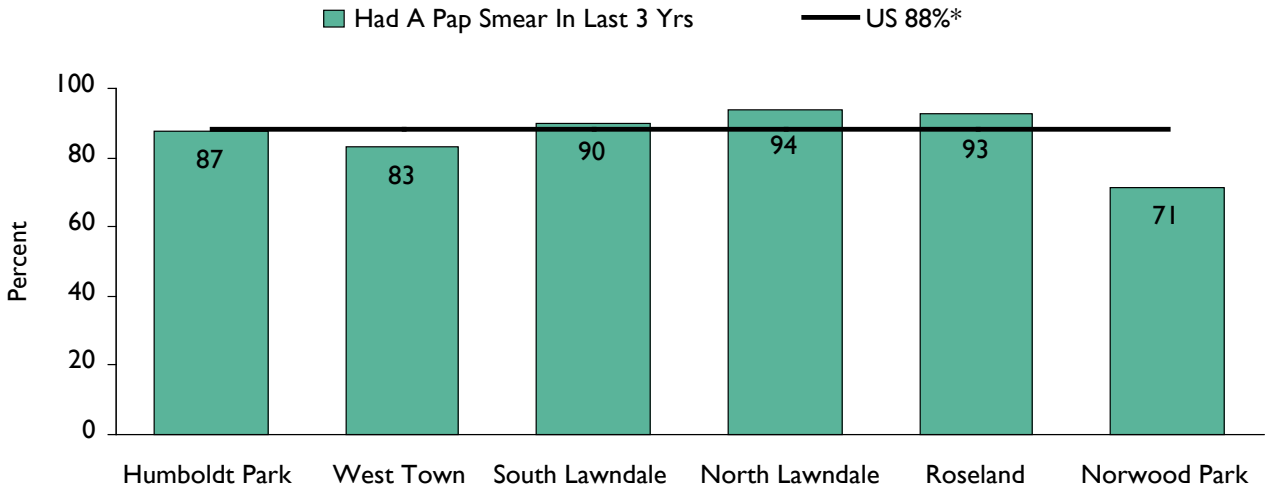
The primary risk factor for developing cervical cancer is the Human Papilloma Virus (HPV), a sexually transmitted infection. HPV has been found in over 99% of cervical cancer cases, suggesting that women who develop cervical cancer quite likely have had an HPV infection.[8]

Figure 9.1 Cervical Cancer Incidence and Mortality, U.S. 1973-2001 (Age-Adjusted)



* SEER (Surveillance, Epidemiology and End Results) Cancer Statistics Review, 1973-2001

Figure 9.2 Percent of Women Who Had A Pap Smear In the Last 3 Years



* Behavioral Risk Factor Surveillance System, 2002

Source: Improving Community Health Survey

Risk factors associated with this infection, and thus cervical cancer, include multiple sexual partners, early age of initial sexual activity, smoking and HIV infection.[9] While routine screening for cervical cancer has become prevalent, rates are still lagging among recent immigrants, the uninsured, and women with lower socioeconomic status (as measured by education and median household income).

The Survey Data

The adult module included a series of questions on screening for cervical cancer. We first asked women whether they had ever been screened for cervical cancer: "A Pap smear is a test for cancer of the cervix. Have you ever had a Pap smear?" Next, women were asked to report when they were last screened: "How long has it been since you had your last Pap smear?" Lastly, we asked women "Have you ever had a hysterectomy?" These are the exact questions asked on the national Behavioral Risk Factor Surveillance System survey. Data presented here are for all women aged ≥18 years.

Survey data revealed that the vast majority of women in five of the six communities reported that they had ever been screened, which is consistent with national findngs. The exception was Norwood Park, where only 82% of women reported that they had ever had a Pap smear test. Women that had not been screened in Norwood Park were generally younger (63% of women aged 18-39 compared to 93% of women nationally in this same age group). Overall, the survey data revealed that women least likely to have ever had a Pap test were uninsured, foreign born, or lived in the U.S. for less than 5 years (data not shown). These trends are similar to those reported from national surveys.[5,7]

Routine screening, defined as having had a Pap smear test within the last 3 years, is recommended as an effective means of detecting cervical cancer for women (≥18 years with an intact uterus) at normal risk. Figure 9.2 presents the proportion of women reporting that they were screened within the last 3 years by community area. Five out of the six communities were comparable to the national average (88%). Again, the lowest rate was reported by women in Norwood Park (71%), a predominately White community.

We also examined the rate of screening by insurance coverage. While people who are uninsured are generally less likely to receive routine preventative services such as a Pap smear exam, this is not the case for women in South Lawndale. Report I notes that more than half of the people living in South Lawndale are uninsured and thus often under- or undiagnosed for many health conditions.[10] However, cervical cancer screening data suggest that the lack of insurance does not impact women's access to Pap smears in this community. The vast majority of women in South Lawndale (90%) are receiving routine Pap smears at rates that are comparable to national data (88%). This phenomenon is likely explained by the higher birth rates among Mexican American women in South Lawndale, which is associated with increased contact with health systems, and thus greater Pap smear proportions.

