

# Data Set Directory of Social Determinants of Health at the Local Level



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION



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# Data Set Directory of Social Determinants of Health at the Local Level

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# Contents

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Introduction to the Data Set Directory .....	1
Dimensions of the Social Environment .....	3
Economy .....	4
Overview .....	4
Data Sets .....	5
Employment .....	11
Overview .....	11
Data Sets .....	12
Education .....	17
Overview .....	17
Data Sets .....	18
Political .....	23
Overview .....	23
Data Sets .....	24
Environmental .....	27
Overview .....	27
Data Sets .....	28
Housing .....	31
Overview .....	31
Data Sets .....	33
Medical .....	37
Overview .....	37
Data Sets .....	38
Governmental .....	41
Overview .....	41
Data Sets .....	42
Public Health .....	45
Overview .....	45
Data Sets .....	46
Psychosocial .....	49
Overview .....	49
Data Sets .....	51

---

*Continued on next page*



**Contents, Continued**

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Behavioral .....	53
Overview .....	53
Data Sets .....	54
Transport .....	57
Overview .....	57
Data Sets .....	58
References .....	63

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# Introduction to the Data Set Directory

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There is widespread interest in the role of local social determinants of health at the local level. Federal, state, and local government agencies, academic institutions, and community organizations are increasingly recognizing the need to understand and address the socioeconomic contexts within which people work and play in order to improve their health and welfare. There is renewed emphasis on implementing interventions aimed at improving socioenvironmental conditions. Such interventions have the potential to produce wide-ranging health benefits (see the April 2003 supplement of the *American Journal of Preventive Medicine*) and could reduce marked health disparities that remain a high-priority concern for public health (USDHHS 2000). It is critical that decisions regarding how to improve health and eliminate health disparities are integrated into the larger picture of community characteristics that promote or endanger health. A recent theme in the literature and in meetings of interested parties around the country is the need for improved conceptualization and availability of data on how the social environment impacts the health of populations (Pickett and Pearl 2001; Macintyre and Ellaway and Cummins 2002; Yen and Syme 1999; Kaplan and Lynch 1997, 2001; Diez Roux 2004; Berkman 2004; Krieger and Davey Smith 2004; Institute of Medicine 1997; M. Miringoff and M.L. Miringoff 1999; Howell et al. 2003).

This *Data Set Directory of Social Determinants of Health at the Local Level* is a response to those needs. The directory contains an extensive list of existing data sets that can be used to address these determinants. The data sets are organized according to 12 dimensions, or broad categories, of the social environment. Each dimension is subdivided into various components.

This directory grew out of a project based at the University of Michigan School of Public Health and funded by the Centers for Disease Control and Prevention (CDC). Investigators from the United States and Europe were invited to a workshop to review an initial list of dimensions important for understanding social determinants of health. Participants represented a wide range of disciplines including epidemiology, sociology, geography, medicine, demography, economics, developmental psychology, education, and toxicology. Others with interests and expertise in the effects of community contextual characteristics on health were also invited, including government experts on data sources and geographic information systems, public health practitioners, and experts on community consultation and processes.

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Structured discussions among the workshop participants led to consensus on a core set of 12 dimensions. Participants then generated detailed lists of components within each dimension, along with suggestions for possible data sources and specific variables that might be used to measure the components of each dimension. Based on the results of the workshop, the lists of components and data indicators were refined by the University of Michigan staff, taking into consideration both conceptual relevance and availability of appropriate data at the local level. An extensive search for data sets that address each of the dimensions and components was conducted—including both traditional and non-traditional sources. The results of this search are presented in this directory.

We focused primarily, but not exclusively, on data sets that contain information for Metropolitan Statistical Areas (MSAs). We chose to focus on MSAs primarily because there is a broad range of data for MSAs that is routinely collected and geocoded. We recognize, however, that there is no single ideal level for measuring social determinants of health in relationship to health-damaging and health-promoting factors. In fact, different characteristics may operate at different levels. An argument can be made that using more localized units, such as county, zip code, census tract, and census block, increases the likelihood of measuring certain aspects of the social and physical environment actually experienced by individuals. Conversely, considerably more richly detailed contextual data sources are available for larger units such as states. Given the inevitable trade-offs between data availability and proximity to lived experience, we chose to focus on MSAs.

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## Dimensions of the Social Environment

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This table lists the 12 dimensions of the social environment.

Each section begins with a brief overview of the literature for each dimension. These reviews are not exhaustive, but rather provide some of the background that led to them being included in this directory.

Each dimension is divided into several components. Each component has one or more indicators, and for each indicator at least one data set is listed.

<b>Dimension</b>	<b>See Page</b>
Economy	5
Employment	13
Education	19
Political	25
Environmental	29
Housing	33
Medical	39
Governmental	43
Public Health	47
Psychosocial	51
Behavioral	55
Transport	59

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# Economy

## Overview

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The association between higher levels of economic resources and more optimal health is one of the most well-documented relationships in public health research (Susser and Watson and Hopper 1985; Krieger et al. 1993; Lynch and Kaplan 2000), and economic aspects of local areas have been among the most frequently analyzed contextual factors with regard to mortality and other outcomes. Significant associations have been shown between health status and community economic characteristics including income (Anderson et al. 1997; Diez Roux et al. 1997) and inequality in income distribution (Lynch et al. 1998; Kennedy et al. 1998), wealth (Diez Roux et al. 1997; O'Campo et al. 1997), poverty (Yen and Kaplan 1999; Shaw et al. 2000), and the geographic concentration of poverty (Waitzman and Smith 1998a,b).

The fact that data for most of these economic indicators are readily available for small areas in census data is undoubtedly an important factor accounting for their widespread use (Mitchell et al. 2000). Our consultants encouraged a broadened perspective to more fully assess the economic status of communities. On one hand, this involved identifying a more diversified set of indicators for commonly studied components, such as considering various types of income (earnings, investments, and transfers) in addition to the overall mean or median income in an area. On the other hand, a number of additional components of economic well-being were also suggested for inclusion. For example, the opportunities for community residents to obtain financial resources would be influenced by characteristics of economic development in an area, including productivity, industrial mix, and amount of area business lending, as well as by the exchanges of goods and services through the informal economy. The availability of financial services such as banks and other sources of credit were considered important, as were local costs of living, patterns of redistribution through taxes and transfers, and the fiscal capacity of the area. One other seldom-considered aspect of the economic milieu concerns the degree to which segments of the community are differentially exploited, and thereby constrained in their access to monetary resources. Indicators of exploitation include the ratio of wages to corporate profits, as well as issues related to location of jobs such as length of commute and commuter taxation.

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## Economy Data Sets

This table presents the components and indicators of the economic dimension. Nine economic components are identified:

1. Income
2. Wealth
3. Poverty
4. Economic Development
5. Financial Services
6. Cost of Living
7. Redistribution
8. Fiscal Capacity
9. Exploitation

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
<p>1. Income</p> <p><b>A. Earned income</b></p> <ol style="list-style-type: none"> <li>1. Median and per capita annual income.....</li> <li>2. Mean hourly and annual wage.....</li> <li>3. Hourly wage, union, and nonunion workers .....</li> <li>4. Per capita personal income.....</li> </ol> <p><b>B. Disposable income</b></p> <ol style="list-style-type: none"> <li>1. Median and per capita Effective Buying Index</li> </ol> <p><b>C. Income distribution</b></p> <ol style="list-style-type: none"> <li>1. Gini coefficient of income inequality; 90%ile/10%ile ratio .....</li> </ol>	<p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>Bureau of Labor Statistics (<a href="http://stat.bls.gov/oes/home.htm">stat.bls.gov/oes/home.htm</a>). Data by occupation available in downloadable Excel files.</p> <p>Union Membership and Earnings Data Book (<a href="http://www.bna.com/bnaplus/labor/laborrpts.html">www.bna.com/bnaplus/labor/laborrpts.html</a>). Separate tables for public and private sector workers and for manufacturing and nonmanufacturing workers. Customized reports available for any or all years since 1983.</p> <p>Bureau of Economic Analysis (<a href="http://www.bea.doc.gov/bea/regional/reis">www.bea.doc.gov/bea/regional/reis</a>). Downloadable compressed comma-separated-value files.</p> <p>Demographics U.S.A (<a href="http://www.tradedimensions.com/p_demographics.html">www.tradedimensions.com/p_demographics.html</a>). Effective Buying Index represents money income minus taxes. Data available on CD-ROM.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p>

*Continued on next page*

## Economy Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>1. Income (continued)</p> <p><b>D. Geographic concentration of income</b></p> <p>1. Concentration of poverty .....</p> <p><b>E. Economic segregation</b></p> <p>1. Dissimilarity index (d), poor/nonpoor segregation; Contact index (xPy*), poor/nonpoor segregation.....</p>	<p>Jargowsky, P. A. 2003. Stunning Progress, Hidden Problems: The Dramatic Decline of Concentrated Poverty in the 1990s (<a href="http://www.brookings.edu/dybdocroot/urban/publications/jargowskypoverty.pdf">www.brookings.edu/dybdocroot/urban/publications/jargowskypoverty.pdf</a>). Percentage of the poor residing in high poverty neighborhoods; total and race-specific rates.</p> <p>Sociometrics Contextual Data Archive (<a href="http://www.socio.com">www.socio.com</a>). Downloadable compressed data files for PC and UNIX, including raw data and SPSS and SAS files.</p>
<p>2. Wealth</p> <p><b>A. Geographic concentration of wealth</b></p> <p>1. Mean and median net worth .....</p> <p><b>B. Debt levels</b></p> <p>1. Bankruptcy filings .....</p> <p><b>C. Savings rates</b></p> <p>1. Dollar amount of deposits in savings institutions and banks .....</p> <p><b>D. Real estate ownership/values</b></p> <p>1. Median value owner-occupied housing units.....</p>	<p>ESRI Business Information Solution (<a href="http://www.esribis.com">www.esribis.com</a>). Data can be integrated into ArcGIS.</p> <p>Economy.com (<a href="http://www.economy.com/research">www.economy.com/research</a>). Personal and business bankruptcy filings and rates per thousand households, by type.</p> <p>Federal Deposit Insurance Corporation (<a href="http://www3.fdic.gov/sod/index.asp">www3.fdic.gov/sod/index.asp</a>). From Web site page, choose Summary Tables, then MSA or county tables.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p>
<p>3. Poverty</p> <p><b>A. Geographic concentration of poverty</b></p> <p>1. Poverty rate.....</p> <p>2. Concentration of poverty .....</p> <p><b>B. Deprivation associated with poverty-level income</b></p> <p>1. Percent of families with incomes less than half of the poverty line.....</p>	<p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>See Jargowsky 2003.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p>

*Continued on next page*

## Economy Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>4. Economic Development</p> <p><b>A. Productivity</b></p> <p>1. Gross metropolitan product (GMP) and GMP growth rate.....</p> <p><b>B. Industrial mix</b></p> <p>1. Wholesale, retail, service, and manufacturing establishments.....</p> <p><b>C. Business lending indicators</b></p> <p>1. City governments bond ratings.....</p>	<p>U.S. Metro Economies (<a href="http://usmayors.org/uscm/home.asp">usmayors.org/uscm/home.asp</a>). Downloadable tables in PDF.</p> <p>Census Bureau, Economic Census (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>Statistical Abstract of the United States (<a href="http://www.census.gov/statab/www">www.census.gov/statab/www</a>). From this Web site page, select desired year; select State and Local Government Finances and Employment.</p>
<p>5. Financial Services</p> <p><b>A. Availability of credit</b></p> <p>1. Home loan denial rates by race, applicants with incomes &lt;50%, 50-79%, 80-99%, 100-119%, and ≥120% of MSA median .....</p> <p><b>B. Availability of banking and check-cashing services</b></p> <p>1. Number of bank and savings institution offices</p>	<p>Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act data (<a href="http://www.ffiec.gov/reports.htm">www.ffiec.gov/reports.htm</a>). From this Web site page, choose Aggregates Reports under Home Mortgage Disclosure Act; select state and MSA of interest; Aggregate Table 5-2 Disposition of applications for conventional home purchase loans, by income and race of applicant, is downloadable as PDF or spreadsheet.</p> <p>Federal Deposit Insurance Corporation (<a href="http://www3.fdic.gov/sod/index.asp">www3.fdic.gov/sod/index.asp</a>). From this Web site page, choose Summary Tables, then MSA or county tables.</p>
<p>6. Cost of Living</p> <p><b>A. Local cost of living indices</b></p> <p>1. Cost of living index: composite/grocery items/housing/utilities/transportation/health care; average local prices for a wide range of specific food items, products, and services .....</p>	<p>American Chamber of Commerce Researchers Association (<a href="http://www.acra.org">www.acra.org</a>). Quarterly and annual average data may be purchased as downloadable spreadsheet or hardcopy.</p>

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## Economy Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>6. Cost of Living (continued)</p> <p><b>A. Local cost of living indices (continued)</b></p> <p>2. Basic family budget: total/housing/food/child care/health care/transportation/taxes .....</p> <p><b>B. Spending/consumption patterns</b></p> <p>1. Consumer expenditures: total/food/alcoholic beverages/housing/apparel/transportation/health care/entertainment/personal care products and services/reading/education/tobacco products/personal insurance and pensions .....</p> <p><b>C. Income to spending ratios</b></p> <p>1. Ratio annual income/expenditures .....</p>	<p>Economic Policy Institute: Hardships in America (epinet.org). From this Web site page, choose Basic Family Budget Calculator; select a metropolitan area of interest or download budget tables for all areas in Excel.</p> <p>Bureau of Labor Statistics (BLS) (www.bls.gov). From this Web site page, select Consumer Expenditures; select Tables Created by BLS; select current MSA tables grouped by region in text format or PDF.</p> <p>Can be calculated from BLS expenditures data.</p>
<p>7. Redistribution</p> <p><b>A. Taxes</b></p> <p>1. Local tax rates.....</p> <p>2. Cigarette tax .....</p> <p>3. Taxpayers filing for Earned Income Tax Credit</p> <p><b>B. Transfers</b></p> <p>1. Transfer payments.....</p>	<p>1. Statistical Abstract of the United States (www.census.gov/statab/www). From this Web site page, select desired year; select State and Local Government Finances and Employment.</p> <p>2. Tax Foundation (www.taxfoundation.org). From this Web site page, select State Finance; select Combined State and Local Tax Burdens as a Percentage of Income, by State.</p> <p>Tax Foundation (www.taxfoundation.org). From this Web site page, select State Finance; select Various Tax Rates.</p> <p>Brookings Institution (www.brook.edu/es/urban/eitc/eitcnational.pdf).</p> <p>Bureau of Economic Analysis (www.bea.doc.gov/bea/regional/reis). Downloadable compressed comma-separated-value files.</p>

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## Economy Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>8. Fiscal Capacity</p> <p><b>A. Property values</b></p> <p>1. Median value, owner-occupied housing units.....</p> <p><b>B. Sales levels</b></p> <p>1. Dollar amount of retail sales per household.....</p> <p><b>C. Income capacity</b></p> <p>1. Buying power index .....</p> <p>2. Standardized fiscal health.....</p>	<p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>1. Demographics USA (<a href="http://tradedimensions.com/p_demographics.html">tradedimensions.com/p_demographics.html</a>). Data available on CD-ROM.</p> <p>2. State and Metropolitan Area Data Book (<a href="http://www.census.gov/statab/www/smadb.html">www.census.gov/statab/www/smadb.html</a>).</p> <p>Demographics USA (<a href="http://www.tradedimensions.com/p_demographics.html">www.tradedimensions.com/p_demographics.html</a>). A weighted index incorporating population, economic, and distributional information to measure the market's ability to buy, expressed as a percentage of the national total (100%). Data available on CD-ROM.</p> <p>State of the Nations Cities Database (<a href="http://policy.rutgers.edu/cupr/sonc/sonc.htm">policy.rutgers.edu/cupr/sonc/sonc.htm</a>). Defined by Ladd and Yinger (<i>America's Ailing Cities: Fiscal Health and the Design of Urban Policy</i>. Baltimore: Johns Hopkins University Press. 1991) as the difference between a city's revenue-raising capacity and its expenditure need expressed as a percentage of capacity. Used to reveal the net effect of a city's economic, social, and demographic characteristics on a city's ability to deliver a standard level of public services at a standard tax burden on its residents. Database available in four PC formats (tab-delimited ASCII, SPSS portable, Excel, and SAS) and one Macintosh format.</p>

