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Health-Related Quality of Life in Los Angeles County

Over the past century, advances in public health and medicine have increased the average life expectancy in the United States by nearly 30 years.[1] These advances, however, have been accompanied by a significant rise in the percentage of adults living with chronic health conditions such as heart disease, cancer, diabetes, arthritis, and mental illness. As a result, public health efforts in recent years have focused increasingly on issues of quality as well as quantity of life. This increased focus on health-related quality of life in large part reflects the substantial toll imposed by chronic health conditions on both a personal level (e.g., pain and suffering, functional limitations, and reduced productivity) and a societal level (e.g., increased health care costs and other economic costs).

One of the major Healthy People 2010 goals for the nation is to increase the quality and years of healthy life. To assess progress in meeting this goal, the Centers for Disease Control and Prevention (CDC) has compiled a set of standard measures of health-related quality of life.[2] These measures have been used in CDC's national health surveillance system since 1993 to assess people's perceptions of their physical and mental health, to monitor changes in these perceptions over time, and to identify disparities in health status and health-related quality of life across different populations.

This report presents findings from the 1999-2000 Los Angeles County Health Survey on health-related quality of life among adults in the county. A total of 8,354 randomly selected adults (≥18 years old) were included in the survey and all were asked the following core set of health-related quality of life questions:

1. Would you say that in general your health is excellent, very good, good, fair, or poor?

1. Guyer B, Freedman MA, Strobino DM, Sondik EJ. Annual summary of vital statistics: trends in the health of Americans during the 20th century. Pediatrics 2000;106:1307-1317.

2. Centers for Disease Control and Prevention. Measuring Health Days. Atlanta, Georgia: CDC, November 2000.

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The Los Angeles County Health Survey is a biennial, population-based telephone survey that collects information on sociodemographic characteristics, health status, health behaviors, and access to health services among adults and children in the county. The most recent survey was conducted for the Department of Health Services between September 1999 and April 2000 by Field Research Corporation. Support for the survey was also provided by the California Department of Health Services, the Los Angeles County Department of Public Social Services, and Los Angeles County Medicaid Demonstration Project.

2. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

3. Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

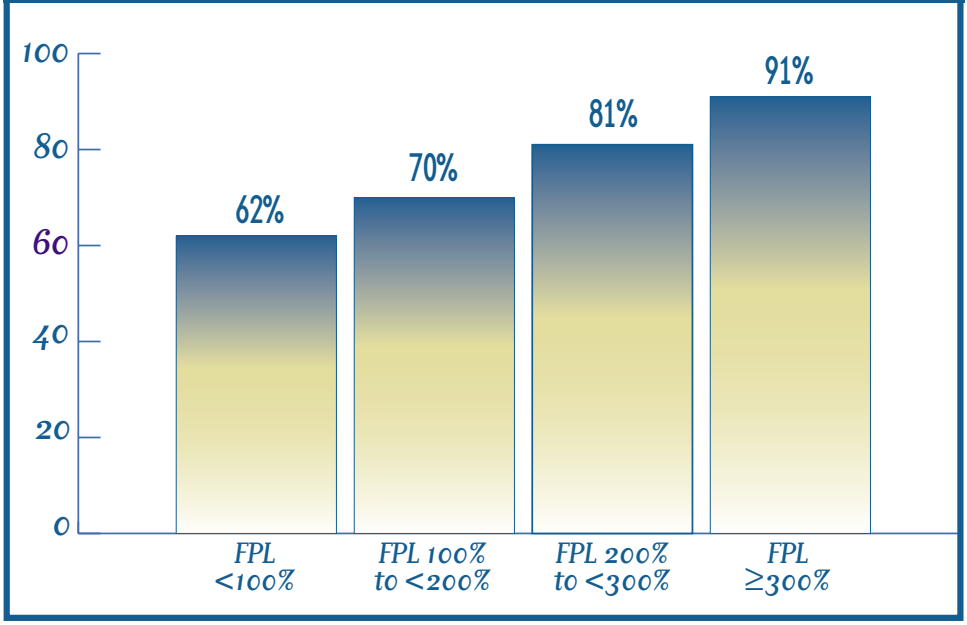
4. During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