Overall, higher proportions of routine Pap smears among

Black and Mexican American women may reflect greater utilization of reproductive health care services. For instance, the better screening rate for Black women may be related to the fact that these women have higher birth rates and are therefore receiving preventative cancer screening services as part of prenatal care. Studies have shown that women who were recently pregnant or who used family planning services were most likely to enter the health care system, and therefore to receive routine Pap smears.[11] This is consistent with survey findings indicating that women with public insurance coverage (88%) were the most likely to have received a routine Pap smear (in the last 3 years) compared to privately insured (85%) and uninsured (80%) women. Further, women who have a personal doctor or a particular clinic they go to when sick were similarly more likely to report that they had routine screening (data not shown). These data reflect the success of programs in providing access to cervical cancer preventative services.

References

[1] Freeman HP, Wingrove BK. Excess cervical cancer mortality: a marker for low access to health care in poor communities. Rockville, MD: National Cancer Institute. Center to Reduce Cancer Health Disparities; May 2005. NIH Pub. No. 05-5282.

[2] Ries LAG, Eisner MP, Kosary CL, Hankey BF, Miller BA, Clegg L, Mariotto A, Fever EJ, Edwards BK, editors. Surveillance, Epidemiology and End Results (SEER) cancer statistics review, 1973-2002. Bethesda, MD: National Cancer Institute; 2005. Available from: http://seer.cancer.gov/scsr/1975_2002/.

[3] Newmann SJ, Garner EO. Social inequities along the cervical cancer continuum: a structured review. Cancer Causes Control 2005; 16: 63.

[4] Franco EL, Duarte-Franco E, Ferenczy A. Cervical cancer: epidemiology, prevention and the role of human papillomavirus infection. Can Med Assoc J 2001; 164(7): 1017.

[5] Blackman DK, Bennett EM, Miller DS. Trends in self-reported use of mammograms (1989-1997) and papanicolaou tests (1991-1997) – Behavioral Risk Factor Surveillance System. In: CDC surveillance summaries (October 8). MMWR 1999; 48 (No. SS-6): 24p.

[6] Hawkes AP, Kronenberger CB, MacKenzie TD, Mardes AL, Palen TE, Schulter WW, Shah SA, Steel AW, Marine WM. Cervical cancer screening: American College of Preventive Medicine practice policy statement [Internet]. Denver, CO: University of Colorado Health Sciences Center; January 2005. Available from: www.acpm.org/cervical.htm.

[7] Lawson HW, Henson R, Bobo JK, Kaeser MK. Implementing recommendations for the early detection of breast and cervical cancer among low-income women. In: CDC recommendations regarding selected conditions affecting women's health. MMWR 2000; 49(No. RR-2): 44-5.

[8] Mougin C, Dalstein V, Pretet JL, Gay C, Schaal JP, Riethmuller D. Epidemiology of cervical papillomavirus infections: recent knowledge. Presse Med 2001; 30(20): 1017-23.

[9] National Cancer Institute cervical cancer prevention [Internet]. Bethesda, MD: National Cancer Institute; July 2005. Available from: http://cancer.gov/cancertopics/pdq/prevention/cervical/Patient/page2.

[10] Whitman S, Williams C, Shah AM. Sinai Health System's improving community health survey: report 1. Chicago, IL: Sinai Health System; January 2004. 54p.

[11] Wilcox LS, Mosher WD. Factors associated with obtaining health screening among women of reproductive age. Public Health Rep 1993; 108(1): 76-86.

[12] Sasieni PD. Human papillomavirus screening and cervical cancer prevention. J Am Med Womens Assoc 2000 Summer; 55(4): 216-9.

[13] Newmann SJ, Garner EO. Social inequities along the cervical cancer continuum: a structured review. Cancer Causes Control 2005; 16: 63-70.

Policy Considerations

Since HPV infection is the leading risk factor for cervical cancer, primary prevention efforts must focus on early detection and treatment of HPV. Unfortunately, HPV is very common and because it is not a reportable infection, surveillance systems do not track the number of HPV cases within a given population. However, data about other sexually transmitted infections (STIs) like gonorrhea and chlamydia are associated with higher rates of HPV and could therefore help identify women who might be at greater risk of developing cervical cancer. For instance, North Lawndale has relatively high rates of these STIs, suggesting that women in this community may also have higher rates of HPV and thus may be at increased risk for cervical cancer. Strategies to combat HPV and its complications could involve raising awareness of HPV and its treatment, promoting safe sex practices and widespread screening for HPV. Though not all HPV infections result in cancer, HPV screening could identify the presence of the viral infection and genital warts symptomatic of the infection. While early detection of these symptoms may result in some over-treatment (since not all infections will result in cancer), it can certainly prevent the onset of pre-cancerous lesions, which lead to cancer of the cervix.[12] While protocols for HPV testing have yet to be established, we could encourage the combination of HPV testing in addition to Pap smears, particularly among women at higher risk (that is, women who are age 35 and older, initiate sexual activity at a young age, have known multiple partners, and/or are at increased risk for sexually transmitted diseases).