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## Economy Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>9. Exploitation</p> <p><b>A. Ratio of wages to corporate profits</b></p> <p>1. Ratio of average production worker wage: average value added per manufacturing employee.....</p> <p>2. Ratio of average nonunion worker wage: average union worker wage.....</p> <p><b>B. Commuter taxes</b></p> <p>1. Transit and vanpool tax exemption benefits .....</p> <p><b>C. Commuting patterns</b></p> <p>1. Means of travel to work; median travel time to work; median income by means of transport to work; median income and number of workers in household by vehicles available .....</p> <p>2. Travel time index.....</p>	<p>Can be calculated from data in State and Metropolitan Area Data Book 1991 (<a href="http://www.census.gov/statab/www/smadb.html">www.census.gov/statab/www/smadb.html</a>).</p> <p>Can be calculated from data in the Union Membership and Earnings Data Book (<a href="http://www.bna.com/bnaplus/labor/laborrpts.html">www.bna.com/bnaplus/labor/laborrpts.html</a>).</p> <p>Federal Transit Administration (<a href="http://www.fta.dot.gov/library/policy/cc/tvbtei.html">www.fta.dot.gov/library/policy/cc/tvbtei.html</a>). Data on which states allow federally exempted, qualified transportation fringe benefits to be exempted from state tax.</p> <p>Census Bureau, Transportation Planning Package (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>Texas Transportation Institute (<a href="http://mobility.tamu.edu/">mobility.tamu.edu/</a>). Annual Urban Mobility Report includes a Travel Time Index, reflecting the average amount of extra time it takes to travel in the peak period relative to free-flow travel.</p>

# Employment

## Overview

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Aspects of employment in residential areas have also been among the more frequently considered factors in research on context and health. Adverse outcomes have generally been found to be positively associated with higher community levels of unemployment (Guest and Almgren and Hussey 1998; LeClere and Rogers and Peters 1998), as well as with larger proportions of employed residents working at lower social class occupations (Armstrong et al. 1998; Cubbin and LeClere and Smith 2000). Unemployment rates and/or occupational status measures are also frequently combined with other indicators of areal deprivation, including median income, car ownership, education level, and overcrowded housing, to form summary measures that are associated with poorer health (e.g., Townsend and Phillimore and Beattie 1988; Carstairs and Morris 1989).

In addition to the usual employment indicators, we include a number of other measures. Looking in detail at characteristics of the workforce, for example, along with the area business capacity and the geography of job growth would facilitate assessment of job access, as well as the degree of spatial “mismatch,” which may adversely affect the employment opportunities of central city residents (Holzer 1991; Mouw 2000). Racial, gender-based, and anti-gay discrimination also limit access to employment and can cause stress-related consequences for health (Williams 1999; Krieger and Sidney 1997; Yen et al. 1999). The degree to which occupational safety regulations and policies are in place and enforced is likely to influence the frequency and severity of work-related injuries (McQuiston and Zakocs and Loomis 1998), while aspects of job quality, including wage equity, family-friendly policies, and demand/control characteristics of jobs, can reduce or exacerbate job-related stress and its sequelae (Cheng et al. 2000; de Jonge et al. 2000; A. L. Saltzstein and Ting and G.H. Saltzstein 2001). The presence of labor unions is also associated with more optimal working conditions and employee compensation (Hirsch and Macpherson 2001).

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## Employment Data Sets

This table describes the components and indicators of the employment dimension. Seven employment components are identified:

1. Employment/Unemployment Rates
2. Workforce Characteristics
3. Area Business Capacity
4. Job Access
5. Occupational Safety
6. Job Quality
7. Job Characteristics

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
<p>1. Employment/Unemployment Rates</p> <p><b>A. Job security</b></p> <p>1. Employment volatility .....</p> <p><b>B. Labor market turnover</b></p> <p>1. Unemployment rates: total, by race/ethnicity, sex, occupation, and industry .....</p> <p>2. Labor force participation rates: total, by race/ethnicity and sex .....</p>	<p>State of the Nation’s Cities Database (<a href="http://policy.rutgers.edu/cupr/sonc/sonc.htm">policy.rutgers.edu/cupr/sonc/sonc.htm</a>). Variables calculated by the Center for Urban Policy Research for this database indicating employment volatility relative to volatility in the United States as a whole. Database available in four PC formats (tab-delimited ASCII, SPSS portable, Excel, and SAS) and one Macintosh format.</p> <p>1. Bureau of Labor Statistics, Local Area Series (<a href="http://stats.bls.gov/lau/">stats.bls.gov/lau/</a>). From this Web site page, select monthly or annual average tables of total unemployment rates for metropolitan areas; tables available in PDF.</p> <p>2. Bureau of Labor Statistics, Geographic Profile Series (<a href="http://stats.bls.gov/opub/gp/laugp.htm">stats.bls.gov/opub/gp/laugp.htm</a>). From this Web site page, select Estimates for Metropolitan Areas and Cities; tables available in PDF.</p> <p>Bureau of Labor Statistics, Geographic Profile Series (<a href="http://stats.bls.gov/opub/gp/laugp.htm">stats.bls.gov/opub/gp/laugp.htm</a>). From this Web site page, select Estimates for Metropolitan Areas and Cities.</p>

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## Employment Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>2. Workforce Characteristics</p> <p><b>A. Racial/ethnic/gender diversity</b></p> <ol style="list-style-type: none"> <li>1. Percent distribution of employed persons by sex, race/ethnicity, and occupation.....</li> <li>2. Percent of workers who are female .....</li> </ol> <p><b>B. Skill level</b></p> <ol style="list-style-type: none"> <li>1. Percent distribution of employed persons by sex, race/ethnicity, and occupation.....</li> </ol> <p><b>C. Unionization</b></p> <ol style="list-style-type: none"> <li>1. Percent of workforce unionized; percent of workers covered by union contract .....</li> <li>2. Collective bargaining protection laws covering state and local employees; laws protecting public employees' right to strike</li> </ol>	<p>Bureau of Labor Statistics, Geographic Profile Series (<a href="http://stats.bls.gov/opub/gp/laugp.htm">stats.bls.gov/opub/gp/laugp.htm</a>). From this Web site page, select Estimates for Metropolitan Areas and Cities.</p> <p>Union Membership and Earnings Data Book (<a href="http://www.bna.com/bnaplus/labor/laborrpts.html">www.bna.com/bnaplus/labor/laborrpts.html</a>). Total, private, public sector, and private manufacturing workers; customized reports available for any or all years since 1983.</p> <p>Bureau of Labor Statistics, Geographic Profile Series (<a href="http://stats.bls.gov/opub/gp/laugp.htm">stats.bls.gov/opub/gp/laugp.htm</a>).</p> <p>Union Membership and Earnings Data Book (<a href="http://www.bna.com/bnaplus/labor/laborrpts.html">www.bna.com/bnaplus/labor/laborrpts.html</a>). Total, private, public sector, and private manufacturing workers; customized reports available for any or all years since 1983.</p> <p>Dilts, D. A., C. R. Deitsch, and A. Rassuli. 1992. <i>Labor Relations Law in State and Local Government</i>. Westport, CT: Quorum Books.</p>
<p>3. Area Business Capacity</p> <p><b>A. Tax breaks offered</b></p> <ol style="list-style-type: none"> <li>1. Corporate income tax rate .....</li> </ol> <p><b>B. Number and size of businesses</b></p> <ol style="list-style-type: none"> <li>1. Number of establishments by employment size (1-4, 5-9, 10-19, 20-49, 50-99, 100-249, 250-499, 500-999, ≥1,000 employees).....</li> </ol> <p><b>C. Business space available</b></p> <ol style="list-style-type: none"> <li>1. Commercial office space (sq ft) in and outside central business district.....</li> <li>2. Commercial office space vacancy rate in and outside central business district .....</li> </ol>	<p>Tax Foundation (<a href="http://www.taxfoundation.org">www.taxfoundation.org</a>). From this Web site page, select State Finance; select Corporate Income Tax Rates.</p> <p>County Business Patterns (<a href="http://www.census.gov/pub/epcd/cbp/download/cbpdownload.html">www.census.gov/pub/epcd/cbp/download/cbpdownload.html</a>). Downloadable comma-delimited data files and record layout documentation.</p> <p>Society of Industrial and Office Realtors (<a href="http://www.sior.com">www.sior.com</a>). From this Web site page, select Publications; online data from Comparative Statistics of Industrial and Office Real Estate Markets available for purchase.</p> <p>Society of Industrial and Office Realtors (<a href="http://www.sior.com">www.sior.com</a>).</p>

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## Employment Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>4. Job Access</p> <p><b>A. Geography of job growth</b></p> <ol style="list-style-type: none"> <li>1. Central city and suburban: employment growth rate; number and percent change in number of jobs; share and percent change in share of private employment .....</li> <li>2. Number and increase in nonagricultural jobs</li> </ol> <p><b>B. Discrimination/affirmative action policies</b></p> <ol style="list-style-type: none"> <li>1. Employment-population ratio by race and sex .....</li> </ol> <p><b>C. Distance traveled to work</b></p> <ol style="list-style-type: none"> <li>1. Share of metro employment &gt;10 miles from central business district .....</li> </ol> <p><b>D. Transportation system</b></p> <ol style="list-style-type: none"> <li>1. Percent of workers aged <math>\geq 16</math> years using various means of transportation to work .....</li> <li>2. Percent of residents without satisfactory public transportation available in neighborhood .....</li> </ol>	<p>Brookings Institution. Brennan J., and E.W. Hill. 1999. Where Are the Jobs? Cities Suburbs, and the Competition for Employment (<a href="http://www.brook.edu/es/urban/hillfa.pdf">www.brook.edu/es/urban/hillfa.pdf</a>).</p> <p>Blue Chip Job Growth Update: Arizona State University (<a href="http://www.cob.asu.edu/seid/eoc/pubs/JGUsample">www.cob.asu.edu/seid/eoc/pubs/JGUsample</a>). From this Web site page, select Ranking of MSAs.</p> <p>Bureau of Labor Statistics, Geographic Profile Series (<a href="http://stats.bls.gov/opub/gp/laugp.htm">stats.bls.gov/opub/gp/laugp.htm</a>). From this Web site page, select Estimates for Metropolitan Areas and Cities; tables available in PDF.</p> <p>Brookings Institution (<a href="http://www.brook.edu/es/urban/publications/glaeserjobsprawlsum.htm">www.brook.edu/es/urban/publications/glaeserjobsprawlsum.htm</a>). Glaeser E.L., M. Kahn, and C. Chu 2001. Job Sprawl: Employment Location in U.S. Metropolitan Areas. Downloadable PDF.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p>
<p>5. Occupational Safety</p> <p><b>A. Laws, regulations, and company-specific policies</b></p> <ol style="list-style-type: none"> <li>1. Directory of states with approved occupational safety and health plans .....</li> </ol> <p><b>B. Enforcement/number of violations</b></p> <ol style="list-style-type: none"> <li>1. OSHA workplace inspections and penalties for violations .....</li> </ol>	<p>Occupational Safety and Health Administration (<a href="http://www.osha.gov/oshdir/states.html">www.osha.gov/oshdir/states.html</a>).</p> <p>Occupational Safety and Health Administration Workplace Safety Data (<a href="http://www.nicar.org/data/osha">www.nicar.org/data/osha</a>). Businesses classified by city; data since 1972 available for purchase.</p>

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## Employment Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>6. Job Quality</p> <p><b>A. Compensation .....</b></p> <p><b>B. Ratio of Chief Executive Officer to worker earnings</b></p> <p>1. Ratio of mean annual wages, chief executives to production workers.....</p>	<p>See Economic Dimension, Income, page 6.</p> <p>Can be calculated from 1999 Occupational Employment Statistics data (<a href="http://www.bls.gov/oes/oes_data.htm">www.bls.gov/oes/oes_data.htm</a>).</p>
<p>7. Job Characteristics</p> <p><b>A. Unionized companies/size and power of unions .....</b></p> <p><b>B. Skills needed by employers</b></p> <p>1. Percent of total employment in various industries.....</p> <p><b>C. Full vs. part-time employment</b></p> <p>1. Percent of workers who work part-time .....</p>	<p>See Workforce Characteristics, Unionization, page 15.</p> <p>Bureau of Economic Analysis (<a href="http://www.bea.doc.gov/bea/regional/reis">www.bea.doc.gov/bea/regional/reis</a>). Can be calculated from data in downloadable compressed comma-separated-value files.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p>



# Education

## Overview

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Researchers studying educational context and health have generally used the percent of the adult population not completing high school as an indicator, finding positive associations with all-cause mortality (Guest and Almgren and Hussey 1998; Bosma et al. 2001), homicide (Cubbin and LeClere and Smith 2000), motor vehicle deaths (Cubbin and LeClere and Smith 2000), coronary heart disease prevalence (Diez Roux et al. 1997), neural tube defects (Wasserman et al. 1998), smoking (Diez Roux et al. 1997), severe pediatric injury (Durkin et al. 1994), and elevated serum cholesterol (Diez Roux et al. 1997). High school noncompletion rate and median educational level have also been used in combination with other areal economic and employment measures to form aggregate socioeconomic scores that are correlated with adverse health outcomes (Diez Roux et al. 2001; Roberts 1997).

In these studies the contextual educational variable tends to be treated as a marker for a more generalized concept of community socioeconomic status and resources, rather than being considered in its own right. Our consultants suggested that a focused assessment of aspects of education that are likely to vary among communities is warranted. Multiple measures of the population's educational attainment and functioning are included in the recommended indicators. Moreover, the levels of funding, characteristics of school systems and curricula, and learning-related aspects of community life such as prevalence of television viewing and numbers of library books per capita, can provide insights into the priority placed on education and corresponding investment within an area, which itself may be related to health outcome.

Specific aspects of the curriculum also have implications for the health of children at school ages and throughout their lives. For instance, bullying and violence is a serious problem among children and adolescents (Nansel et al. 2001), and the presence of violence prevention programs has been found to be effective in decreasing physically aggressive behavior (Twemlow et al. 2001; Grossman et al. 1997). Similarly, obesity in children is approaching epidemic proportions and is related to adult obesity; levels of lipids, cholesterol, triglycerides, insulin, and blood pressure; and risk of coronary heart disease (Styne 2001). Incorporation of nutrition modification programs and optimal physical education curricula in schools can be effective in modifying these risks (Stone et al. 1998; Snyder et al. 1999).