These questions have been shown to be valid and reliable indicators of self-perceived physical and mental health.[2] Responses to questions two and three were added together to estimate the total number of days in the past 30 days that the respondent felt that either his or her physical or mental health was not good.[2] This summary measure is referred to as "unhealthy days." Responses to question four were used to estimate the number of days in the past 30 days that activity was limited because of poor physical and mental health, referred to as "activity limitation days."

Self-Rated Health Status in the Los Angeles County Adult Population

- Overall, 79% of adults reported good to excellent health and 21% poor to fair health (Table 1).
- The percentage who rated their health as good to excellent was highest among those living at or above 300% of the federal poverty level (91%) and lowest among those living below 100% poverty (62%) (Figure 1).

Figure 1. ***Percentage of Adults Who Reported Their Health Status as Good to Excellent by Federal Poverty Level, 1999***



Source: Los Angeles County Health Survey

The 1999-2000 survey collected information on a random sample of 8,354 adults and 6,016 children. Interviews were offered in English, Spanish, Cantonese, Mandarin, Korean, and Vietnamese. Among households contacted and eligible for participation, the response rate was 55%. To adjust for differential rates of participation, results were weighted by selected demographic variables using 1998 census projections for the Los Angeles County population.

The findings in this report are subject to several limitations. In any survey that includes sampling, some degree of error (referred to as "sampling error") is introduced by chance alone, even when the sample is chosen randomly. In the present survey, if 50% of the overall sample of adults answered "yes" to a specific question, the sampling error would be plus or minus 1.2 percentage points at the 95% confidence level. This means that if all adults in the population were asked the above question, there is a 95% chance that the result would be between 48.8% and 51.2%. Because the sample sizes of subgroups are smaller than the overall sample, results for these subgroups have larger sampling errors and wider confidence levels. For all results presented in this report, confidence levels are available.

There are a number of other possible sources of error in any survey. For example, questions may be misunderstood, respondents may not provide accurate information, and errors may occur in the processing of data. In addition, surveys administered by telephone miss those who are homeless and others without telephone service. The survey professionals working on this study made every effort to minimize these sources of error.

313 North Figueroa Street, Room 127
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Table 1. *Self-Reported Health Status, Unhealthy Days, and Activity Limitation Days Among Adults in Los Angeles County, 1999.*

	Percent Who Reported Good to Excellent Health Status	Average Number of Unhealthy Days in Past Month	Average Number of Activity Limitation Days in Past Month
Overall	79%	6.4	2.4
Gender			
Male	82%	5.6	2.2
Female	77%	7.1	2.7
Age			
18-29	86%	5.7	1.9
30-49	81%	6.1	2.3
50-64	72%	7.6	3.1
65+	70%	6.8	2.9
Race/Ethnicity			
White	86%	7.1	2.7
Latino	69%	5.6	2.1
African-American	80%	8.4	3.5
Asian/Pacific Islander	86%	4.8	1.7
SPA			
Antelope Valley	79%	8.1	3.6
San Fernando	85%	6.4	2.3
San Gabriel	80%	5.8	2.1
Metro	72%	7.0	2.3
West	86%	6.0	2.1
South	72%	5.9	2.6
East	76%	5.8	2.4
South Bay	80%	7.2	2.9
Household Income			
< 100% FPL[1]	62%	7.7	3.1
100% to < 200% FPL	70%	7.1	3.1
200% to < 300% FPL	81%	6.7	2.5
>300% FPL	91%	5.2	1.7
Education			
Less than High School	60%	6.7	2.7
High School Graduate	80%	6.6	2.6
Some College/Trade School	85%	6.9	2.7
College Graduate/Post-Graduate	92%	5.2	1.7

1. Federal Poverty Level: In 1999, the 100% FPL for a family of two adults and two dependents was 16,895 per year.

Source: Los Angeles County Health Survey

- Self-rated health status was also strongly associated with level of formal education: 92% of college graduates reported good to excellent health compared to only 60% among those who had not graduated from high school.
- The percentage who reported poor or fair health was markedly higher among those who had ever been diagnosed with heart disease (51%), diabetes (57%), arthritis (40%), depression (42%), or asthma (38%) than among those not previously diagnosed with any of the above conditions (14%).