Routine screening has proven effective in reducing the number of cervical cancer cases and deaths in the U.S. Local and national data demonstrate that efforts to ensure that all women receive a Pap smear at least once every 3 years have been successful. Such efforts have been most effective in reaching women, particularly those who access the health system for other reproductive services (i.e., giving birth). Once women are linked to health services, they seem to receive the recommended cervical cancer screening. However, information on follow-up activities and treatment options necessary to prevent the onset of cervical cancer is not as readily available. The lack of insurance may prevent women from following up and seeking treatment, which in the case of cervical cancer, is critical. Evidence has shown that as cancer of the cervix progresses, the 5-year survival rate drops from 91% for a local pre-cancerous lesion (neoplasia) to 9% for a distant lesion. Early detection and timely treatment can thus be life saving for uninsured women who may delay or go without care.

Despite the tremendous success of screening procedures to reduce the incidence and mortality from cervical cancer, disparities in health outcomes persist. Black women have benefited from the advent of the Pap smear and report high screening rates, as found locally (Figure 9.2) and nationally. However, they are still 2-3 times more likely to be diagnosed with cervical cancer and to die of it than White women.[7] While rates have improved over the last decades, minority women tend to be diagnosed at older ages, and therefore at later stages of the disease, which can result in fewer treatment options and sometimes even less effective treatment.[13]

Topic 10. Colorectal Cancer Screening

Colorectal cancer is one cancer where regular screening clearly has benefits. Screening saves lives.
- James S. Marks, MD, Former Director, National Center for Chronic Disease Prevention and Health Promotion
Centers for Disease Control and Prevention

Background

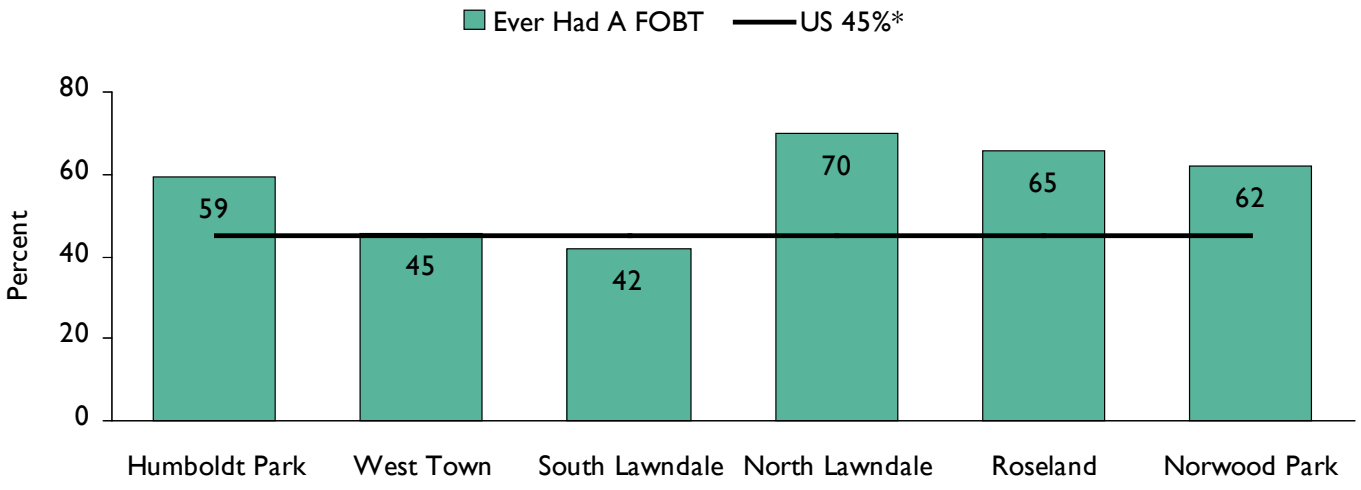
Colorectal cancer (CRC) is a cancer that occurs in the colon or rectum. Despite the fact that it is the second leading cancer killer in the U.S., when detected early there is a high survival rate, suggesting that early and timely screening is important.[1,2] Researchers have found that the following factors can increase someone's risk for developing CRC: age (≥ 50 years), family history, smoking, obesity, lack of exercise, diet high in fat, and diabetes.[3] While the specific recommendations differ slightly, the American Cancer Society, the National Cancer Institute and the Centers for Disease Control and Prevention all recommend regular fecal occult blood testing (FOBT) and sigmoidoscopy for all individuals aged 50 or older.[1,4,5]

FOBT is a blood stool test that can be performed at home using a special kit or at a doctor's office. Its purpose is to determine whether the stool contains blood, an indication of possible cancer. It is generally recommended that adults (≥ 50 years) have a FOBT every year. Sigmoidoscopy and colonoscopy are exams in which a health care provider inserts a tube into the rectum to look for signs of cancer, such as polyps. It is generally recommended that adults (≥ 50 years) have a sigmoidoscopy or colonoscopy every 5-10 years. Both screening exams for colorectal cancer are important because early diagnosis and treatment result in survival rates of greater than 90% compared to only 9% once a cancerous tumor has spread.