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## Education Data Sets

This table describes the components and indicators of the education dimension. Five education components are identified:

1. Educational Attainment
2. Funding
3. Private Schools
4. School Characteristics
5. Community Climate

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
<p>1. Educational Attainment</p> <p><b>A. Graduation rates</b></p> <ol style="list-style-type: none"> <li>1. Educational attainment among persons aged <math>\geq 25</math> years .....</li> <li>2. Number of diploma recipients; number of other high school completers .....</li> <li>3. High school graduation rates .....</li> </ol> <p><b>B. Dropout rates</b></p> <ol style="list-style-type: none"> <li>1. Percent of persons aged 16-19 years not enrolled, not high school graduates .....</li> <li>2. Dropout rates for grades 7-12 and 9-12 .....</li> <li>3. High school dropout rates.....</li> </ol> <p><b>C. Literacy rates</b></p> <ol style="list-style-type: none"> <li>1. Reading assessment results .....</li> </ol>	<p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>National Center for Education Statistics Common Core of Data (CCD). Downloadable comma-separated-value and Excel data tables for MSAs, counties, districts, and schools can be created with a Build a Table tool (<a href="http://nces.ed.gov/ccd/bat">nces.ed.gov/ccd/bat</a>). Source CCD data sets also downloadable in ASCII format (<a href="http://nces.ed.gov/ccd/ccdata.asp">nces.ed.gov/ccd/ccdata.asp</a>).</p> <p>U.S. Department of Education, No Child Left Behind (<a href="http://www.nochildleftbehind.gov/index.html">www.nochildleftbehind.gov/index.html</a>). Starting with the 2002-03 school year, school districts will publicly report graduation rates.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>CCD Local Education Agency (School District) Universe Dropout Data (<a href="http://nces.ed.gov/ccd/drpagency.asp">nces.ed.gov/ccd/drpagency.asp</a>); downloadable in ASCII format.</p> <p>U.S. Department of Education, No Child Left Behind (<a href="http://www.nochildleftbehind.gov/index.html">www.nochildleftbehind.gov/index.html</a>). Starting with the 2002-03 school year, school districts will publicly report dropout rates.</p> <p>U.S. Department of Education, No Child Left Behind (<a href="http://www.nochildleftbehind.gov/index.html">www.nochildleftbehind.gov/index.html</a>). Starting with the 2002-03 school year, school districts will publicly report test results.</p>

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## Education Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>1. Educational Attainment (continued)</p> <p><b>D. Test scores</b></p> <p>1. Reading, math, and science assessment results</p> <p>2. Average SAT scores .....</p> <p><b>E. Rates of progression to post-secondary education</b></p> <p>1. Post-secondary enrollment .....</p>	<p>U.S. Department of Education, No Child Left Behind (<a href="http://www.nochildleftbehind.gov/index.html">www.nochildleftbehind.gov/index.html</a>). Starting with the 2002-03 school year, school districts will publicly report test results.</p> <p>The College Board (<a href="http://www.collegeboard.com">www.collegeboard.com</a>) releases data to states/districts.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p>
<p>2. Funding</p> <p><b>A. Teacher salaries</b></p> <p>1. Mean annual wage: preschool, elementary, middle school, and secondary teachers .....</p> <p><b>B. Facilities</b></p> <p>1. Percent of schools with at least one inadequate building feature.....</p> <p><b>C. Teacher training/support</b></p> <p>1. Professional qualifications of teachers .....</p> <p>2. Percent of expenditures on instructional staff support .....</p> <p><b>D. Fiscal capacity of school district</b></p> <p>1. Expenditures per pupil.....</p> <p>2. Long-term debt outstanding .....</p> <p><b>E. Proportion of funds by source</b></p> <p>1. Revenues by source for public schools .....</p> <p>2. Local government expenditures on education....</p> <p>3. Consumer expenditures on education.....</p>	<p>Bureau of Labor Statistics (<a href="http://stat.bls.gov/oes/home.htm">stat.bls.gov/oes/home.htm</a>). Downloadable Excel files.</p> <p>National Education Association (<a href="http://www.nea.org/lac/modern/modchart.html">www.nea.org/lac/modern/modchart.html</a>). State-level data.</p> <p>U.S. Department of Education, No Child Left Behind (<a href="http://www.nochildleftbehind.gov/index.html">www.nochildleftbehind.gov/index.html</a>). Starting with the 2002-03 school year, school districts will publicly report this information.</p> <p>School District Data Book (<a href="http://www.census.gov/mp/www/rom/msrom6i.html">www.census.gov/mp/www/rom/msrom6i.html</a>). Data on CD-ROM available for purchase.</p> <p>School District Data Book (<a href="http://www.census.gov/mp/www/rom/msrom6i.html">www.census.gov/mp/www/rom/msrom6i.html</a>).</p> <p>School District Data Book (<a href="http://www.census.gov/mp/www/rom/msrom6i.html">www.census.gov/mp/www/rom/msrom6i.html</a>).</p> <p>School District Data Book (<a href="http://www.census.gov/mp/www/rom/msrom6i.html">www.census.gov/mp/www/rom/msrom6i.html</a>).</p> <p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>).</p> <p>See Economic Dimension, Cost of Living, page 8.</p>

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## Education Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>3. Private Schools</p> <p><b>A. Number</b></p> <p>1. Number of private schools .....</p> <p><b>B. Enrollment</b></p> <p>1. Percent of students not enrolled in public school.....</p> <p>2. Enrollment in private schools.....</p>	<p>National Private Schools Association Group (<a href="http://www.npsag.com/database.html">www.npsag.com/database.html</a>). Commercially available database on CD-ROM or diskette.</p> <p>School District Data Book (<a href="http://www.census.gov/mp/www/rom/msrom6i.html">www.census.gov/mp/www/rom/msrom6i.html</a>).</p> <p>National Private Schools Association Group (<a href="http://www.npsag.com/database.html">www.npsag.com/database.html</a>).</p>
<p>4. School Characteristics</p> <p><b>A. Size of schools/classes</b></p> <p>1. Public school enrollment .....</p> <p>2. Mean number of students in primary, middle, and high school.....</p> <p><b>B. Student/teacher ratios</b></p> <p>1. Pupils per teacher .....</p> <p><b>C. Teacher turnover</b></p> <p>1. Rates of teacher turnover.....</p> <p><b>D. Parental attitude/involvement in schools</b></p> <p>1. Percent of households with children aged 0-13 years reporting unsatisfactory public schools in their neighborhood.....</p>	<p>School District Data Book (<a href="http://www.census.gov/mp/www/rom/msrom6i.html">www.census.gov/mp/www/rom/msrom6i.html</a>). National Center for Health Statistics Common Core of Data (CCD) (<a href="http://nces.ed.gov/ccd/ccdata.asp">nces.ed.gov/ccd/ccdata.asp</a>).</p> <p>Characteristics of the 100 Largest Public Elementary and Secondary School Districts in the United States (<a href="http://nces.ed.gov/pubs2001/100_largest/index.asp">nces.ed.gov/pubs2001/100_largest/index.asp</a>).</p> <p>CCD. Downloadable comma-separated-value and Excel data tables for MSAs, counties, districts, and schools can be created with a Build a Table tool (<a href="http://nces.ed.gov/ccd/bat">nces.ed.gov/ccd/bat</a>).</p> <p>Schools and Staffing Survey and Teacher Followup Survey (<a href="http://www.nces.ed.gov">www.nces.ed.gov</a>).</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p>

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## Education Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>4. School Characteristics (continued)</p> <p><b>E. School segregation</b></p> <p>1. Race/ethnicity</p> <p>    a. Enrollment by race/ethnicity.....</p> <p>    b. Exposure of minority students to white students.....</p> <p>2. Economic status</p> <p>    a. Percent of students eligible for free lunch</p> <p><b>F. Curriculum quality</b></p> <p>1. Physical education requirements</p> <p>    a. Mandated requirements for physical education .....</p> <p>2. Health education</p> <p>    a. Health education coordinator in place; health education standards required; curriculum required for accident/injury prevention, alcohol/drug use prevention, consumer health, CPR, death and dying, dental and oral health, emotional and mental health, first aid, growth and development, HIV prevention, immunizations, personal hygiene, suicide prevention, sun safety or skin cancer prevention, tobacco use, and violence prevention. ....</p> <p>3. Nutrition education</p> <p>    a. Nutrition and dietary behavior curriculum required.....</p> <p>4. Sex education</p> <p>    a. Required curricula for human sexuality, pregnancy prevention, and STD prevention</p>	<p>National Center for Education Statistics Common Core of Data (CCD). Downloadable comma-separated-value and Excel data tables for MSAs, counties, districts, and schools can be created with a Build a Table tool (<a href="http://nces.ed.gov/ccd/bat">nces.ed.gov/ccd/bat</a>).</p> <p>Frankenberg, E., C. Lee, and G. Orfield. 2003. A Multiracial Society with Segregated Schools: Are We Losing the Dream? (<a href="http://www.civilrightsproject.harvard.edu/research/reseg03/reseg03_full.php">www.civilrightsproject.harvard.edu/research/reseg03/reseg03_full.php</a>).</p> <p>Can be calculated from data in the School District Data Book (<a href="http://www.census.gov/mp/www/rom/msrom6i.html">www.census.gov/mp/www/rom/msrom6i.html</a>).</p> <p>School Health Policies and Programs Study (<a href="http://www.cdc.gov/nccdphp/dash/shpps/index.htm">www.cdc.gov/nccdphp/dash/shpps/index.htm</a>). Data available in ASCII, SAS, and SPSS formats.</p> <p>School Health Policies and Programs Study (<a href="http://www.cdc.gov/nccdphp/dash/shpps/index.htm">www.cdc.gov/nccdphp/dash/shpps/index.htm</a>).</p> <p>School Health Policies and Programs Study (<a href="http://www.cdc.gov/nccdphp/dash/shpps/index.htm">www.cdc.gov/nccdphp/dash/shpps/index.htm</a>).</p> <p>School Health Policies and Programs Study (<a href="http://www.cdc.gov/nccdphp/dash/shpps/index.htm">www.cdc.gov/nccdphp/dash/shpps/index.htm</a>).</p>

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## Education Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>4. School Characteristics (continued)</p> <p><b>G. Preschool/Kindergarten/Early Intervention</b></p> <p>1. Nursery school, preschool enrollment.....</p> <p><b>H. School-based clinics</b></p> <p>1. Number of school-based health centers .....</p> <p><b>I. Physical environment of school/safety</b></p> <p>1. On school property: availability of drugs; percent of students threatened/injured with a weapon, involved in physical fights, or carrying a weapon; percent of students who do not feel safe on school property; percent of teachers victimized .....</p>	<p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>Center for Health and Health Care in Schools (<a href="http://www.healthinschools.org/home.asp">www.healthinschools.org/home.asp</a>).</p> <p>National Education Goals Panel (<a href="http://www.negp.gov">www.negp.gov</a>).</p>
<p>5. Community Climate</p> <p><b>A. Television viewing</b></p> <p>1. Hours per week of television viewing, by age</p> <p><b>B. Radio stations</b></p> <p>1. Number of radio stations .....</p> <p><b>C. Reading/reading to children</b></p> <p>1. Proportion of households receiving daily newspapers .....</p> <p>2. Number of local newspapers .....</p> <p><b>D. Libraries</b></p> <p>1. Number of libraries; number of library books and serial volumes .....</p>	<p>Nielson Media Research (<a href="http://www.nielsonmedia.com">www.nielsonmedia.com</a>).</p> <p>Gale Directory of Publications and Broadcast Media (<a href="http://galenet.gale.com/a/acp/db/gdpbm">galenet.gale.com/a/acp/db/gdpbm</a>).</p> <p>SRDS Corporation (<a href="http://www.srds.com">www.srds.com</a>).</p> <p>Gale Directory of Publications and Broadcast Media (<a href="http://galenet.gale.com/a/acp/db/gdpbm">galenet.gale.com/a/acp/db/gdpbm</a>).</p> <p>Public Libraries Survey (<a href="http://nces.ed.gov/surveys/libraries">nces.ed.gov/surveys/libraries</a>).</p>

# Political

## Overview

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Aspects of community political participation have been found to be associated with population health status. Davey Smith and Dorling (1996), for example, showed that in England and Wales, mortality rates in electoral constituencies were negatively correlated with Conservative voting patterns and positively correlated with Labour voting. Area deprivation was also negatively associated with Conservative voting but positively associated with Labour voting. The authors concluded that in areas with better material circumstances and more optimal health, voters were more likely to support leadership that favors reducing public assistance programs. In the United States, Blakely and colleagues (2001) studied disparities among states in voting across socioeconomic status groups. Individuals living in states with the highest voting inequality were shown to have increased odds of fair or poor self-rated health relative to those in other states. They reasoned that disproportionate political participation by the more economically well-off skews subsequent policy-making towards their interests, a conclusion supported in the political science literature (Hill and Leighley 1992).

More broadly, political participation has been of recent interest as an indicator of embeddedness in the institutions of civil society. As such, it is considered to be a reflection of social capital within a community (Kawachi 1999). Social capital, measured in several different ways, has been associated with positive health outcomes (Subramanian and Kawachi and Kennedy 2001; Kawachi and Kennedy and Glass 1999a; Kawachi et al. 1997) (see the Psychosocial Dimension, page 51, for further discussion of the social capital concept).

Within the political contextual dimension, we include aspects of political participation such as voting and political party membership, as well as donations to parties and candidates, which are known to influence public policy (Ferguson 1995). Likewise the degree to which elected officials are representative of their areas in terms of gender and race/ethnicity may be an important factor in their responsiveness to constituents' needs (Whitby 1997; Bratton and Haynie 1999). The percent of the local budget devoted to public health investments can be considered an indication of the priority placed on health by the community as well as a measure of available fiscal resources. We also include the number and influence of various politically active community groups.

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## Political Data Sets

This table describes the components and indicators of the political dimension.

Three political components are identified:

1. Civic Participation
2. Political Structure
3. Power Groups

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
<p>1. Civic Participation</p> <p><b>A. Voting</b></p> <p>1. Voting and registration rates</p> <p style="padding-left: 20px;">a. Votes cast for president, by party .....</p> <p style="padding-left: 40px;">b. Percent of persons registered to vote and voting by race/ethnicity .....</p> <p>2. Ease of registration</p> <p style="padding-left: 20px;">a. Voter registration by mail allowed; registration deadline prior to election .....</p> <p>3. Racial/ethnic representativeness of registered voters.....</p> <p><b>B. Census participation</b></p> <p>1. Census response rates.....</p> <p><b>C. Political party membership .....</b></p> <p><b>D. Donations to parties and candidates</b></p> <p>1. Donations to Republican and Democratic candidates, parties, and political action committees.....</p>	<p>USA Counties (<a href="http://www.census.gov/statab/www/county.html">www.census.gov/statab/www/county.html</a>). Data available on CD-ROM; online data for single counties downloadable as text or comma-separated-value file.</p> <p>Census Bureau (<a href="http://www.census.gov/prod/3/98pubs/p20-504u.pdf">www.census.gov/prod/3/98pubs/p20-504u.pdf</a>). State data in PDF.</p> <p>Moving and Relocation Sourcebook and Directory (<a href="http://www.omnigraphics.com">www.omnigraphics.com</a>). Hardcover book available for purchase.</p> <p>See voting and registration rates above.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>See voting and registration rates above.</p> <p>Center for Responsive Politics (<a href="http://www.opensecrets.org">www.opensecrets.org</a>). Contributions for selected metropolitan areas, zip codes, and states.</p>

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## Political Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>2. Political Structure</p> <p><b>A. Gender/racial/ethnic representation in elected office</b></p> <p>1. Women in governing body .....</p> <p>2. Elected officials in local governments by sex, race, and state .....</p> <p>3. Percent of women in statewide elective office</p> <p>4. Blacks in elected office.....</p> <p><b>B. Percent of local budget for public health investments</b></p> <p>1. Expenditures for health and welfare.....</p>	<p>Carpenter, A. 1996. Facts About the Cities. New York: HW Wilson.</p> <p>Census of Governments (www.census.gov/govs/www). From this Web site page, select Census of Governments for 1992; select Vol. 1, No. 2, Popularly Elected Officials. Available in PDF.</p> <p>Center for American Women and Politics (www.rci.rutgers.edu/~cawp).</p> <p>Joint Center for Political and Economic Studies DataBank (www.jointcenter.org/DB/index.htm).</p> <p>Census of Governments (www.census.gov/govs/www). From this Web site page, select year of interest; select Vol. 4, No. 3, Finances of County Governments, or No. 4, Finances of Municipal and Township Governments. Downloadable spreadsheet or comma-separated-value files available.</p>
<p>3. Power Groups</p> <p><b>A. Community organizations</b></p> <p>1. Number and size of organizations: religious, political, civic and social, social advocacy, human rights, environmental and wildlife, business, labor, grant making and giving. ....</p> <p><b>B. Unions</b> .....</p>	<p>County Business Patterns (www.census.gov/epcd/cbp/view/cbp/view/cbpview.html). From this Web site page, select County, State, U.S., ZIP or MSA Database on a NAICS Basis. Select area of interest; in Number of Establishments table select detail for Industry Code 81, Other Services. Data downloadable as text or comma-separated-value tables; CD-ROM also available.</p> <p>See Employment Dimension, Workforce Characteristics, page 15.</p>

# Environmental

## Overview

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The environmental dimension includes physical and chemical components that have known associations with adverse health outcomes—air pollutants (American Lung Association 2001; Pope and Bates and Raizenne 1995); water pollutants (Griffith et al. 1989); and environmental hazards, including hazardous waste (Johnson 1999; Schell 1991), heavy metals (Goldman and Shannon and the American Academy of Pediatrics Committee on Environmental Health 2001; Mendelsohn et al. 1999), pesticides (Blindauer and Jackson and McGeehin 1999; Landrigan et al. 1999), climatic extremes (Greenough et al. 2001; Patz and McGeehin and Bernard 2001), and excessive noise (W. Passchier-Vermeer and W.F. Passchier 2000; Schell 1991). These exposures are known to vary by area and to be disproportionately concentrated among disadvantaged populations (American Lung Association 2001; Brown 1995).