Health-Related Quality of Life

"An individual's or group's perceived physical and mental health over time"

Source: CDC, 2000

Unhealthy Days in the Past Month

- The average number of unhealthy days in the past month was 6.4 among all county adults and was higher among women (7.1) than men (5.6) (Table 1).
- The average number of unhealthy days was highest among African-Americans (8.4), followed by whites (7.1), Latinos (5.6), and Asians/Pacific Islanders (4.8).
- The number of unhealthy days was inversely related to household income and education level (Table 1).
- Unhealthy days ranged from a high of 8.1 in the Antelope Valley Service Planning Area (SPA) to a low of 5.8 in the East and San Gabriel SPAs.
- The number of unhealthy days was significantly higher among persons diagnosed with selected chronic health conditions compared to those not diagnosed with each condition (Figure 2). For example, those diagnosed with depression reported an average of 16.6 unhealthy days in the past month compared to 5.4 days among those not diagnosed with depression.

Activity Limitation Days in the Past Month

- The average number of activity limitation days in the past month was 2.4 among all county adults and was slightly higher among women (2.7) than men (2.2) (Table 1).
- Activity limitation days were higher among those 50-64 years old (3.1) and those 65 years and older (2.9) than those 18-29 years old (1.9) (Table 1).
- Activity limitation days were highest among African-Americans (3.5) and lowest among Asians/Pacific Islanders (1.7).
- Activity limitation days were inversely related to household income and education level (Table 1).
- Activity limitation days were highest in the Antelope Valley SPA (3.6) and lowest in the San Gabriel and West SPAs (2.1).

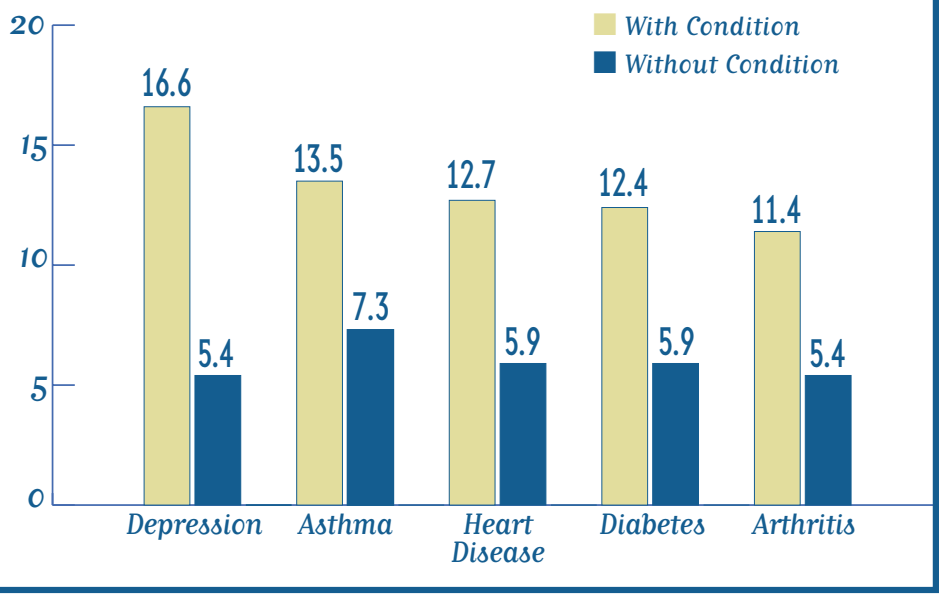
➜ The numbers of activity limitation days were significantly higher in persons diagnosed with depression, arthritis, diabetes, heart disease, or asthma than in persons not diagnosed with each condition (Figure 3).