The Survey Data

The adult module included questions on CRC screening similar to those found in the national Behavioral Risk Factor Surveillance System survey. First, we asked respondents, "Have you ever had a blood stool test?" and if so, "How many times in the last 3 years have you had a blood stool test?" We also asked, "Have you ever had a sigmoidoscopy or colonoscopy?" and if so, "How long ago did you have a sigmoidoscopy or colonoscopy?" Data are presented for adults ≥50 years.

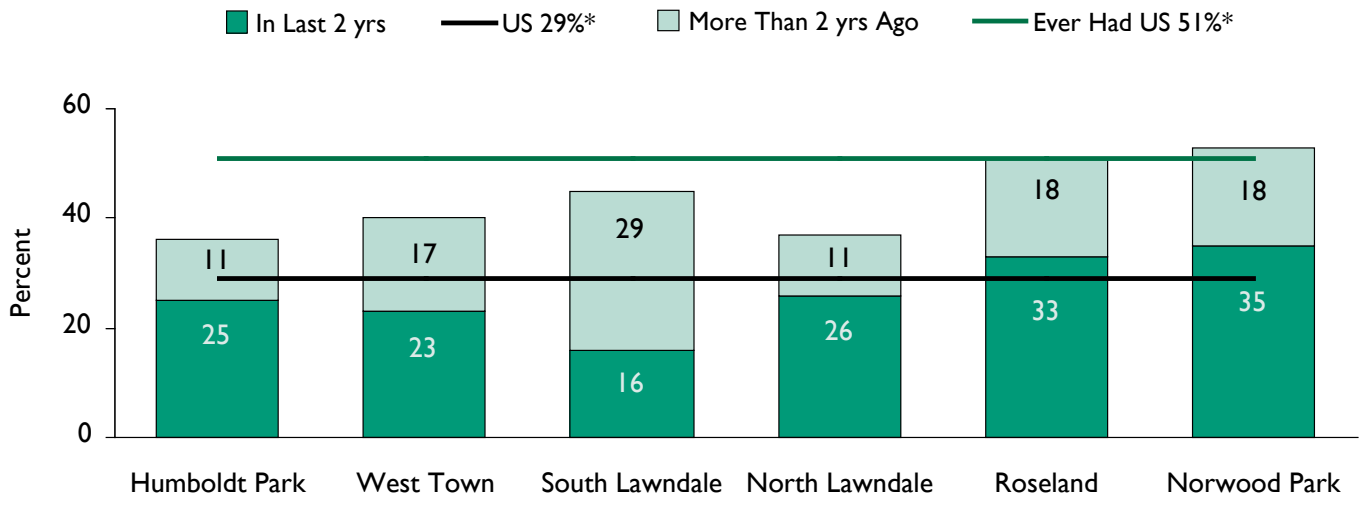
Figure 10.1 Percent of Adults (≥50 Years) Who Ever Had A Fecal Occult Blood Test (FOBT)



* Behavioral Risk Factor Surveillance System, 2002

Source: Improving Community Health Survey

Figure 10.2 Percent of Adults (≥50 Years) Who Had A Sigmoidoscopy or Colonoscopy Screening Exam



* Behavioral Risk Factor Surveillance System, 2002

Source: Improving Community Health Survey

Figure 10.1 shows the prevalence of ever having been tested for CRC using FOBT. Four out of the six community areas surveyed exceeded the national estimate (45%).[6] The remaining two communities (West Town and South Lawndale) were similar to the national estimate.

We also asked respondents if they had a recent exam, that is, whether they had at least one FOBT exam within the last 3 years. Overall, about 43% of all adults reported that they had a recent exam, with proportions ranging from 30% in West Town to 50% in Roseland, Norwood Park, and Humboldt Park. Most noteworthy, however, is that insurance coverage played a significant role in determining whether or not a respondent reported that they had a recent FOBT. For instance, among those with insurance, 46% reported that they had a recent FOBT compared to only 28% of the uninsured population.

Figure 10.2 shows the total proportion of adults aged 50 and over who had ever had a sigmoidoscopy or colonoscopy. Four of the six community areas had a lower screening rate than the U.S. average (51%), with the community areas of Roseland (51%) and Norwood Park (53%) reporting rates similar to the U.S. Figure 10.2 also illustrates the proportion that had a recent (≤ 2 years) sigmoidoscopy or colonoscopy. While only 29% of adults (≥ 50 years) had a recent exam nationally, 4 of the 6 community areas reported even lower rates (ranging from 16% in South Lawndale to 26% in North Lawndale). For most of the communities, the exception being South Lawndale, of those who were ever tested, more than half had been tested within the last 2 years.