In addition, this contextual dimension encompasses structural features of communities such as physical design of streets, sidewalks, and safety structures that are associated with level of injury risk (Navin and Zein and Felipe 2000; Agran et al. 1996). Aspects of land usage are also considered, such as public spaces and parks that may facilitate greater physical activity levels (French and Story and Jeffery 2001), as are services related to environmental quality like waste disposal and recycling programs.

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## Environmental Data Sets

This table describes the components and indicators of the environmental dimension. Five environmental components are identified:

1. Air Quality
2. Water Quality
3. Environmental Hazards
4. Physical Safety
5. Land Use

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
<p>1. Air Quality</p> <p><b>A. Outdoor</b></p> <ol style="list-style-type: none"> <li>1. Peak air concentration of carbon monoxide, lead, nitrogen dioxide, ozone, and sulfur dioxide; particulate matter air concentration; days Air Quality Index is higher than 100 .....</li> <li>2. Total pounds of air chemicals emitted by industry, by chemical .....</li> </ol> <p><b>B. Indoor</b></p> <ol style="list-style-type: none"> <li>1. Percent of households reporting neighborhood odor to be a problem or bothersome.....</li> </ol>	<p>Environmental Protection Agency (EPA) (<a href="http://www.epa.gov/airtrends">www.epa.gov/airtrends</a>). From this Web site page, select Metropolitan Area Trends; choose Table A-15 for Peak Concentrations or Table A-17 for Air Quality Index. Available in PDF.</p> <p>EPA, Toxics Release Inventory (<a href="http://www.epa.gov/tri">www.epa.gov/tri</a>). From this Web site page, select Get TRI Data; select TRI Explorer; under Chemical Released choose Select a Chemical Group, then Hazardous Air Pollutants; select geographic area of interest, then generate downloadable report.</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p>
<p>2. Water Quality</p> <p><b>A. Number of violations per year for federally regulated drinking water contaminants.....</b></p> <p><b>B. Total pounds of surface water chemicals discharged by industry, by chemical .....</b></p>	<p>EPA (<a href="http://www.epa.gov/safewater/data/pivottables.html#summdetails">www.epa.gov/safewater/data/pivottables.html#summdetails</a>). Downloadable compressed Excel files.</p> <p>EPA, Toxics Release Inventory (<a href="http://www.epa.gov/tri">www.epa.gov/tri</a>). From this Web site page, select Get TRI Data; select TRI Explorer; select report by industry or chemical, choose geographic area of interest, then generate downloadable report.</p>

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## Environmental Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>3. Environmental Hazards</p> <p><b>A. Hazardous waste</b></p> <p>1. Total pounds of chemical waste released by industry, by chemical .....</p> <p><b>B. Heavy metals</b></p> <p>1. Total pounds of selected heavy metals released by industry .....</p> <p><b>C. Pesticides</b></p> <p>1. Total pounds of pesticide chemicals .....</p> <p><b>D. Climate extremes</b></p> <p>1. Maximum and minimum temperatures .....</p> <p><b>E. Noise</b></p> <p>1. Percent of households reporting noise to be a problem or bothersome.....</p>	<p>EPA, Toxics Release Inventory (<a href="http://www.epa.gov/tri">www.epa.gov/tri</a>). From this Web site page, select Get TRI Data; select TRI Explorer; select report by industry or chemical, choose geographic area of interest, then generate downloadable report.</p> <p>EPA, Toxics Release Inventory (<a href="http://www.epa.gov/tri">www.epa.gov/tri</a>). From this Web site page, select Get TRI Data; select TRI Explorer; under Chemical Released choose Select a Chemical Group, then Metals and Metal Compounds; select geographic area of interest, then generate downloadable report.</p> <p>EPA, Toxics Release Inventory (<a href="http://www.epa.gov/tri">www.epa.gov/tri</a>). From this Web site page, select Get TRI Data; select TRI Explorer; select report by industry or chemical, choose geographic area of interest, then generate downloadable report.</p> <p>Statistical Abstract of the United States (<a href="http://www.census.gov/statab/www">www.census.gov/statab/www</a>). From this Web site page, select desired year, then Geography and Environment.</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p>
<p>4. Physical Safety</p> <p><b>A. Traffic</b></p> <p>1. Total miles of local roads; total vehicle miles of local road travel daily.....</p> <p>2. Percent of households perceiving traffic as a problem or bothersome.....</p>	<p>Federal Highway Administration (<a href="http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm">www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm</a>). From this Web site page, select Highway Statistics for desired year; select Roadway Extent, Characteristics, and Performance. Available in PDF and Excel.</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p>

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## Environmental Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>4. Physical Safety (continued)</p> <p><b>B. Street repair</b></p> <p>1. Percent of households reporting major street repair needed in their neighborhood.....</p>	<p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p>
<p>5. Land Use</p> <p><b>A. Public recreational space/number of parks</b></p> <p>1 Expenditures on natural resources, parks, and recreation .....</p> <p><b>B. Waste disposal/dumping/sanitation services</b></p> <p>1. Pounds of waste managed .....</p> <p>2. Percent of households reporting major trash, litter, or junk on streets near their home; reporting neighborhood litter/deterioration to be a problem or bothersome; and reporting poor city or county services in neighborhood</p> <p><b>C. Curbside recycling programs</b></p> <p>1. Pounds of waste transferred to recycling .....</p>	<p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>). From this Web site page, select year of interest; select Vol. 4, No. 3, Finances of County Governments, or No. 4, Finances of Municipal and Township Governments, or select downloadable State and Local Government Finance data.</p> <p>EPA, Toxics Release Inventory (<a href="http://www.epa.gov/tri">www.epa.gov/tri</a>). From this Web site page, select Get TRI Data; select TRI Explorer; select report by industry or chemical, then choose geographic area of interest; then choose waste quantity reports; generate downloadable report.</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>).</p> <p>EPA, Toxics Release Inventory (<a href="http://www.epa.gov/tri">www.epa.gov/tri</a>). From this Web site page, select Get TRI Data; select TRI Explorer; select report by industry or chemical, then choose geographic area of interest; then choose waste quantity reports; generate downloadable report.</p>

# Housing

## Overview

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Associations between housing and health have been studied from several perspectives. Most concretely, physical characteristics of housing have been linked to adverse outcomes. For example, the presence of dampness and mold leads to increased risk of respiratory and other illnesses (Platt et al. 1989; Packer and Stewart-Brown and Fowle 1994). Dilapidated and abandoned housing in the local area increases the risk of accidental injury among residents (Gielen et al. 1995), is associated with increased emotional stress (Ellaway and Macintyre 2000), and may provide situational opportunities for high-risk behaviors (Cohen et al. 2000). Population density and overcrowding have also been associated with increased chances of contracting infections and sustaining injury (Agran et al. 1996; Acevedo-Garcia 2000).

Home ownership has been associated with reduced morbidity and mortality risk (Filakti and Fox 1995; O'Campo et al. 1997). In most cases this housing variable is regarded as a marker for general material well-being. It has been suggested, however, that long-term exposure to specific health promoting or damaging characteristics of housing itself is likely to account for some of the observed health effects (Macintyre et al. 1998; Ellaway and Macintyre 1998).

There is also some evidence that poor housing conditions during childhood can adversely affect health in later life. For example, Barker and colleagues (1990) found an association between domestic crowding during childhood and later stomach cancer mortality rates, suggesting that overcrowding may promote the transmission of causative organisms among children that exert negative health effects later in life. Similarly, Dedman et al. (2001) noted aspects of poorer childhood housing conditions were associated with increased mortality risk from common diseases in adulthood.

Our consultants suggested that we include these characteristics of housing in our framework, as well as other aspects of residential patterns within communities. Homelessness, for example, has known associations with differentially poorer health (Barrow et al. 1999; Hwang 2001). Segregation by race has been associated with adverse health outcomes among blacks (Williams and Collins 2001; Jackson et al. 2000), as well as among whites in some cases (Collins and Williams 1999). Similarly, concentration of poverty has been found to be associated with elevated mortality risk (Waitzman and Smith 1998a).

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We also include two other components within the housing dimension. Regulations such as zoning and industrial/residential segregation can affect the degree to which residential areas are exposed to industrial pollution and other health threats such as increased traffic. Financial issues specific to housing, such as housing costs, the availability and characteristics of low-income housing, mortgage lending practices, and community reinvestment initiatives are also considered.

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# Housing Data Sets

This table describes the components and indicators of the housing dimension.

Four housing components are identified:

1. Housing Stock
2. Residential Patterns
3. Regulation
4. Financial Issues

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
<p>1. Housing Stock</p> <p><b>A. Age</b></p> <ol style="list-style-type: none"> <li>1. Median age of housing units .....</li> <li>2. New private housing units authorized by building permits as a percent of housing stock</li> </ol> <p><b>B. Scarcity</b></p> <ol style="list-style-type: none"> <li>1. Percent of housing units vacant.....</li> </ol> <p><b>C. Value</b></p> <ol style="list-style-type: none"> <li>1. Median value, owner-occupied housing units....</li> <li>2. Median sales price of existing homes.....</li> <li>4. Valuation of residential construction .....</li> </ol> <p><b>D. Characteristics</b></p> <ol style="list-style-type: none"> <li>1. Percent of housing units lacking complete kitchen facilities, complete plumbing facilities, and/or telephone .....</li> <li>2. Percent of households reporting 1 or more vandalized buildings in neighborhood; percent of households with best/worst opinion of their neighborhood (10 point scale).....</li> </ol> <p><b>E. Gentrification/gatedness</b></p> <ol style="list-style-type: none"> <li>1. Percent of home loans to high-income borrowers made in low-income areas of central cities.....</li> </ol> <p><b>F. Rental vs. owner occupied</b></p> <ol style="list-style-type: none"> <li>1. Percent of occupied housing units that are owner occupied.....</li> </ol>	<p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <ol style="list-style-type: none"> <li>1. State and Metropolitan Area Data Book (<a href="http://www.census.gov/statab/www/smadb.html">www.census.gov/statab/www/smadb.html</a>).</li> <li>2. State of the Nation's Housing (<a href="http://www.jchs.harvard.edu">www.jchs.harvard.edu</a>). From Web site page, choose publications, then most recent edition.</li> </ol> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>State of the Nation's Housing (<a href="http://www.jchs.harvard.edu">www.jchs.harvard.edu</a>). From Web site page, choose publications, then most recent edition.</p> <p>See Economic Dimension, Fiscal Capacity, page 10.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p> <p>State of the Nation's Housing (<a href="http://www.jchs.harvard.edu">www.jchs.harvard.edu</a>). From Web site page, choose publications, then most recent edition.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p>

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## Housing Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>2. Residential Patterns</p> <p><b>A. Homelessness</b></p> <p>1. Estimated homeless population .....</p> <p><b>B. Number of institutional facilities</b></p> <p>1. Number of homeless shelter beds; number of months wait for public housing and Section 8 vouchers .....</p> <p><b>C. Segregation</b></p> <p>1. Racial/ethnic</p> <p>a. Indices of Dissimilarity, Isolation, Delta, Absolute Centralization, and Spatial Proximity .....</p> <p>2. Economic .....</p> <p><b>D. Vacancy rates</b></p> <p>1. Percent of housing units vacant .....</p> <p><b>E. Crowded housing</b></p> <p>1. Mean number of persons per room .....</p> <p><b>F. Population density</b></p> <p>1. Persons per square mile .....</p>	<p>U.S. Conference of Mayors (<a href="http://usmayors.org/uscm/home.asp">usmayors.org/uscm/home.asp</a>). From this Web site page, select Hunger and Homelessness from Reports and Publications.</p> <p>U.S. Conference of Mayors (<a href="http://usmayors.org/uscm/home.asp">usmayors.org/uscm/home.asp</a>).</p> <p>Iceland J., D. H. Weinberg, and E. Steinmetz. Racial and Ethnic Residential Segregation in the United States: 1980-2000. Census 2000 Special Report (<a href="http://landview.census.gov/hhes/www/housing/resseg/pdfdoc.html">landview.census.gov/hhes/www/housing/resseg/pdfdoc.html</a>).</p> <p>See Economic Dimension, Income, page 6.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p>
<p>3. Regulation</p> <p><b>A. Zoning policies</b></p> <p>1. Percent of households perceiving undesirable commercial, institutional, or industrial use as a problem or bothersome .....</p> <p><b>B. Industrial/residential segregation</b></p> <p>1. Segregation indices for blacks, whites and Hispanics from high employment and hazardous manufacturing industries .....</p>	<p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p> <p>Anderton D. L., and K. L. Egan. Industrial and Residential Segregation: Employment Opportunities and Environmental Burdens in Metropolitan Areas. (<a href="http://www.umass.edu/sadri/papers/wp20002.pdf">www.umass.edu/sadri/papers/wp20002.pdf</a>).</p>

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## Housing Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>4. Financial Issues</p> <p><b>A. Housing costs</b></p> <p>1. Cost of living index, housing and utilities; average 950 sq ft apartment rent, 2400 sq ft new home price, house payment, monthly energy costs .....</p> <p>2. Basic family budgetary need for housing.....</p> <p>3. Consumer expenditures on housing .....</p> <p>4. Percent of income spent on mortgage/rent.....</p> <p>5. Median gross rent as a percent of household income .....</p> <p><b>B. Low-income housing</b></p> <p>1. Percent of total housing</p> <p>a. Percentage of households receiving federal housing assistance .....</p> <p>b. Percent of home loans to low-income borrowers.....</p> <p>2. Ratio of low-income units to low-income workers.</p> <p>a. Ratio of low-rent units and Section 8 units to low-income families .....</p> <p><b>C. Mortgage lending practices by race/ethnicity</b></p> <p>1. Share of all home loans made to minority borrowers.....</p> <p>2. Home loan denial rates by race .....</p> <p><b>D. Community reinvestment initiatives</b></p> <p>1. Expenditures for housing and community development .....</p>	<p>American Chamber of Commerce Researchers Association (<a href="http://www.acra.org">www.acra.org</a>). Quarterly and annual average data may be purchased as downloadable spreadsheet or hardcopy.</p> <p>Economic Policy Institute: Hardships in America (<a href="http://epinet.org">epinet.org</a>). From this Web site page, choose Basic Family Budget Calculator; select a metropolitan area of interest or download budget tables for all areas in Excel.</p> <p>Bureau of Labor Statistics (BLS) (<a href="http://www.bls.gov">www.bls.gov</a>). From this Web site page, select Consumer Expenditures; select Tables Created by BLS; select current MSA tables grouped by region in text format or PDF.</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p> <p>State of the Nation's Housing (<a href="http://www.jchs.harvard.edu">www.jchs.harvard.edu</a>).</p> <p>Can be calculated from Housing Authority Profile data on low-rent units (<a href="http://www.hud.gov">www.hud.gov</a>) and census data.</p> <p>State of the Nation's Housing (<a href="http://www.jchs.harvard.edu">www.jchs.harvard.edu</a>).</p> <p>See Economy, Financial Services, page 8.</p> <p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>). From this Web site page, select State and Local Government Finances; select year of interest. Downloadable spreadsheet or comma-separated-value files.</p>

# Medical

## Overview

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Health care services are generally considered to be an important determinant of health status (Andrulis 1998; Frenk 1998), although the degree to which medical care impacts health status over and above social and economic conditions has been the subject of considerable controversy (Pincus et al. 1998; McKeown 1979). The medical contextual dimension encompasses a range of health care services, including primary care, specialty care, emergency services, home health care, emergency services, mental health services, long-term care, oral health care, and alternative care.