Discussion

This report provides the first population-wide data on health-related quality of life in Los Angeles County and uses measures developed by the CDC to track health trends at the national and state levels. The average numbers of unhealthy days and activity limitation days were higher in the county (6.4 and 2.4, respectively) than in California (5.9 and 2.1) and the United States (5.5 and 1.9, respectively) in 1999.[3] These differences may reflect true disparities in health status across the three populations but could also reflect demographic differences (e.g., socioeconomic or racial/ ethnic differences) between the populations.[4]

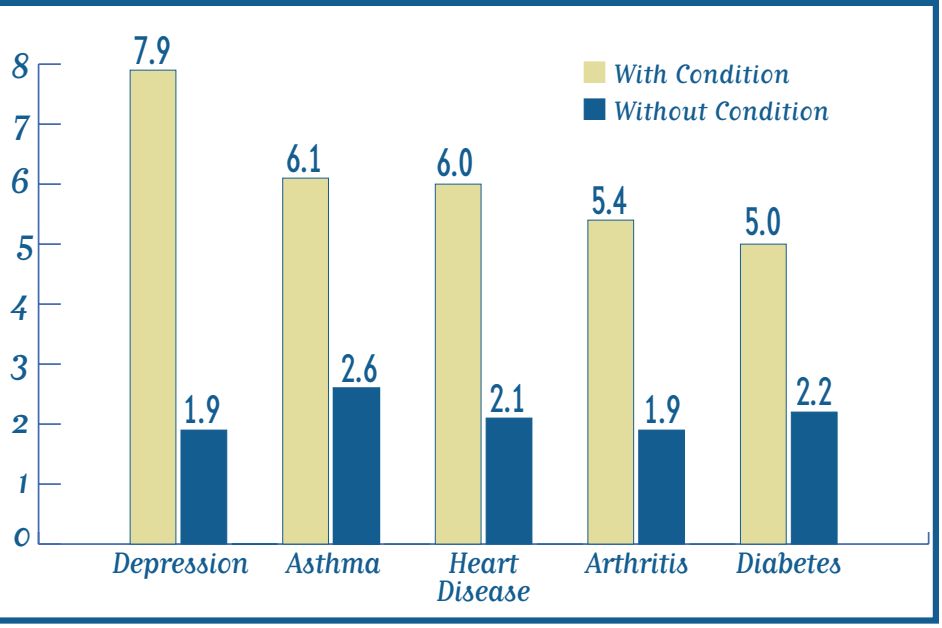
The survey also found substantial variation in health-related quality of life across income and education levels in the county with those at the lower end of the socioeconomic scale reporting poorer health and function. These findings are consistent with a large body of research that has documented strong links between lower socioeconomic status (SES) and poorer health outcomes, including reduced life expectancy and increased rates of many infectious and non-infectious diseases.[5,6] This research has provided strong evidence of the importance of the physical and social environments on overall health and of the importance of considering these

Figure 2. *Average Number of Unhealthy Days in the Past Month by Chronic Health Condition, 1999*



Source: Los Angeles County Health Survey

Figure 3. *Average Number of Activity Limitation Days in the Past Month by Chronic Health Condition, 1999*



Source: Los Angeles County Health Survey

3. State and national data are from the Behavioral Risk Factor Surveillance System; personal communication, Matthew Zack, MD, MPH, Centers for Disease Control and Prevention.