Survey data further indicate that insurance plays a role in whether or not respondents have received a recent sigmoidoscopy or colonoscopy. Overall, among those with insurance, 29% had a recent screening (within the last 2 years) compared to only 16% of those without insurance. Thus, while there is strong evidence that at least one third of adults (≥50 years) had access to colorectal cancer screening exams, those with no insurance were least likely to have had a recent exam.

Policy Considerations

Lack of physician knowledge about screening guidelines and the benefits of screening serve as a barrier to routine CRC screening.[7,8] Therefore, further and ongoing educational efforts should be targeted to health care professionals. At a minimum, such efforts should be targeted at internists who are at the frontlines of primary health care delivery.

Lack of public awareness on the importance of getting screened also poses a barrier.[9,10] Educational campaigns that provide information on the importance of screening and how to get screened would be beneficial to both patients and providers. More informed patients would be more apt to ask their doctors about getting screened.

Mandated insurance coverage across all 50 states and increased Medicare reimbursements for CRC screening would alleviate patient concerns regarding out-of-pocket costs and affordability. Data show that screening is cost effective as it prevents more expensive advanced treatments, which often put the patient at high risk.[11] In addition, increased public funding for comprehensive screening including a colonoscopy will ensure that patients who need follow-up are given the referrals they need without high costs being a barrier to accessing care.

Because physicians are constantly under time constraints and pressure to tend to acute conditions when treating a patient, health systems should consider alternative approaches to delivering screening services. For example, support staff such as nurses or medical assistants can be trained to screen and offer testing. In addition, the implementation of reminder systems (such as those used for mammography and pap smear testing) can help cue the health care providers to screen and the patients to comply with testing procedures and referrals.

References

[1] American Cancer Society. Cancer facts & figures 2004. Atlanta, GA: American Cancer Society, Inc; 2004. Report No. 5008.04. 56p.

[2] Ries LAG, Eisner MP, Kosary CL, Hankey BF, Miller BA, Clegg L, Mariotto A, Fever EJ, Edwards BK, editors. Surveillance, Epidemiology and End Results (SEER) cancer statistics review, 1973-2002. Bethesda, MD: National Cancer Institute; 2005. Available from: http://seer.cancer.gov/scsr/1975_2002/.

[3] American Cancer Society [ACS]. Detailed guide: colon and rectum cancer - what are the risk factors for colorectal cancer? [Internet]. Atlanta, GA: ACS; May 2005. Available from: http://www.cancer.org/docroot/CRI/content/CRI_2_4_2X_What_are_the_risk_factors_for_colon_and_rectum_cancer.asp?sitearea=.

[4] Breen N, Wagener DK, Brown ML, Davis WW, Ballard-Barbash R. Progress in cancer screening over a decade: results of cancer screening from the 1987, 1992, 1998 National Health Interview Surveys. J Natl Cancer Inst 2001; 93: 1704-13.

[5] Centers for Disease Control and Prevention. Screening for colorectal cancer—United States, 1992-1993 and new guidelines. MMWR 1996; 45: 107-10.

[6] Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention [CDC], Behavioral Risk Factor Surveillance System Online Prevalence Data 2002 [Internet]. Atlanta, GA: CDC; June 2005. Available from: http://apps.nccd.cdc.gov/brfss.

[7] Gennarelli M, Jandorf L, Cromwell C, Valdimarsdottir H, Redd W, Itzkowitz S. Barriers to colorectal cancer screening: inadequate knowledge by physicians. Mt Sinai J Med 2005; 72: 36-44.

[8] Burt RW. Colon cancer screening. Gastroenterology 2000; 119: 837-53.

[9] O'Malley AS, Beaton E, Yabroff KR, Abramson R, Mandelblatt J. Patient and provider barriers to colorectal cancer screening in the primary care safety-net. Prev Med 2004; 39: 56-63.

[10] Wender RC. Barriers to screening for colorectal cancer. Gastrointest Endosc Clin N Am 2002; 12: 145-69.

[11] Pignone M, Saha S, Hoerger T, Mandelblatt J. Cost-effectiveness analyses of colorectal screening: a systematic review. Ann Intern Med 2002; 137: 96-104.