We also look specifically at aspects of access to health care services, which is related to health status and known to vary among population groups (USDHHS 2000). Some of the factors included, such as insurance coverage and the availability of indigent care, are well-known determinants of access (Baker and Shapiro and Schur 2000; Newacheck et al. 1998; Nelson et al. 1999). The racial/ethnic makeup of medical staff in relation to the patient population and the cultural competence of providers and institutions may also be important in encouraging utilization of health care resources that are present in an area (Flores et al. 1998; Langer 1999). In addition to traditional measures of access, we also include rates of hospitalization for ambulatory care sensitive conditions. These are conditions considered to be manageable on an outpatient basis, given access to high-quality primary care, and therefore higher hospitalization rates can be used as an indicator of poorer access to appropriate care (Institute of Medicine 1993).

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## Medical Data Sets

This table describes the components and indicators of the medical dimension.

Eight medical components are identified:

1. Primary Care
2. Specialty Care
3. Emergency Services
4. Home Health Care Services
5. Mental Health Care
6. Long-Term Care
7. Oral Health Care
8. Access to/Utilization of Care

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
<p>1. Primary Care</p> <p><b>A. Number of providers</b></p> <ol style="list-style-type: none"> <li>1. Total number of nonfederal MD/DOs in primary care, family practice, general practice, internal medicine, ob/gyn, and pediatric primary care practice.....</li> </ol> <p><b>B. Provider training/competence/certification</b></p> <ol style="list-style-type: none"> <li>1. Nonfederal physicians in primary care who are foreign medical graduates and who are board certified; hospital-associated medical staff who are board certified .....</li> </ol> <p><b>C. Medicaid/Medicare reimbursement levels</b></p> <ol style="list-style-type: none"> <li>1. Medicaid reimbursement rates for various medical services, including preventive care visits, immunization, critical care, emergency care, and surgery .....</li> <li>2. Age, sex, race, illness, and price-adjusted reimbursements for noncapitated Medicare per enrollee .....</li> </ol>	<p>American Medical Association Physicians Professional Data, Medical Marketing Service (<a href="http://www.mmslists.com/main.asp">www.mmslists.com/main.asp</a>). Custom data tables in Excel may be purchased.</p> <p>Area Resource File (<a href="http://www.arfsys.com">www.arfsys.com</a>). Data available for purchase on CD-ROM, magnetic tape, and cartridge.</p> <p>American Academy of Pediatrics: Medicaid Reimbursement Survey (<a href="http://www.aap.org/research/medreimPDF01/all_states.PDF">www.aap.org/research/medreimPDF01/all_states.PDF</a>).</p> <p>Dartmouth Atlas of Health Care (<a href="http://www.dartmouthatlas.org">www.dartmouthatlas.org</a>). Downloadable Excel files.</p>

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## Medical Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>2. Specialty Care</p> <p><b>A. Number of providers</b></p> <p>1. Total number of nonfederal MD/DOs in medical and surgical specialty office practice .....</p> <p><b>B. Provider training/competence/certification</b></p> <p>1. Nonfederal physicians in specialty care who are foreign medical graduates, and who are board certified; hospital-associated medical staff who are board certified .....</p>	<p>American Medical Association Physicians Professional data Medical Marketing Service (<a href="http://www.mmslists.com/main.asp">www.mmslists.com/main.asp</a>). Custom data tables in Excel may be purchased.</p> <p>Area Resource File (<a href="http://www.arfsys.com">www.arfsys.com</a>).</p>
<p>3. Emergency Services</p> <p><b>A. Number of nonfederal physicians in emergency medicine patient care; number of hospitals with emergency departments .....</b></p>	<p>Area Resource File (<a href="http://www.arfsys.com">www.arfsys.com</a>).</p>
<p>4. Home Health Care Services</p> <p><b>A. Number of hospitals with home health services.....</b></p>	<p>Area Resource File (<a href="http://www.arfsys.com">www.arfsys.com</a>).</p>
<p>5. Mental Health Care</p> <p><b>A. Total number of nonfederal physicians in psychiatric, office-based patient care; number of hospitals with psychiatric emergency, outpatient, emergency social work, and outpatient social work services</b></p>	<p>Area Resource File (<a href="http://www.arfsys.com">www.arfsys.com</a>).</p>
<p>6. Long-Term Care</p> <p><b>A. Number of nursing and board-and-care homes and beds; number of long-term hospitals and beds .....</b></p>	<p>Area Resource File (<a href="http://www.arfsys.com">www.arfsys.com</a>).</p>
<p>7. Oral Health Care</p> <p><b>A. Total number of active dentists in private practice.....</b></p>	<p>Area Resource File (<a href="http://www.arfsys.com">www.arfsys.com</a>).</p>

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## Medical Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>8. Access to/Utilization of Care</p> <p><b>A. Insurance coverage</b></p> <p>1. Percent of persons aged 0-64 years who are uninsured, have job-based insurance, have no usual care source, and who delayed or went without needed care.....</p> <p><b>B. Race/ethnicity staff-to-population ratios</b></p> <p>1. Race/ethnicity staff-to-population ratios for primary care family practice, general practice, pediatric practice, internal medicine, ob/gyn, and medical and surgical subspecialties.....</p> <p><b>C. Provision of care in total and indigent care</b></p> <p>1. Number of short-term general hospital admissions and emergency hospital outpatient visits .....</p> <p><b>D. Costs of care</b></p> <p>1. Average cost of routine MD visit, hospital room.....</p> <p>2. Consumer expenditures on health care</p> <p><b>E. Rates of ambulatory care sensitive hospitalizations</b></p> <p>1. Rates of ambulatory care sensitive hospitalizations per 1,000 Medicare enrollees .....</p>	<p>Brown, E. R., R. Wyn, and S. Teleki. 2000. Disparities in Health Insurance and Access to Care for Residents Across U.S. Cities. (<a href="http://www.cmwf.org/programs/insurance/Brown85MSAsreport.pdf">www.cmwf.org/programs/insurance/Brown85MSAsreport.pdf</a>).</p> <p>Can be calculated from American Medical Association Physicians Professional Data, Medical Marketing Service (<a href="http://www.mmslists.com">www.mmslists.com</a>) and census data.</p> <p>Area Resource File (<a href="http://www.arfsys.com">www.arfsys.com</a>).</p> <p>American Chamber of Commerce Researchers Association (<a href="http://www.accra.org">www.accra.org</a>). Quarterly and annual average data may be purchased as downloadable spreadsheet or hardcopy.</p> <p>Bureau of Labor Statistics (BLS) (<a href="http://www.bls.gov">www.bls.gov</a>). From this Web site page, select Consumer Expenditures; select Tables Created by BLS; select current MSA tables grouped by region in text format or PDF.</p> <p>Dartmouth Atlas of Health Care (<a href="http://www.dartmouthatlas.org">www.dartmouthatlas.org</a>).</p>

# Governmental

## Overview

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Within this dimension, we consider characteristics and functioning of local area governments. Levels of funding are assessed, as well as the relative contributions from various revenue sources. Policies and legislation that have potential health effects, such as obstacles to unionization and living wage or minimum wage ordinances and employer requirements for provision of health benefits, are included. The nature and quality of local governmental services are also considered.

Another aspect of local governance with potential health relevance concerns the degree to which there is municipal fragmentation. This term refers to a situation in which large numbers of smaller governmental entities exist within a metropolitan area. It has been argued that in cases where there are high levels of municipal fragmentation and no single government empowered to act for the good of the entire region, a host of problems result, including resource and public service imbalances within the area and the protection of privilege (Mitchell-Weaver and Miller and Deal 2000; Ross and Levine 1996).

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## Governmental Data Sets

This table describes the components and indicators of the governmental dimension. Four governmental components are identified.

1. Funding
2. Policy/Legislation
3. Services
4. Municipal Fragmentation (number of subunit governments within a metro area)

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
<p>1. Funding</p> <p><b>A. Revenue</b></p> <p>1. Intergovernmental</p> <p style="padding-left: 20px;">a. Revenue from federal, state, and local government sources.....</p> <p>2. Taxes</p> <p style="padding-left: 20px;">a. Revenue from all taxes, property, income, and sales taxes .....</p> <p>3. Lottery</p> <p style="padding-left: 20px;">a. Revenue from lottery.....</p> <p><b>B. Debt</b></p> <p>1. Total debt outstanding.....</p>	<p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>). From this Web site page, select year of interest; select Vol. 4, No. 3, Finances of County Governments, or No. 4, Finances of Municipal and Township Governments. Downloadable spreadsheet or comma-separated-value files available.</p> <p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>). From this Web site page, select State and Local Government Finances; select year of interest. Downloadable spreadsheet or comma-separated-value files.</p> <p>Christiansen Capital Advisors (<a href="http://www.cca-i.com">www.cca-i.com</a>). From this Web site page, select Research; select Lottery Data. Excel files available for purchase.</p> <p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>). From this Web site page, select year of interest; select Vol. 4, No. 3, Finances of County Governments, or No. 4, Finances of Municipal and Township Governments. Downloadable spreadsheet or comma-separated-value files available.</p>

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## Governmental Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>2. Policy/Legislation</p> <p><b>A. Obstacles to unionization .....</b></p> <p><b>B. Living wage/minimum wage ordinances</b></p> <p>1. Living wage laws enacted.....</p> <p>2. Minimum wage rate .....</p>	<p>See Employment, Workforce Characteristics, page 15.</p> <p>ACORN Living Wage Resource Center (<a href="http://www.acorn.org">www.acorn.org</a>). From this Web site page, select Living Wage; select List of Cities and Counties Where Living Wage Ordinances Have Been Passed.</p> <p>U.S. Department of Labor (<a href="http://www.dol.gov/esa/minwage/america.htm">www.dol.gov/esa/minwage/america.htm</a>). Interactive map providing details of state minimum wage rates.</p>
<p>3. Services</p> <p><b>A. Privatization</b></p> <p>1. Number of state programs and services privatized.....</p> <p><b>B. Local services/safety net resources</b></p> <p>1. Percent of households reporting poor levels of city or county services and reporting poor levels of police protection in their neighborhood.....</p> <p>2. Expenditures on public welfare, health and hospitals, police and fire protection, parks and recreation, sewerage and solid waste management .....</p>	<p>Reason Public Policy Institute Privatization Center (<a href="http://www.privatization.org">www.privatization.org</a>). From this Web site page, select Privatization Database; select Statistics and Trends. Results of surveys on number of programs and services privatized by state.</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p> <p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>). From this Web site page, select year of interest; select Vol. 4, No. 3, Finances of County Governments, or No. 4, Finances of Municipal and Township Governments. Downloadable spreadsheet or comma-separated-value files available.</p>
<p>4. Municipal fragmentation</p> <p><b>A. Number of local governments .....</b></p> <p><b>B. Metropolitan power diffusion index .....</b></p>	<p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>). From this Web site page, select year of interest; select Vol. 1, No. 1, Government Organization, or downloadable spreadsheet or comma-separated-value files.</p> <p>Mitchell-Weaver, C., D. Miller, and R. Deal. 2000. Multilevel Governance and Metropolitan Regionalism in the U.S.A. <i>Urban Studies</i> 37(5-6):851-76.</p>

# Public Health

## Overview

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This dimension includes assessment of the implementation of core public health functions of assessment, policy development, and assurance at the local level (Turnlock and Handler 1997; Institute of Medicine 1988). We focus on three primary areas of interest. First, there are a variety of programs aimed at prevention, early detection, and optimal management of a range of health problems. Local public health departments may provide these services directly or oversee their implementation by other organizations, both governmental and private sector. The next category concerns development, regulation, and enforcement of standards, which has become a salient issue because provision of traditional public health services is increasingly being privatized (Beauchamp 1997). Thirdly, funding issues including budget allocations and financial arrangements for service provision are of interest in gauging the priority given to public health issues in the community.

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## Public Health Data Sets

This table describes the components and indicators of the public health dimension. Three public health components are identified:

1. Programs
2. Regulation/Enforcement
3. Funding

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
<p>1. Programs</p> <p><b>A. Screening</b> .....</p> <p><b>B. Nutrition</b> .....</p> <p><b>C. Family planning</b>.....</p> <p><b>D. Chronic disease control</b>.....</p> <p><b>E. Home visiting</b> .....</p> <p><b>F. Outreach</b> .....</p> <p><b>G. School-based clinics/education</b>.....</p> <p><b>H. Substance abuse prevention</b> .....</p> <p><b>I. Domestic violence program</b> .....</p> <p><b>J. Mental health services</b> .....</p> <p><b>K. Immunization</b></p> <p>    1. Percent of children aged 19-35 months completely immunized, by race/ethnicity</p>	<p>Local Health Department Infrastructure Study (<a href="http://www.sscnet.ucla.edu/issr/da/index/techinfo/i31851.htm">www.sscnet.ucla.edu/issr/da/index/techinfo/i31851.htm</a>). This survey addressed the paucity of current data on the U.S. public health infrastructure. Respondents' state identification only obtainable if user agrees to terms and conditions of a Restricted Data Use Agreement. Data available through the Inter-University Consortium for Political and Social Research; Stata file.</p> <p>National Immunization Program (<a href="http://www.cdc.gov/nip/coverage/default.htm">www.cdc.gov/nip/coverage/default.htm</a>). From this Web site page, select National Immunization Survey (NIS); select NIS Data Tables; downloadable tables in Excel or HTML for states and select counties.</p>
<p>2. Regulation/Enforcement</p> <p><b>A. Sanitation</b> .....</p> <p><b>B. Health/food inspection</b> .....</p> <p><b>C. Health violations</b>.....</p>	<p>Local Health Department Infrastructure Study (<a href="http://www.sscnet.ucla.edu/issr/da/index/techinfo/i31851.htm">www.sscnet.ucla.edu/issr/da/index/techinfo/i31851.htm</a>).</p>

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## Public Health Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>3. Funding</p> <p><b>A. Budget allocations</b></p> <p>1. Local health department expenditures.....</p> <p>2. Governmental expenditures on health.....</p> <p><b>B. Private sector provision of public health services</b></p> <p>1. Percent of total local health department budget from private sources .....</p>	<p>Local Health Department Infrastructure Study (<a href="http://www.sscnet.ucla.edu/issr/da/index/techinfo/i31851.htm">www.sscnet.ucla.edu/issr/da/index/techinfo/i31851.htm</a>).</p> <p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>). From this Web site page, select year of interest; select Vol. 4, No. 3, Finances of County Governments, or No. 4, Finances of Municipal and Township Governments. Downloadable spreadsheet or comma-separated-value files available.</p> <p>Local Health Department Infrastructure Study (<a href="http://www.sscnet.ucla.edu/issr/da/index/techinfo/i31851.htm">www.sscnet.ucla.edu/issr/da/index/techinfo/i31851.htm</a>).</p>

# Psychosocial

## Overview

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There has been longstanding scientific interest in the organization of social life and the implications of interpersonal and group interactions for emotional and physical health status (House and Landis and Umberson 1988; Yen and Syme 1999). Research in the 1970s on social support suggested a health-enhancing role for social relationships in buffering the ill effects of stress (Cassel 1976), and subsequent studies confirmed an inverse relationship between social relationships and mortality risk (House and Robbins and Metzner 1982; Schoenbach et al. 1986).

More recently, aspects of social interactions and relationships have been increasingly conceptualized as forms of social capital, although there is widespread disagreement about the meaning of the term and the level of aggregation at which it operates (Lynch et al. 2000b; Woolcock 2001). Portes (1998) defines social capital as “the ability of actors to secure benefits by virtue of membership in social networks or other social structures.” Coleman (1988) sees social capital as a resource for organizations as well as individuals: “Social capital is defined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors—whether persons or corporate actors—within the structure. Like other forms of capital, social capital is productive, making possible the achievement of certain ends that in its absence would not be possible.” Putnam et al. (1993) considers social capital broadly as “features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions.”