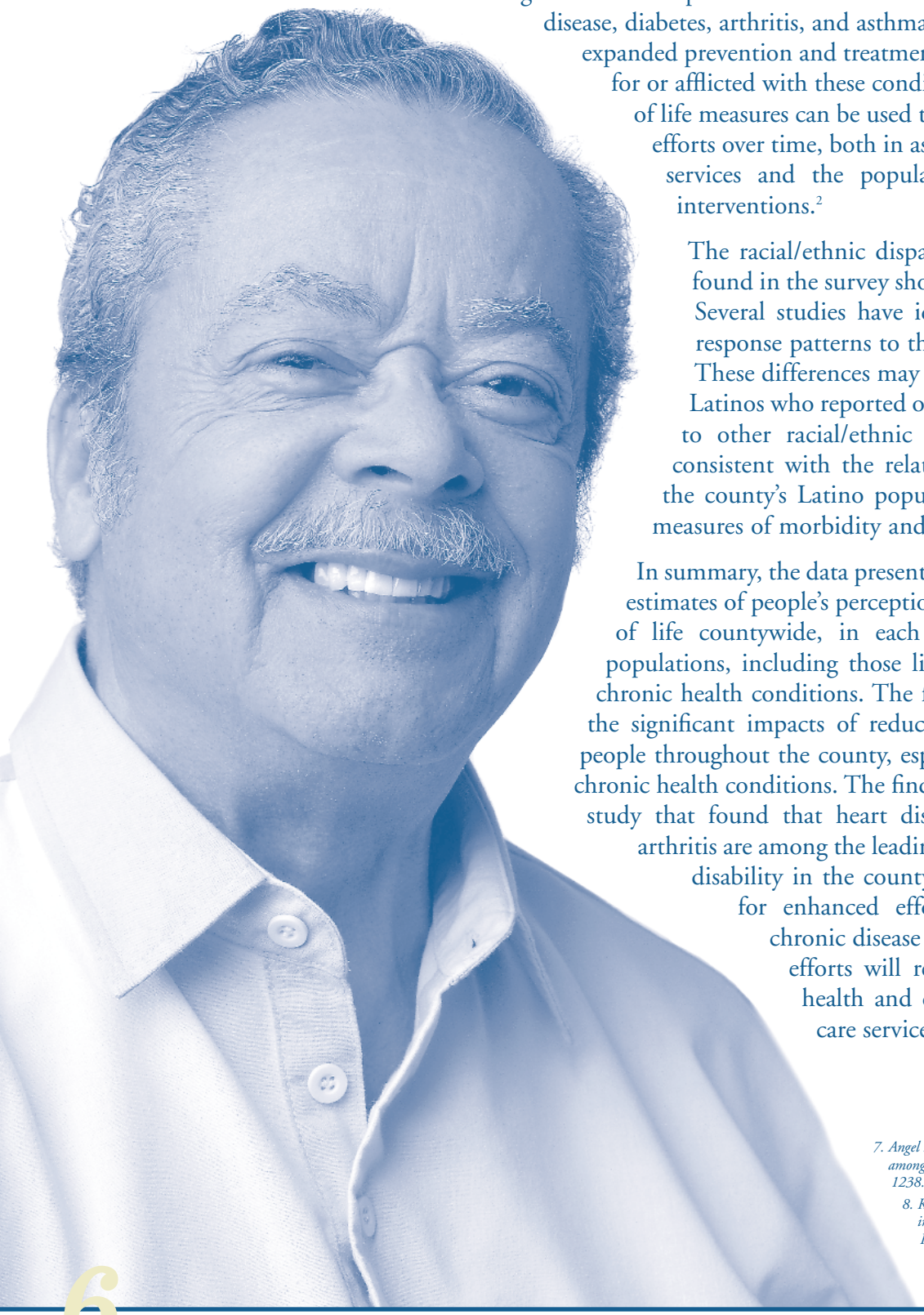
4. We did not have access to sufficient data from the state and national surveys to adjust for demographic differences in the populations.

5. Marmot MG, Kogevinas M, Elston MA. Social/economic status and disease. Ann Rev Public Health 1987;8:111-135.

6. Adler NE, Boyce WT, Chesney MA, Folkman S, Syme SL. Socioeconomic inequalities in health: no easy solution. JAMA 1993;269:3140-3145.

environments in developing community health improvement strategies. For example, efforts to improve the quality of primary school education, increase adult literacy, expand employment opportunities, and strengthen local economies can all be considered potential interventions to improve community health.