Section 6. Racial and Ethnic Disparities

Of all the forms of inequality, injustice in health is the most shocking and the most inhumane.
- Dr. Martin Luther King, Jr., National Convention of the Medical Committee for Human Rights, Chicago 1966

Since 1980 the United States has been setting goals for improved health that it wishes to accomplish in the following ten years. Thus, in 1980 the Federal Government set goals for 1990, in 1990 for 2000, and in 2000 for 2010. These are part of the Healthy People Initiative.[1] There are currently about 500 goals in all areas of health, including infant mortality, heart disease mortality, asthma hospitalizations, etc. In addition to these goals there have been two or three overarching goals. In 2000, one of the three overarching goals was to "Reduce health disparities among Americans," i.e. among different groups (like Black and White people).[2] For 2010, one of the two overarching goals is to "Eliminate health disparities." Despite these pursuits, and quite a bit of associated attention, racial disparities in health for the United States have improved (narrowed) only slightly.[3] In addition, matters are worse in Chicago. For example, a study that the Sinai Urban Health Institute carried out examined indicators of health between 1980 and 1998. We found that Black:White disparities actually increased (that is, became worse) in Chicago during this time for 20 of the 22 health indicators that we studied.[4] The U.S. study noted above found that matters improved (although only slightly) for 11 of 14 Health Status Indicators. We next precisely replicated a Centers for Disease Control and Prevention (CDC) study of the U.S., but this time using Chicago data. We found that disparities grew worse for 11 of the 14 Health Status Indicators, exactly opposite what was happening for the country as a whole. This finding was published in the American Journal of Public Health.[5] Finally, we updated this analysis and compared 1990 with 2000 data and found virtually identical results. Thus, Chicago is making very little progress in reducing racial disparities in health; in fact we are moving substantially in the wrong direction.

We viewed the survey described in *Sinai's Improving Community Health Survey: Report 1* and this report as an opportunity to further examine disparities in the city. Norwood Park is almost all White and is the richest of the six communities we surveyed (but is still only the tenth richest community area in the city). Thus, comparison of the other five community areas to Norwood Park should give us some sense of the extent of existing disparities in health measures that cannot be obtained from already existing databases.

In Section 5 of this report, we examined 10 topics that were selected from the study data. What we found from looking at the results is that Norwood Park, the middle class White community area in the survey, scored best on almost all of the 10 topics while Humboldt Park, North Lawndale, and Roseland almost always scored worst. This is not unique to these 10 measures. The trend exists for measures throughout the survey, which are not discussed in this report. That is, generally, Norwood Park had the best measures of health, while Humboldt Park and North Lawndale had the worst. We have generated many other tables that are not presented in this report. Some of them are arranged by race and ethnicity rather than by community area. In virtually every table White people do best and either Black or Puerto Rican people do worst, even when we take income into consideration.

We repeat here for emphasis that Norwood Park is not nearly the richest community area in the city and North Lawndale is not nearly the poorest. Had we selected community areas at the extremes, the disparities almost certainly would have been far more severe.

The situation is thus perplexing indeed. Most people, we think, would agree that it should not be that poorer people and Black people (and other non-White people) should suffer from worse health – and yet they do. This is not a situation that is unique to these community areas or to Chicago, although the problem appears to be particularly severe here. Surely we must find together a way to improve the health of all people and eventually arrange matters so that health, and even life and death, are not driven by the color of one's skin, how much money one has or where one lives.

References

[1] US Dept of Health and Human Services [HHS]. Healthy People 2000: National health promotion and disease prevention objectives. Washington, DC: HHS; 1991. DHHS publication no. 91-50212.

[2] US Dept of Health and Human Services [HHS]. Healthy People 2010: Understanding and improving health. 2nd edition. Washington, DC: HHS; November 2000. Vol 1 of 2, p. 7-23.

[3] Keppel KG, Pearcy JN, Wagner DK. Trends in racial and ethnic-specific rates for the health status indicators: United States, 1990-98. Healthy People Statistical Notes. No. 23. Hyattsville, MD: National Center for Health Statistics; January 2002. DHHS publication no. 2002-1237. 16p.

[4] Silva A, Whitman S, Margellos H, Ansell D. Evaluating Chicago's success in reaching the Healthy People 2000 goal of reducing health disparities. Public Health Reports 2001; 116: 484-94.

[5] Margellos H, Silva A, Whitman S. Comparison of health status indicators in Chicago: Are Black-White disparities worsening? Am J Public Health 2004; 94(1): 116-21.

[6] Whitman S, Williams C, Shah AM. Sinai Health System's improving community health survey: report 1. Chicago, IL: Sinai Health System, January 2004. 54p.

Section 7. Overarching Policy Implications

We present in this report ten additional topics (or sets of findings) from our survey. For each specific topic, we discuss policy implications of the data. The purpose of this section is to offer overarching observations that we hope will lead us in some optimal policy directions.

1) Our motivation for conducting this survey was to help improve health conditions. Penultimately, we argue that city or even national level data are not adequate to describe health at the local level and that local survey data is thus essential. In this we were proven correct. For measure after measure it is obvious that national (or even city data when they exist) do not accurately inform us about what is happening at the community level, which is precisely where we would like to implement interventions to improve matters. **Thus, we suggest that national, state, and local governments conduct local area surveys like this one on a regular basis. In an environment of financial constraint, it is essential that resources be applied where they can do the most good.** We have carried out extensive calculations and found that it would not be prohibitively expensive to implement such surveys.