Social capital has been operationalized in different ways in health-related empirical research. Per capita membership in groups and associations has been used to assess civic engagement (Kawachi et al. 1997; Kawachi and Kennedy and Glass 1999a), as has political participation (Blakely and Kennedy and Kawachi 2001). Several studies have considered greater mistrust to be indicative of lower levels of social capital (Kawachi et al. 1997; Kawachi and Kennedy and Glass 1999a; Subramanian and Kawachi and Kennedy 2001). Mistrust is generally defined as the percent of persons in an area who agree with the second part of the following question: “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?”

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A related indicator is perceived lack of fairness, indexed by the percent of persons who agree that “most people would try to take advantage of you if they got the chance” (Kawachi et al. 1997). Perceived helpfulness/reciprocity has also been used as a gauge of social capital, based on answers to the question, “Would you say that most of the time people try to be helpful, or are they mostly looking out for themselves?” (Kawachi et al. 1997). It has also been hypothesized that crime level is an indicator of collective well-being that is influenced by the degree of cohesiveness in social relations or social capital (Sampson and Raudenbush and Earls 1997; Kawachi and Kennedy and Wilkinson 1999b).

Within the psychosocial dimension, we include theorized aspects of social capital such as civic engagement via political participation, membership in voluntary organizations and unions, and charitable giving. Crime as a marker for social cohesion is assessed through expenditures on jails and incarceration rates. Collection of information on lawsuits and the presence and utilization of protective services was also suggested as an indicator of the level of trust in communities.

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## Psychosocial Data Sets

This table describes the components and indicators of the psychosocial dimension. Seven psychosocial components are identified:

1. Political
2. Volunteer Organizations
3. Union Participation
4. Charitable Giving
5. Jails
6. Lawsuits
7. Protective Services

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
1. Political <b>A. Contributions to parties, candidates</b> <b>B. Women in elected office .....</b> <b>C. Registered voters .....</b>	See Political Dimension, Civic Participation, page 26. See Political Dimension, Political Structure, page 27. See Political Dimension, Civic Participation, page 26.
2. Volunteer Organizations <b>A. Types/functions</b> 1. Number of churches, total and by denomination .....	<i>Religious Congregations and Membership in the United States: 2000</i> (www.glenmary.org/grc/default.htm). Regional, state, and county data based on reporting from 149 religious bodies. Available for purchase as CD-ROM and hardcopy.
<b>B. Number of members</b> 1. Number of church members and church adherents, total and by denomination..... 2. Number and size of membership organizations, including churches and political and civic organizations.....	<i>Religious Congregations and Membership in the United States: 2000</i> (www.glenmary.org/grc/default.htm).  See Political Dimension, Power Groups, page 27.
3. Union Participation	See Employment Dimension, Workforce Characteristics, page 15.
4. Charitable Giving 1. Average charitable contribution per itemized income tax return; number of public charitable organizations by type of charity; monetary public support for public charitable organizations by type of charity.....	National Center for Charitable Statistics (nccsdataweb.urban.org/NCCS/Public). Data from the Internal Revenue Service and other sources; dataweb in development that will allow data viewing, extraction, and downloading.

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## Psychosocial Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>5. Jails</p> <p><b>A. Expenditures</b></p> <p>1. State and local justice system expenditures.....</p> <p>2. Corrections expenditures.....</p> <p><b>B. Incarceration rates</b></p> <p>1. Average daily population in local jails; state prison incarceration rates .....</p> <p>2. Confined jail inmates by race, as a percent of total race specific population</p> <p><b>C. Crime</b></p> <p>1. Number of serious crimes known to police .....</p>	<p>Sourcebook of Criminal Justice Statistics (<a href="http://www.albany.edu/sourcebook">www.albany.edu/sourcebook</a>). Data available online and in CD-ROM and print format.</p> <p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>). From this Web site page, select year of interest; select Vol. 4, No. 3, Finances of County Governments, or No. 4, Finances of Municipal and Township Governments. Downloadable spreadsheet or comma-separated-value files available.</p> <p>Bureau of Justice Statistics, Prison and Jail Inmates at Midyear (<a href="http://www.ojp.usdoj.gov/bjs/pubalp2.htm">www.ojp.usdoj.gov/bjs/pubalp2.htm</a>). PDF, ASCII, and spreadsheet files available for download.</p> <p>Can be calculated from Bureau of Justice Statistics and census data.</p> <p>U.S. Counties (<a href="http://www.census.gov/statab/www/county.html">www.census.gov/statab/www/county.html</a>). Data available on CD-ROM; online data for single counties downloadable as text or comma-separated-value file.</p>
<p>6. Lawsuits</p> <p><b>A. Civil lawsuits</b></p> <p>1. Number of tort trials.....</p>	<p>Bureau of Justice Statistics: Tort Trials and Verdicts in Large Counties (<a href="http://www.ojp.usdoj.gov/bjs/pubalp2.htm">www.ojp.usdoj.gov/bjs/pubalp2.htm</a>). PDF, ASCII, and spreadsheet files available for download.</p>
<p>7. Protective Services</p> <p><b>A. Government services</b></p> <p>1. Police protection expenditures .....</p> <p>2. Percent of households reporting poor levels of police protection in their neighborhood.....</p>	<p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>). From this Web site page, select year of interest; select Vol. 4, No. 3, Finances of County Governments, or No. 4, Finances of Municipal and Township Governments. Downloadable spreadsheet or comma-separated-value files available.</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p>



# Behavioral

## Overview

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As mentioned earlier, there has been increasing recognition that aspects of social, physical, and cultural context can affect health status in a community by facilitating or inhibiting behaviors that impact well-being (Macintyre and Ellaway and Cummins 2002). We focus on behavior areas that are among the nation's leading health indicators and that have been repeatedly cited as major determinants of premature morbidity and mortality—tobacco use, physical activity, diet/obesity, alcohol and illicit drug use, and violence (USDHHS 2000; McGinnis and Foege 1998; Wilson 1994).

For each of these behaviors, we examine specific characteristics of communities that might influence the degree to which they will be adopted by residents. In the case of tobacco use, these characteristics include current smoking rates, the presence of cessation and preventive education programs, workplace smoking restrictions, the cost and accessibility of cigarettes, and targeted advertising. In the area of physical activity, we include reported activity levels, physical education requirements in schools, participation in local sports and recreational activities, as well as availability of exercise facilities in the workplace and in the area more generally. We also consider indicators of sedentary activities such as television viewing patterns and video game sales and use. Regarding diet and obesity, we look at consumption patterns of healthy foods such as fruit and vegetables as well as high-fat and high-sugar foods. The quality, availability, and cost of a range of different foods is of interest, as is the availability of generally less nutritious “fast food” as indexed by the number of such establishments in the area. We also include aspects of nutrition in the schools, including the prevalence of subcontracting to vendors of non-nutritious items and the presence of nutrition education programs. In the area of alcohol and illicit drug use, we consider availability as indicated by the number of liquor stores, as well as marketing laws and the nature of public advertising. We also include drug and alcohol treatment service availability and the presence of syringe laws and exchange programs. Violence in the community is indicated by factors such as the availability of guns and the level of exposure to violence perceived by residents.

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## Behavioral Data Sets

This table describes the components and indicators of the behavioral dimension. Five behavioral components are identified:

1. Tobacco Use
2. Physical Activity
3. Diet/Obesity
4. Alcohol and Illicit Drug Use
5. Violence

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
<p>1. Tobacco Use</p> <p><b>A. Smoking rates</b></p> <ol style="list-style-type: none"> <li>1. Rate of ever smoking; number of cigarettes smoked per day; current smoking rates among adults .....</li> <li>2. Current smoking rates among children in grades 6-8 and 9-12 .....</li> </ol> <p><b>B. Cessation programs</b></p> <ol style="list-style-type: none"> <li>1. Directory of local smoking cessation programs .....</li> </ol> <p><b>C. Smoking prevention</b></p> <ol style="list-style-type: none"> <li>1. Tobacco control funding .....</li> </ol> <p><b>D. Workplace/public space smoking restriction laws</b></p> <ol style="list-style-type: none"> <li>1. Workplace smoking policies .....</li> <li>2. Smoking restrictions: government and private workplaces, restaurants, child day care, bars, malls, grocery stores, enclosed arenas, public transportation, hospitals, prisons, hotels, and motels .....</li> </ol> <p><b>E. Cost/accessibility of cigarettes</b></p> <ol style="list-style-type: none"> <li>1. Cigarette tax.....</li> <li>2. Average local price of cigarettes .....</li> </ol>	<p>Behavioral Risk Factor Surveillance System (<a href="http://www.cdc.gov/brfss">www.cdc.gov/brfss</a>). Data for states available in Rich Text Format and SAS format. Estimates for Metropolitan Areas are available in the SMART BRFSS.</p> <p>National Tobacco Control Program State Exchange (<a href="http://www.cdc.gov/tobacco/ntcp_exchange/index.htm">www.cdc.gov/tobacco/ntcp_exchange/index.htm</a>). This Web site page has links to state information.</p> <p>Quitnet National Directory (<a href="http://www.quitnet.com/library/programs">www.quitnet.com/library/programs</a>).</p> <p>National Tobacco Control Program State Exchange (<a href="http://www.cdc.gov/tobacco/ntcp_exchange/index.htm">www.cdc.gov/tobacco/ntcp_exchange/index.htm</a>).</p> <p>Behavioral Risk Factor Surveillance System (<a href="http://www.cdc.gov/brfss">www.cdc.gov/brfss</a>).</p> <p>National Tobacco Control Program State Exchange (<a href="http://www.cdc.gov/tobacco/ntcp_exchange/index.htm">www.cdc.gov/tobacco/ntcp_exchange/index.htm</a>).</p> <p>See Economic Dimension, Redistribution (Taxes), page 9.</p> <p>See Economic Dimension, Cost of Living, page 8.</p>

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## Behavioral Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>2. Physical Activity</p> <p><b>A. Physical activity levels</b></p> <p>1. Type, frequency, and duration of physical activity.....</p> <p><b>B. Physical education requirements in schools.....</b></p> <p><b>C. Public and private recreational facilities</b></p> <p>1. Expenditures on natural resources, parks, and recreation.....</p> <p><b>D. Television viewing patterns .....</b></p>	<p>Behavioral Risk Factor Surveillance System (www.cdc.gov/brfss).</p> <p>See Education Dimension, School Characteristics, page 22.</p> <p>Census of Governments (www.census.gov/govs/www). From this Web site page, select year of interest; select Vol. 4, No. 3, Finances of County Governments, or No. 4, Finances of Municipal and Township Governments. Downloadable spreadsheet or comma-separated-value files available.</p> <p>See Education Dimension, Community Climate, page 24.</p>
<p>3. Diet/Obesity</p> <p><b>A. Fresh fruit and vegetable consumption</b></p> <p>1. Food intake history .....</p> <p><b>B. High-fat, high-sugar food consumption</b></p> <p>1. Food intake history .....</p> <p><b>C. Food quality/availability</b></p> <p>1. Number of supermarkets, convenience stores.....</p> <p>2. Percent of food sales that are supermarket sales.....</p> <p>3. Percent of households reporting unsatisfactory shopping in their neighborhood.....</p> <p><b>D. Number of fast food establishments</b></p> <p>1. Number of fast food restaurants.....</p> <p><b>E. School nutrition</b></p> <p>1. Regulation of subcontracting to vendors</p> <p>2. Nutrition education.....</p>	<p>Behavioral Risk Factor Surveillance System (www.cdc.gov/brfss).</p> <p>Behavioral Risk Factor Surveillance System (www.cdc.gov/brfss).</p> <p>Economic Census (www.census.gov). Data for specific types of retail trade companies available online and on CD-ROM.</p> <p>Progressive Grocers Market Scope (www.progressivegrocer.com).</p> <p>American Housing Survey (www.census.gov/hhes/www/ahs.html). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII format.</p> <p>Economic Census (www.census.gov).</p> <p>Commercial Activities in Schools GAO Report (www.gao.gov/archive/2000/he00156.pdf).</p> <p>See Education Dimension, School Characteristics, page 22.</p>

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## Behavioral Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>4. Alcohol and Illicit Drug Use</p> <p><b>A. Number of beer, wine, and liquor stores</b></p> <p><b>B. Drug and alcohol treatment services</b></p> <ol style="list-style-type: none"> <li>1. Number of hospitals with outpatient alcohol/drug abuse services; number of alcohol/chemical dependency treatment beds .....</li> <li>2. Number of alcohol/chemical dependency treatment programs .....</li> </ol> <p><b>C. Syringe laws/exchange programs</b></p> <ol style="list-style-type: none"> <li>1. Law allowing sterile syringe exchange ...</li> </ol>	<p>Economic Census (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>Area Resource File (<a href="http://www.arfsys.com">www.arfsys.com</a>). Data available for purchase on CD-ROM, magnetic tape, and cartridge.</p> <p>Substance Abuse and Mental Health Services Administration facility locator (<a href="http://findtreatment.samhsa.gov/facilitylocator.doc.htm">findtreatment.samhsa.gov/facilitylocator.doc.htm</a>).</p> <p>Hard Truth About AIDS: Sterile Syringe Exchange Programs (<a href="http://hardtruth.qti.net/sterile_syringe_exchange_program.htm">hardtruth.qti.net/sterile_syringe_exchange_program.htm</a>).</p>
<p>5. Violence</p> <p><b>A. Guns</b></p> <ol style="list-style-type: none"> <li>1. Availability             <ol style="list-style-type: none"> <li>a. Presence of firearms in home/vehicle</li> <li>b. Number of gun stores .....</li> </ol> </li> </ol> <p><b>B. Exposure to violence</b></p> <ol style="list-style-type: none"> <li>1. Rates of violent crime.....</li> <li>2. Perception of neighborhood safety</li> <li>3. Percent of households perceiving neighborhood crime as a problem or bothersome .....</li> </ol> <p><b>C. Police protection .....</b></p>	<p>Behavioral Risk Factor Surveillance System (<a href="http://www.cdc.gov/brfss">www.cdc.gov/brfss</a>).</p> <p>Economic Census (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>FBI Uniform Crime Reports (<a href="http://www.fbi.gov/ucr/ucr.htm">www.fbi.gov/ucr/ucr.htm</a>). From this Web site page, select Crime in the United States; select year of interest; select Index of Crime for MSAs; data downloadable in Excel and PDF.</p> <p>Behavioral Risk Factor Surveillance System (<a href="http://www.cdc.gov/brfss">www.cdc.gov/brfss</a>).</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p> <p>See Psychosocial Dimension, Protective Services, page 54.</p>

# Transport

## Overview

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The transportation system in place in communities has multiple implications for the health of residents. Most directly, motor vehicles are the leading cause of injury in the United States and are responsible for about one-third of all injury deaths (Fingerhut and Warner 1997). The nature of the transportation modes and the volume of use also influence the types and magnitude of pollution introduced into the environment (Sharpe 1999). A third consideration is the degree to which employment patterns and therefore economic well-being are determined by the accessibility of jobs through adequate and affordable transportation systems (Pugh 1998).

In our framework we include measures within each of these health-related aspects of transportation. Vehicle occupant and pedestrian safety factors are included, as well as characteristics of the infrastructure of roads, sidewalks, and bike lanes. We examine characteristics and numbers of vehicles and aspects of the public transportation system. Finally, we include economic issues such as government transportation spending priorities, funding for public transportation, and personal insurance rates.

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## Transport Data Sets

This table describes the components and indicators of the transport dimension. Six transport components are identified:

1. Safety
2. Infrastructure
3. Traffic Patterns
4. Vehicles
5. Public Transportation
6. Economic Issues

Within each component, several indicators are identified, and for each indicator at least one data set is listed.