The findings also highlight the burden of chronic disease in the county population. For example, persons who had been diagnosed with depression reported three times as many unhealthy days and four times as many activity limitation days as those not diagnosed with depression. Similar trends were also observed for heart disease, diabetes, arthritis, and asthma, highlighting the importance of expanded prevention and treatment efforts targeted to those at risk for or afflicted with these conditions. The health-related quality of life measures can be used to assess the effectiveness of these efforts over time, both in assessing the quality of health care services and the population impact of public health interventions.[2]



The racial/ethnic disparities in self-rated health status found in the survey should be interpreted with caution. Several studies have identified cultural differences in response patterns to the question on self-rated health.[7] These differences may explain the higher percentage of Latinos who reported only poor to fair health compared to other racial/ethnic groups, a finding that is not consistent with the relatively favorable health status of the county's Latino population based on more objective measures of morbidity and mortality.

In summary, the data presented in this report provide baseline estimates of people's perceptions of their health-related quality of life countywide, in each SPA, and in important sub-populations, including those living in poverty and those with chronic health conditions. The findings document and quantify the significant impacts of reduced health on the daily lives of people throughout the county, especially among those living with chronic health conditions. The findings are consistent with a recent study that found that heart disease, depression, diabetes, and arthritis are among the leading causes of premature death and disability in the county,[8] highlighting the critical need for enhanced efforts to reduce the burden of chronic disease in the county population. These efforts will require a mobilization of public health and community stakeholders, health care service providers, and policy makers to

7. Angel R, Guarnaccia P. Mind, body, and culture: somatization among Hispanics. Social Science and Medicine 1989;28:1229-1238.

8. Kominski GF, Ho A, Simon P, et al. The Burden of Disease in Los Angeles County. Los Angeles County Department of Health Services and UCLA Center for Health Policy Research, January 2000.

increase resource allocations, improve access to services, and identify more effective chronic disease prevention and treatment interventions. In addition, ongoing monitoring of health-related quality of life in the county will be important for evaluating the effectiveness of these efforts and assessing progress toward achieving public health goals.

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Series Editors: Paul Simon, MD MPH; Cheryl Wold, MPH; Jonathan Fielding, MD MPH; and Anna Long, PhD MPH

Data Analysts: Isabel Cardenas, MPH; Michele Liebowitz, MPH; Amy Lightstone, MPH, ATC; Amy Paturel, MS, MPH; Thomas Rice, MA; Zhiwei Waley Zeng, MD, MPH

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For more information or to obtain additional copies of this report, call 213-240-7785. You can also visit our Web site at **www.lapublichealth.org**.

Additional information on health-related quality of life measures is available at the CDC's website:

http://www.cdc.gov/nccdphp/hrq01/pdfs/mhd.pdf

A Broader Definition of Health

"Health is a state of well-being and the capability to function in the face of changing circumstances. Health is, therefore, a positive concept emphasizing social and personal resources as well as physical capabilities. Improving health is a shared responsibility of health care providers, public health officials, and a variety of other actors in the community who can contribute to the well-being of individuals and populations."

Source: Institute of Medicine, 1997.[9]

9. Durch JS, Bailey LA, Stoto MA (ed.) Improving Health in the Community: A Role for Performance Monitoring. Institute of Medicine.National Academy Press, 1997

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Summary:

Issue 4

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- The average number of unhealthy days was highest among African-Americans (8.4), followed by whites (7.1), Latinos (5.6), and Asians/Pacific Islanders (4.8).
- The average number of activity limitation days in the past month was 2.4 among all county adults and was nearly two times higher among those living in poverty than those living at or above 300% of the federal poverty level.
- The numbers of unhealthy days and activity limitation days were significantly higher in persons previously diagnosed with depression, arthritis, diabetes, heart disease, or asthma than in persons not diagnosed with these conditions.