2) Virtually every health issue discussed in this report is amenable to prevention. Prevention implemented effectively will eliminate the need for much treatment. In the long run, prevention improves health and costs less. Yet, according to the Prevention Institute, in the U.S. less than 5% of all health expenditures are used for prevention. **We urge Chicago (and, indeed, the country) to turn its attention and resources toward prevention and screening measures rather than concentrating almost exclusively on treatment. The costly treatment of chronic diseases is crippling our health care system. We can be better served by prevention, early detection, and intervention.**

3) Health education and health care education are sorely lacking among the populace at large. The education of health care professionals about how to educate their patients is lacking as well. **We urge greater investment in educating both health professionals and the public aimed at changing and improving lifestyle choices. Although all health behavior must be understood within its societal context, incentives to avoid unhealthy choices and encourage personal responsibility have the potential to reshape our approach to a healthy, productive life.**

4) One cross-cutting issue for all of these measures of health is the question of equitable access to medical care. The prestigious Institute of Medicine (IOM)'s recent report, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care,*[1] speaks passionately to this question. The IOM found that at every step White people receive more care and higher quality care than people who are not White. In another report, *Care Without Coverage: Too Little, Too Late*,[2] the IOM found that such inferior care was literally a matter of life and death as Black and Hispanic people died sooner and at higher rates as a result of the lack of health insurance. As our survey shows (Report 1), this lack of insurance is even worse in Chicago than it is nationally.[3] This is not acceptable and a way must be found to guarantee suitable and equitable health care for all. Adding intensity to this concern is that poverty in four of the six community areas we surveyed (and in many other communities in Chicago) is very serious. It is well documented that payment disparity has an adverse effect on the health of communities. **We must work to establish universal access to quality health care. Every other industrialized country in the world has a system that pursues this goal and we recommend it for the U.S. If our country does not have the will to provide such a system, then Illinois must take action on its own.**

5) In almost every instance, the richest community area had the best measures of health and the poorest areas had the worst measures. In most cases this was also a comparison of White and Black people. Although these community areas are not necessarily representative of the entire city and cannot be generalized in that way, they

do offer still more evidence, in addition to the studies we have already conducted and published in professional journals, that the problem of disparities in the city of Chicago is a very severe one.[4,5] **We must recognize and then eliminate racial and other societal disparities in health.** In fact, whether and how we deal with this problem illuminates how we value health and whether health will improve for Chicago as a whole. It will also say a lot about us as a people and a democracy.[6]

Although structural factors like racism and poverty are responsible for many of the negative findings in this survey, we should not wait until these factors are eliminated before we act. We need to take on health issues one at a time, at the local level, beginning now, regardless of how daunting the task may seem. We can begin today to work on each and every one. They all are associated with quite successful preventive and ameliorative steps. There is no other choice if we are to live in an equitable and healthy society.

References

[1] Institute of Medicine. Unequal treatment: confronting racial and ethnic disparities in health care. Washington, D.C.: National Academies Press; 2003.

[2] Institute of Medicine. Care without coverage: too little, too late. Washington, D.C.: National Academies Press; 2002.

[3] Whitman S, Williams C, Shah AM. Sinai Health System's improving community health survey: report 1. Chicago, IL: Sinai Health System; January 2004: 13.

[4] Silva A, Whitman S, Margellos H, Ansell D. Evaluating Chicago's success in reaching the Healthy People 2000 Goal of reducing health disparities. Public Health Reports 2001; 116: 484-94.

[5] Margellos H, Silva A, Whitman S. Comparison of health status indicators in Chicago: are White-Black disparities worsening? Am J Public Health 2004; 94; 116-21.

[6] Whitman S. Racial Disparities in Health: taking it personally [editorial]. Public Health Reports 2001; 116: 387-9.

Section 8: Translating Survey Findings Into Action

Unless findings from this survey are used to make things better, we believe our project will have failed.
– Steve Whitman, Ph.D., Principal Investigator

This report is intended to empower people with community area health information necessary to develop creative interventions and advocate for improved health in their Chicago communities. In the Introduction, we discuss our motivation for conducting Sinai's Improving Community Health Survey. Without analysis of local level health information, we do not know the specific health problems facing a community and thus cannot appropriately allocate limited resources and target specific programs.

Since the start of the project, over 700 copies of *Sinai's Improving Community Health Survey: Report 1* have been disseminated and more than 100 presentations have been made at community organizations, universities, medical centers, political forums, foundations, and local and national conferences. In all, we estimate that survey findings from Report 1 have been shared with over 5,000 individuals! While dissemination has been widespread, what is even more impressive is how people have applied these data thus far to improve the health of their communities.

We have done our best to trace the sequelae of the survey findings released in Report 1. In this section, we present a few examples of how these data have been translated into action with hopes of inspiring others to pursue their own positive steps. While we believe that the survey findings have the potential to inform legislation, grant proposal writing or even the media, the ultimate goals are the elimination of growing health disparities and the overall improvement of health for residents of Chicago.