Components and Indicators	Data Sources and Notes
<p>1. Safety</p> <p><b>A. Seat belts/child restraints</b></p> <p>1. Prevalence of seat belt and child safety seat use.....</p> <p><b>B. Helmets</b></p> <p>1. Prevalence of child bicycle helmet use</p> <p><b>C. Age curfews/graduated driver’s license program</b></p> <p>1. Driver’s license requirements for young drivers .....</p> <p><b>D. Driving while intoxicated laws/enforcement</b></p> <p>1. Rating of driving while intoxicated laws and law enforcement .....</p> <p><b>E. Speed restriction/enforcement</b></p> <p>1. Speed limit on urban interstates .....</p> <p>2. Peak period freeway and principal artery speed .....</p>	<p>Behavioral Risk Factor Surveillance System (<a href="http://www.cdc.gov/brfss">www.cdc.gov/brfss</a>). Data for states available in Rich Text Format and SAS; estimates for Metropolitan Areas under development by CDC.</p> <p>Behavioral Risk Factor Surveillance System (<a href="http://www.cdc.gov/brfss">www.cdc.gov/brfss</a>).</p> <p>Insurance Institute for Highway Safety/Highway Loss Data Institute (<a href="http://www.hwysafety.org/">www.hwysafety.org/</a>). From this Web site page, select How States Measure Up.</p> <p>MADD (<a href="http://www.madd.org/home">www.madd.org/home</a>). From this Web site page, select Stats and Resources; select Laws; select Rating the States.</p> <p>Insurance Institute for Highway Safety/Highway Loss Data Institute (<a href="http://www.hwysafety.org/">www.hwysafety.org/</a>). From this Web site page, select How States Measure Up.</p> <p>Texas Transportation Institute (<a href="http://mobility.tamu.edu">mobility.tamu.edu</a>). Annual Urban Mobility Report includes speed and congestion information.</p>

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## Transport Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>2. Infrastructure</p> <p><b>A. Roads</b></p> <p>1. Quantity</p> <p>a. Miles of interstate, other freeways, and expressways; other principal arteries, minor arterial, collector, and local roads; total roadway miles .....</p> <p>2. Quality</p> <p>a. Percent of households reporting major repairs needed to streets in their neighborhood.....</p>	<p>Federal Highway Administration (<a href="http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm">www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm</a>). From this Web site page, select Highway Statistics for desired year; select Roadway Extent, Characteristics, and Performance. PDF and Excel files.</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p>
<p>3. Traffic Patterns</p> <p><b>A. Spatial location of jobs</b></p> <p>1. Mean travel time to work, workers aged <math>\geq 16</math> years; average daily commute distance .....</p> <p><b>B. Traffic volume</b></p> <p>1. Vehicle miles of local road traveled daily, total and by type of road; travel time index (measure of congestion at peak times); percent of lane miles with congestion.....</p> <p>2. Percent of households reporting street noise or traffic as a problem or bothersome .....</p> <p>3. Annual traffic growth rates .....</p> <p><b>C. Car pooling</b></p> <p>1. Percent of workers aged <math>\geq 16</math> years carpooling to work.....</p>	<p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>Texas Transportation Institute (<a href="http://mobility.tamu.edu">mobility.tamu.edu</a>).</p> <p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p> <p>Highway and Motorway Fact Book (<a href="http://www.publicpurpose.com/ut-ushyg.htm">www.publicpurpose.com/ut-ushyg.htm</a>).</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p>

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## Transport Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>4. Vehicles</p> <p><b>A. Numbers of vehicles</b></p> <p>1. Vehicles available per household.....</p> <p><b>B. Types of vehicles</b></p> <p>1. Numbers of automobiles, buses, trucks, and trailers registered .....</p>	<p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>Federal Highway Administration (<a href="http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm">www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm</a>). From this Web site page, select Highway Statistics for desired year; select Motor Vehicles. PDF and Excel files.</p>
<p>5. Public Transportation</p> <p><b>A. Availability/density/efficiency</b></p> <p>1. Percent of households reporting unsatisfactory or no public transportation in their neighborhood .....</p> <p><b>B. Types of public transportation available</b></p> <p>1. Percent of workers aged <math>\geq 16</math> years using various means of transportation to work</p> <p><b>C. Cohesiveness/integration</b></p> <p>1. Percent of trips taken by car, by transit, on foot, and by bicycle .....</p>	<p>American Housing Survey (<a href="http://www.census.gov/hhes/www/ahs.html">www.census.gov/hhes/www/ahs.html</a>). Data for each of 47 selected Metropolitan Areas are collected about every 4 years, with an average of 12 areas included each year. Downloadable data in SAS and ASCII formats.</p> <p>Census Bureau (<a href="http://www.census.gov">www.census.gov</a>).</p> <p>Driven to Spend: The Impact of Sprawl on Household Expenses (<a href="http://www.transact.org">www.transact.org</a>). From this Web site page, select Library; select STPP Reports.</p>
<p>6. Economic Issues</p> <p><b>A. Expenditures</b></p> <p>1. Highway expenditures .....</p> <p>2. Percent of total household expenditures for transportation; household spending on public transportation.....</p> <p>3. Consumer expenditures on transportation .....</p>	<p>Census of Governments (<a href="http://www.census.gov/govs/www">www.census.gov/govs/www</a>). From this Web site page, select year of interest; select Vol. 4, No. 3, Finances of County Governments, or No. 4, Finances of Municipal and Township Governments, or downloadable State and Local Government Finance data.</p> <p>Driven to Spend: The Impact of Sprawl on Household Expenses (<a href="http://www.transact.org">www.transact.org</a>).</p> <p>See Economic Dimension, Cost of Living, page 9.</p>

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## Transport Data Sets, Continued

Components and Indicators	Data Sources and Notes
<p>6. Economic Issues (continued)</p> <p><b>B. Spending on local roads vs. alternative transportation</b></p> <p>1. Funding for state grants-in-aid for mass transit; funding for highway .....</p> <p><b>C. Percent of transit revenue from fares</b></p> <p>1. Percent of total operating funds that are fare revenues.....</p> <p><b>D. Insurance rates</b></p> <p>1. Average expenditure for auto insurance</p> <p><b>E. Commuter taxes</b></p> <p>1. Transit and vanpool tax exemption benefits .....</p>	<p>Federal Highway Administration (<a href="http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm">www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm</a>). From this Web site page, select Highway Statistics for desired year; select Highway Finance. PDF and Excel files.</p> <p>National Transit Database (<a href="http://www.fta.dot.gov/ntl/database.html">www.fta.dot.gov/ntl/database.html</a>). PDF and HTML tables.</p> <p>See Economic Dimension, Cost of Living, page 9.</p> <p>See Economic Dimension, Exploitation (Commuter Taxes), page 11.</p>

## References

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This chapter lists references for the text.

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- Acevedo-Garcia, D. 2000. "Residential Segregation and the Epidemiology of Infectious Diseases." *Social Science and Medicine* 51:1143-61.
- Agran, P. F., D. G. Winn, C. L. Anderson, C. Tran, and C. P. Del Valle. 1996. "The Role of the Physical and Traffic Environment in Child Pedestrian Injuries." *Pediatrics* 98(6 pt 2):1096-103.
- American Lung Association. 2001. "Urban Air Pollution and Health Inequalities: A Workshop Report." *Environmental Health Perspectives* 109(suppl 3):357-74.
- Anderson, R. T., P. Sorlie, E. Backlund, N. Johnson, and G. A. Kaplan. 1997. "Mortality Effects of Community Socioeconomic Status." *Epidemiology* 8:42-7.
- Andrulis, D. P. 1998. "Access to Care is the Centerpiece in the Elimination of Socioeconomic Disparities in Health." *Annals of Internal Medicine* 129:412-6.
- Armstrong, D. L., E. Barnett, M. Casper, and S. Wing. 1998. "Community Occupational Structure, Medical and Economic Resources, and Coronary Mortality among U.S. Blacks and Whites, 1980-1988." *Annals of Epidemiology* 8:184-91.
- Baker, D. W., M. F. Shapiro, and C. L. Schur. 2000. "Health Insurance and Access to Care for Symptomatic Conditions." *Archives of Internal Medicine* 160(9):1269-74.
- Barker, D. J., D. Coggon, C. Osmond, and C. Wickham. 1990. "Poor Housing in Childhood and High Rates of Stomach Cancer in England and Wales." *British Journal of Cancer* 61(4):575-8.
- Barrow, S. M., D. B. Herman, P. Cordova, and E. L. Struening. 1999. "Mortality Among Homeless Shelter Residents in New York City." *American Journal of Public Health* 89(4):529-34.
- Beauchamp, D. 1997. "Public Health, Privatization, and Market Populism: A Time for Reflection." *Quality Management in Health Care* 5(2):73-9.
- Berkman, L. F. 2004. "Introduction: Seeing the Forest and the Trees—From Observation to Experiments in Social Epidemiology." *Epidemiologic Reviews* 26:2-6.
- Blakely, T. A., B. P. Kennedy, and I. Kawachi. 2001. "Socioeconomic Inequality in Voting Participation and Self-Rated Health." *American Journal of Public Health* 91(1):99-104.
- Blindauer, K. M., R. J. Jackson, and M. McGeehin. 1999. "Environmental Pesticide Illness and Injury: The Need for a National Surveillance System." *Journal of Environmental Health* 61(10):9-13.

---

*Continued on next page*

- Bosma, H., H. D. van de Mheen, G. J. J. M. Borsboom, and J. P. Mackenbach. 2001. "Neighborhood Socioeconomic Status and All-Cause Mortality." *American Journal of Epidemiology* 153(4):363-71.
- Bratton, K. A., and K. L. Haynie. 1999. "Agenda Setting and Legislative Success in State Legislatures: The Effects of Gender and Race." *Journal of Politics* 61(3): 658-79.
- Brown, P. 1995. "Race, Class, and Environmental Health: A Review and Systematization of the Literature." *Environmental Research* 69:15-30.
- Carstairs, V., and R. Morris. 1989. "Deprivation: Explaining Differences in Mortality Between Scotland and England and Wales." *British Medical Journal* 299:886-9.
- Cassel, J. 1976. "The Contribution of the Social Environment to Host Resistance." *American Journal of Epidemiology* 104(2):107-23.
- Cheng, Y., I. Kawachi, E. H. Caokley, J. Schwartz, and G. Colditz. 2000. "Association Between Psychosocial Work Characteristics and Health Functioning in American Women: Prospective Study." *British Medical Journal* 320(7247):1432-6.
- Cohen, D., S. Spear, R. Scribner, P. Kissinger, K. Mason, and J. Wildgen. 2000. "'Broken Windows' and the Risk of Gonorrhea." *American Journal of Public Health* 90:230-6.
- Coleman, J. S. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology* 94:S95-S120.
- Collins, C. A., and D. R. Williams. 1999. "Segregation and Mortality: The Deadly Effects of Racism?" *Sociological Forum* 14(3):495-523.
- Cubbin, C., F. B. LeClere, and G. S. Smith. 2000. "Socioeconomic Status and Injury Mortality: Individual and Neighborhood Determinants." *Journal of Epidemiology and Community Health* 54:517-24.
- Davey Smith, G., and D. Dorling. 1996. "'I'm All Right, John': Voting Patterns and Mortality in England and Wales, 1981-92." *British Medical Journal* 313:1573-7.
- Davey Smith, G., and N. Krieger. 2004. "'Bodies Count,' and Body Counts: Social Epidemiology and Embodying Inequality." *Epidemiologic Reviews* 26:92-103.
- Dedman, D. J., D. Gunnell, G. Davey Smith, and S. Frankel. 2001. "Childhood Housing Conditions and Later Mortality in the Boyd Orr Cohort." *Journal of Epidemiology and Community Health* 55(1):10-5.
- de Jonge, J., H. Bosma, R. Peter, and J. Siegrist. 2000. "Job Strain, Effort-Reward Imbalance and Employee Well-Being: A Large-Scale Cross-Sectional Study." *Social Science and Medicine* 50:1317-27.

---

*Continued on next page*

- 
- Diez Roux, A. V. 1998. "Bringing Context Back into Epidemiology: Variables and Fallacies in Multilevel Analysis." *American Journal of Public Health* 88(2):216-22.
- Diez Roux, A. V. 2004. "The Study of Group-Level Factors in Epidemiology: Rethinking Variables, Study Designs, and Analytical Approaches." *Epidemiologic Reviews* 26:104-11.
- Diez Roux, A. V., F. J. Nieto, C. Muntaner, H. A. Tyroler, G. W. Comstock, E. Shahar, L. S. Cooper, R. L. Watson, and M. Szklo. 1997. "Neighborhood Environments and Coronary Heart Disease: A Multilevel Analysis." *American Journal of Epidemiology* 146(1):48-63.
- Diez Roux, A. V., S. S. Merkin, D. Arnett, L. Chambless, M. Massing, F. J. Nieto, P. Sorlie, M. Szklo, H. A. Tyroler, and R. L. Watson. 2001. "Neighborhood of Residence and Incidence of Coronary Heart Disease." *New England Journal of Medicine* 345(2):99-106.
- Durkin, M. S., L. L. Davidson, L. Kuhn, P. O'Connor, and B. Barlow. 1994. "Low-Income Neighborhoods and the Risk of Severe Pediatric Injury: A Small-Area Analysis in Northern Manhattan." *American Journal of Public Health* 84(4):587-92.
- Ellaway, A., and S. Macintyre. 1998. "Does Housing Tenure Predict Health in the UK Because It Exposes People to Different Levels of Housing Related Hazards in the Home or Its Surroundings?" *Health and Place* 4(2):141-50.
- Ellaway, A., and S. Macintyre. 2000. "Mums on Prozac, Kids on Inhalers: The Need for Research on the Potential for Improving Health Through Housing Interventions." *Health Bulletin* 58(4):336-9.
- Ferguson, T. 1995. *Golden Rule: The Investment Theory of Party Competition and the Logic of Money-Driven Political Systems*. Chicago: University of Chicago Press.
- Filakti, H., and J. Fox. 1995. "Differences in Mortality by Housing Tenure and by Car Access from the OPCS Longitudinal Study." *Population Trends* 81:27-30.
- Fingerhut, L. A., and M. Warner. 1997. "Health, United States, 1996-97 and Injury Chartbook." Hyattsville, MD: National Center for Health Statistics.
- Flores, G., M. Abreu, M. A. Olivar, and B. Kustner. 1998. "Access Barriers to Health Care for Latino Children." *Archives of Pediatric and Adolescent Medicine* 152(1):1119-25.
- French, S. A., M. Story, and R. W. Jeffery. 2001. "Environmental Influences on Eating and Physical Activity." *Annual Review of Public Health* 22:309-35.
- Frenk, J. 1998. "Medical Care and Health Improvement: The Critical Link." *Annals of Internal Medicine* 129:419-20.

---

*Continued on next page*

- Gielen, A. C., M. E. Wilson, R. R. Faden, L. Wissow, and J. D. Harvilchuck. 1995. "In-Home Injury Prevention Practices for Infants and Toddlers: The Role of Parental Beliefs, Barriers, and Housing Quality." *Health Education Quarterly* 22(1):85-95.
- Goldman, L. R., M. W. Shannon, and the American Academy of Pediatrics Committee on Environmental Health. 2001. "Technical Report: Mercury in the Environment: Implications for Pediatricians." *Pediatrics* 108(1):197-205.
- Greenough, G., M. McGeehin, S. M. Bernard, J. Trtanj, J. Riad, and D. Engelberg. 2001. "The Potential Impacts of Climate Variability and Change on Health Impacts of Extreme Weather Events in the United States." *Environmental Health Perspectives* 109(suppl 2):191-8.
- Griffith, J., R. Duncan, W. Riggan, and A. Pellom. 1989. "Cancer Mortality in U.S. Counties With Hazardous Waste Sites and Ground Water Pollution" *Archives of Environmental Health* 44:69-74.
- Grossman, D. C., H. J. Neckerman, T. D. Koepsell, P. Y. Liu, K. N. Asher, K. Beland, K. Frey, and F. P. Rivara. 1997. "Effectiveness of a Violence Prevention Curriculum Among Children in Elementary School. A Randomized Controlled Trial." *Journal of the American Medical Association* 277(20):1605-11.
- Guest, A. M., G. Almgren, and J. M. Hussey. 1998. "The Ecology of Race and Socioeconomic Distress: Infant and Working-Age Mortality in Chicago." *Demography* 35(1):23-34.
- Hill, K. Q., and J. E. Leighley. 1992. "The Policy Consequences of Class Bias in State Electorates." *American Journal of Political Science* 36(2):351-65.
- Hirsch, B. T., and D. A. Macpherson. 2001. *Union Membership and Earnings Data Book: Compilations from the Current Population Survey*. Washington, DC: Bureau of National Affairs.
- Holzer, H. 1991. "The Spatial Mismatch Hypothesis: What Has the Evidence Shown?" *Urban Studies* 28:105-22.
- House, J. S., C. Robbins, and H. Metzner. 1982. "The Association of Social Relations and Activities with Mortality. Prospective Evidence from the Tecumseh Community Health Study." *American Journal of Epidemiology* 116:123-40.
- House, J. S., K. R. Landis, and D. Umberson. 1988. "Social Relationships and Health." *Science* 241:540-5.
- Howell E. M., K. L. Pettit, B. A. Ormond, and G. T. Kingsley. 2003. "Using the National Neighborhood Indicators Partnership to Improve Public Health." *Journal of Public Health Management Practice* 9(3):235-42.
- Hwang, S. W. 2001. "Homelessness and Health." *Canadian Medical Association Journal* 164(2):229-33.
- Institute of Medicine. 1988. *The Future of Public Health*. Washington, DC: National Academy Press.