Below we describe three examples of how communities have employed survey findings from *Sinai's Improving Community Health Survey: Report 1* to improve the health of some of Chicago's most vulnerable communities.

1. Combatting Obesity

Report 1 describes dramatic figures on adult and childhood obesity. These findings were reported on by several media sources and have also encouraged donors to fund efforts to prevent obesity in the surveyed communities. For instance, when the Otho A. Sprague Memorial Institute of Chicago learned about the extraordinary high rates of obesity in Humboldt Park, they funded the Sinai Urban Health Institute, the Puerto Rican Cultural Center and the Consortium to Lower Obesity in Chicago Children to develop a project for preventing and reducing obesity. We have initiated a project entitled "Community Organizing for Obesity Prevention in Humboldt Park (CO-OP-HP)." This group has brought together residents from different racial and ethnic backgrounds in the community to develop culturally specific interventions that will address obesity concerns in Humboldt Park. In the past year, they have also conducted their own community-based health survey on the perceptions of weight status, focus groups on healthy eating and weight loss, and a household survey on risk factors associated with obesity. The group has already raised awareness of fitness, healthy lifestyles and ways to lose weight in their community. Their efforts to better understand obesity and ways to combat it in Humboldt Park have also situated them to seek additional funds from donors such as The Robert Wood Johnson Foundation. With scientific data on the prevalence of obesity and perceptions of weight in their community, these groups are able to demonstrate the need for resources and culturally appropriate interventions in their communities.

2. Smoking Cessation

The smoking prevalence in North Lawndale is among the highest ever documented and is similar to national averages from the early 1970s. North Lawndale in fact lags behind U.S. smoking cessation levels by about 35 years. A report on the smoking findings from the survey was recently published in the widely read *American Journal of Public Health* and in several newspaper articles. With the release of the journal article, SUHI and the American Lung Association jointly held a press conference to announce the results and to reinforce the campaign to make Chicago Smoke Free.

Survey data in Report 1 also found that close to 50% of current smokers in North Lawndale were trying to quit.

While we know there is a need to protect the public from second-hand smoke and offer alternatives to those who want to quit, we now know where to target our efforts and can suggest that legislatures and health care providers do something about it. In fact, this is exactly what the Sinai Health System is in the process of doing.

3. Addressing Asthma

Several activities have evolved in relation to the dissemination of the asthma data found in Report 1. Following a series of presentations at the Chicago Asthma Consortium, the American Medical Association-Minority Affairs Consortium and the American Lung Association-Metropolitan Chicago, a committee was formed and inspired to develop an asthma action plan for the city of Chicago. The Chicago Action Plan, the first of its kind, was released at a press conference on World Asthma Day, May 4, 2004, and Steve Whitman was one of the featured guest speakers. The Plan outlines steps to reduce the high prevalence of asthma and prevent asthma attacks among adults and children.

Next, the American Medical Association-Minority Affairs Consortium became interested in raising awareness of asthma in the Hispanic community. They developed a radio and TV asthma campaign to increase awareness of asthma and received pledges from the Hispanic television networks, Univision and Telemundo, to run free Public Service Announcements on asthma. A Latino Asthma Education Campaign, titled 'Tome Control du Su Asma…Tome Control de Su Vida" *(Take Control of Your Asthma…Take Control of Your Life)* was launched with a press conference held at the Mexican Consulate in Chicago.

In addition to the media attention and local campaigns that resulted from the survey data, grants have also been awarded to combat asthma. For one, the Sinai Urban Health Institute received $125,000 from the Illinois Department of Public Health to implement and evaluate an asthma intervention among African American children being treated at Mount Sinai Hospital. The primary focus of the project is to educate and empower families to better manage their child's asthma and prevent the onset of asthma attacks.

Another example is The Healthy Schools Campaign, which received a $1 million grant from the National Institute of Environmental Health Sciences to work in partnership with communities to address childhood obesity and asthma in two Latino schools in Chicago. Rationale for this grant was also based on survey findings from Report 1.

The activities described above are just a few examples of ways in which data on obesity, smoking and asthma from Report 1 came to life. As described above, data inspired individuals and groups to raise public awareness, tailor interventions and bring more resources to local communities. We encourage data described in this Report to likewise be translated into action. For instance, the high blood pressure and arthritis prevalence findings can shape appropriate interventions and target programs to those communities most affected; findings on physical activity and food shopping habits can lead to safer parks, physical education in public schools, improved food security, and healthier eating options; and cancer screening findings can encourage health care providers to increase access and resources for outreach and preventive services. We thus present ten additional survey findings in Report 2 with hopes that they will motivate communities, political leaders and health care providers to take action and make things better.

Sinai Urban Health Institute
Mount Sinai Hospital
1500 South California, K-439
Chicago, IL 60608

http://www.sinai.org/urban/index.asp