---

*Continued on next page*

---

Institute of Medicine. 1993. *Access to Health Care in America*. Washington, DC: National Academy Press.

Institute of Medicine. 1997. *Improving Health in the Community: A Role for Performance Monitoring*. Washington, DC: National Academy Press.

Jackson, S. A., R. T. Anderson, R. J. Johnson, and P. D. Sorlie. 2000. "The Relation of Residential Segregation to All-Cause Mortality: A Study in Black and White." *American Journal of Public Health* 90(4):615-7.

Johnson, B. L. 1999. "A Review of the Effects of Hazardous Waste on Reproductive Health." *American Journal of Obstetrics and Gynecology* 181(1):12-6.

Kaplan, G. A., and J. W. Lynch. 1997. "Whither Studies on the Socioeconomic Foundations of Population Health?" *American Journal of Public Health* 87(9):1409-11.

Kaplan, G. A., and J. W. Lynch. 2001. "Is Economic Policy Health Policy?" *American Journal of Public Health* 91(3):1-3.

Kawachi, I. 1999. "Social Capital and Community Effects on Population and Individual Health." *Annals of the New York Academy of Sciences* 896:120-30.

Kawachi, I., B. P. Kennedy, K. Lochner, and D. Prothrow-Stith. 1997. "Social Capital, Income Inequality, and Mortality." *American Journal of Public Health* 87(9):1491-8.

Kawachi, I., B. P. Kennedy, and R. Glass. 1999a. "Social Capital and Self-Rated Health: A Contextual Analysis." *American Journal of Public Health* 89:1187-93.

Kawachi, I., B. P. Kennedy, and R. G. Wilkinson. 1999b. "Crime: Social Disorganization and Relative Deprivation." *Social Science and Medicine* 48:719-31.

Kennedy, B. P., I. Kawachi, R. Glass, and D. Prothrow-Stith D. 1998. "Income Distribution, Socioeconomic Status, and Self Rated Health in the United States: Multilevel Analysis." *British Medical Journal* 317:917-21.

Ketola, E., R. Sipila, and M. Makela. 2000. "Effectiveness of Individual Lifestyle Interventions in Reducing Cardiovascular Disease and Risk Factors." *Annals of Medicine* 32(4):239-51.

Krieger, N., J. T. Chen, P. D. Waterman, M. J. Soobader, S. V. Subramanian, and R. Carson. 2002. "Geocoding and Monitoring of U.S. Socioeconomic Inequalities in Mortality and Cancer Incidence: Does the Choice of Area-Based Measure and Geographic Level Matter?: The Public Health Disparities Geocoding Project." *American Journal of Epidemiology* 156(5):471-82.

---

*Continued on next page*

Krieger, N., J. T. Chen, P. D. Waterman, M. J. Soobader, S. V. Subramanian, and R. Carson. 2003. "Choosing Area Based Socioeconomic Measures to Monitor Social Inequalities in Low Birth Weight and Childhood Lead Poisoning: The Public Health Disparities Geocoding Project." *Journal of Epidemiology and Community Health* 57(3):186-99.

Krieger, N., D. L. Rowley, A. A. Herman, B. Avery, and M. T. Phillips. 1993. "Racism, Sexism and Social Class: Implications for Studies of Health, Disease, and Well-Being." *American Journal of Preventive Medicine* 9(suppl 2):82-122.

Krieger, N., and S. Sidney. 1997. "Prevalence and Health Implications of Anti-Gay Discrimination: A Study of Black and White Women and Men in the CARDIA Cohort." *International Journal of Health Services* 27(1):157-76.

Landrigan, P. J., L. Claudio, S. B. Markowitz, G. S. Berkowitz, B. L. Brenner, H. Romero, J. G. Wetmur, T. D. Matte, A. C. Gore, J. H. Godbold, and M. S. Wolff. 1999. "Pesticides and Inner-City Children: Exposures, Risks, and Prevention." *Environmental Health Perspectives* 107(suppl 3):431-7.

Langer, N. 1999. "Culturally Competent Professionals in Therapeutic Alliances Enhance Patient Compliance." *Journal of Health Care for the Poor and Underserved* 10(1):19-26.

LeClere, F. B., R. G. Rogers, and K. D. Peters. 1998. "Neighborhood Social Context and Racial Differences in Women's Heart Disease Mortality." *Journal of Health Social Behavior* 39:91-107.

Lynch, J. W., and G. A. Kaplan. 2000. "Socioeconomic Position." In *Social Epidemiology*, edited by L. F. Berkman and I. Kawachi, 13-35. New York: Oxford University Press.

Lynch, J. W., G. A. Kaplan, E. R. Pamuk, R. D. Cohen, K. E. Heck, J. L. Balfour, and I. H. Yen. 1998. "Income Inequality and Mortality in Metropolitan Areas of the United States." *American Journal of Public Health* 88(7):1074-80.

Lynch, J. W., P. Due, C. Muntaner, and G. Davey Smith. 2000b. "Social Capital—Is It a Good Strategy for Public Health?" *Journal of Epidemiology and Community Health* 54:404-8.

Macintyre, S., A. Ellaway, G. Der, G. Ford, and K. Hunt. 1998. "Do Housing Tenure and Car Access Predict Health Because They are Simply Markers of Income or Self Esteem? A Scottish Study." *Journal of Epidemiology and Community Health* 52:657-64.

Macintyre, S., A. Ellaway, and S. Cummins. 2002. "Place Effects on Health: How Can We Conceptualise, Operationalise and Measure Them?" *Social Science and Medicine* 55:125-39.

McGinnis, M. J., and W. H. Foege. 1998. "Actual Causes of Death in the United States." *Journal of the American Medical Association* 270:2207-12.

---

*Continued on next page*

- 
- McKeown, T. 1979. *The Role of Medicine: Dream, Mirage, or Nemesis?* Princeton, NJ: Princeton University Press.
- McQuiston, T. H., R. C. Zakocs, and D. Loomis. 1998. "The Case for Stronger OSHA Enforcement—Evidence From Evaluation Research." *American Journal of Public Health* 88(7):1022-4.
- Mendelsohn, A. L., B. P. Dreyer, A. H. Fierman, C. M. Rosen, L. A. Legano, H. A. Kruger, S. W. Lim, S. Barasch, L. Au, and C. D. Courtlandt. 1999. "Low-Level Lead Exposure and Cognitive Development in Early Childhood." *Journal of Developmental and Behavioral Pediatrics* 20(6):425-31.
- Miringoff, M., and M-L. Miringoff. 1999. *The Social Health of the Nation*. New York: Oxford University Press.
- Mitchell, R., S. Gleave, M. Bartley, D. Wiggins, and H. Joshi. 2000. "Do Attitude and Area Influence Health? A Multilevel Approach to Health Inequalities." *Health and Place* 6:67-79.
- Mitchell-Weaver, C., D. Miller, and R. Deal. 2000. "Municipal Governance and Metropolitan Regionalism in the USA." *Urban Studies* 37(516):851-76.
- Mouw, T. 2000. "Job Relocation and the Racial Gap in Unemployment in Detroit and Chicago, 1980 to 1990." *American Sociological Review* 65:730-53.
- Nansel, T. R., M. Overpeck, R. S. Pilla, W. J. Ruan, B. Simons-Morton, and P. Scheidt. 2001. "Bullying Behaviors Among U.S. Youth: Prevalence and Association With Psychosocial Adjustment." *Journal of the American Medical Association* 285(16):2094-100.
- Navin, F., S. Zein, and E. Felipe. 2000. "Road Safety Engineering: An Effective Tool in the Fight Against Whiplash Injuries." *Accident Analysis and Prevention* 32(2):271-5.
- Nelson, D. E., B. L. Thompson, S. D. Bland, and R. Rubinson. 1999. "Trends in Perceived Cost as a Barrier to Medical Care, 1991-1996." *American Journal of Public Health* 89(9):1410-3.
- Newacheck, P. W., J. J. Stoddard, D. C. Hughes, and M. Pearl. 1998. "Health Insurance and Access to Primary Care for Children." *New England Journal of Medicine* 338:513-9.
- O'Campo, P., X. Xue, M.-C. Wang, and M. O. Caughy. 1997. "Neighborhood Risk Factors for Low Birthweight in Baltimore: A Multilevel Analysis." *American Journal of Public Health* 87(7):1113-8.
- Packer, C. N., S. Stewart-Brown, and S. E. Fowle. 1994. "Damp Housing and Adult Health: Results From a Lifestyle Study in Worcester, England." *Journal of Epidemiology and Community Health* 48:555-9.
- Passchier-Vermeer, W., and W. F. Passchier. 2000. "Noise Exposure and Public Health." *Environmental Health Perspectives* 108(suppl 1):123-31.

---

*Continued on next page*



- Patz, J. A., M. A. McGeehin, and S. M. Bernard. 2001. "The Potential Health Impacts of Climate Variability and Change for the United States." *Journal of Environmental Health* 64(2):20-8.
- Pickett, K. E., and M. Pearl. 2001. "Multilevel Analyses of Neighbourhood Socioeconomic Context and Health Outcomes: A Critical Review." *Journal of Epidemiology and Community Health* 55:111-22.
- Pincus, T., R. Esther, D. A. DeWalt, and L. F. Callahan. 1998. "Social Conditions and Self-Management Are More Powerful Determinants of Health Than Access to Care." *Annals of Internal Medicine* 129:406-11.
- Platt, S., C. Martin, S. Hunt, and C. Lewis. 1989. "Damp Housing, Mould Growth and Symptomatic Health State." *British Medical Journal* 298:1643-8.
- Pope, C. A. 3rd, D. V. Bates, and M. E. Raizenne. 1995. "Health Effects of Particulate Air Pollution: Time for Reassessment?" *Environmental Health Perspectives* 103(5):472-80.
- Portes, A. 1998. "Social Capital: Its Origins and Applications to Modern Sociology." *American Journal of Sociology* 24:1-24.
- Pugh, M. 1998. *Barriers to Work: The Spatial Divide Between Jobs and Welfare Recipients in Metropolitan Areas*. Brookings Institution Center on Urban and Metropolitan Policy. Available at <http://www.brookings.edu/es/urban/mismatch.pdf>.
- Putnam, R., R. Leonardi, and R. Nanetti. 1993. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, NJ: Princeton University Press.
- Roberts, E. M. 1997. "Neighborhood Social Environments and the Distribution of Low Birthweight in Chicago." *American Journal of Public Health* 87(4):597-603.
- Ross, B. H, and M. A. Levine. 1996. *Urban Politics: Power in Metropolitan America*. 5th edition. N. Itasca, IL: FE Peacock.
- Saltzstein, A. L., Y. Ting, and G. H. Saltzstein. 2001. "Work-Family Balance and Job Satisfaction: The Impact of Family-Friendly Policies on Attitudes of Federal Government Employees." *Public Administration Review* 61(4):452-67.
- Sampson, R. J., S. W. Raudenbush, and F. Earls. 1997. "Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy." *Science* 277:918-24.
- Schell, L. M. 1991. "Effects of Pollutants on Human Prenatal and Postnatal Growth: Noise, Lead, Polychlorobiphenyl Compounds, and Toxic Wastes." *American Journal of Physical Anthropology* (suppl 13):157-88.
- Schoenbach, V. J., B. H. Kaplan, L. Fredman, and D. G. Kleinbaum. 1986. "Social Ties and Mortality in Evans County, Georgia." *American Journal of Epidemiology* 123:577-91.

---

*Continued on next page*

- 
- Sharpe, M. 1999. "An Unhealthy Road." *Journal of Environmental Monitoring* 1:23N-25N.
- Shaw, M., D. Gordon, D. Dorling, R. Mitchell, and G. Davey Smith. 2000. "Increasing Mortality Differentials by Residential Area Level of Poverty: Britain 1981-1997." *Social Science and Medicine* 51:151-3.
- Snyder, P., J. Anliker, L. Cunningham-Sabo, L. B. Dixon, J. Altaha, A. Chamberlain, S. Davis, M. Evans, J. Hurley, and J. L. Weber. 1999. "The Pathways Study: A Model For Lowering the Fat in School Meals." *American Journal of Clinical Nutrition* 69(4 suppl):810S-815S.
- Stone, E. J., T. L. McKenzie, G. J. Welk, and M. L. Booth. 1998. "Effects of Physical Activity Interventions in Youth: Review and Synthesis." *American Journal of Preventive Medicine* 15(4):298-315.
- Styne, D. M. 2001. "Childhood and Adolescent Obesity: Prevalence and Significance." *Pediatric Clinics of North America* 48(4):823-54.
- Subramanian, S.V., I. Kawachi, and B. P. Kennedy. 2001. "Does the State You Live In Make a Difference? Multilevel Analysis of Self-Rated Health in the US." *Social Science and Medicine* 53:9-19.
- Susser, M., W. Watson, and K. Hopper. 1985. *Sociology in Medicine*. New York: Oxford University Press.
- Townsend, P., P. Phillimore, and A. Beattie. 1988. *Health and Deprivation: Inequality and the North*. London: Croom Helm.
- Turnlock, B. J., and A. S. Handler. 1997. "From Measuring to Improving Public Health Practice." *Annual Review of Public Health* 18:261-82.
- Twemlow, S. W., P. Fonagy, F. C. Sacco, M. L. Gies, R. Evans, and R. Ewbank. 2001. "Creating a Peaceful School Learning Environment: A Controlled Study of an Elementary School Intervention to Reduce Violence." *American Journal of Psychiatry* 158(5):808-10.
- U. S. Department of Health and Human Services (USDHHS). 2000. *Healthy People 2010*. Washington, DC: U. S. Department of Health and Human Services.
- U. S. Preventive Services Task Force. 1996. *Guide to Clinical Preventive Services*, 2nd edition. Baltimore: Williams & Wilkins.
- Waitzman, R. J., and K. R. Smith. 1998a. "Separate But Lethal: The Effects of Economic Segregation on Mortality in Metropolitan America." *Milbank Memorial Quarterly* 76(3):341-73.
- Waitzman, R. J., and K. R. Smith. 1998b. "Phantom of the Poverty Area: Poverty-Area Residence and Mortality in the United States." *American Journal of Public Health* 88:973-6.

---

*Continued on next page*

- Wasserman, C. R., G. M. Shaw, S. Selvin, J. B. Gould, and S. L. Syme. 1998. "Socioeconomic Status, Neighborhood Social Conditions, and Neural Tube Defects." *American Journal of Public Health* 88(11):1674-80.
- Whitby, K. J. 1997. *The Color of Representation: Congressional Behavior and Black Interests*. Ann Arbor: University of Michigan Press.
- Williams, D. R. 1999. "Race, Socioeconomic Status, and Health: The Added Effects of Racism and Discrimination." *Annals of the New York Academy of Sciences* 896:173-88.
- Williams, D. R., and C. Collins. 2001. "Racial Residential Segregation: A Fundamental Cause of Racial Disparities in Health." *Public Health Reports* 116:404-16.
- Wilson, P. S. 1994. "Established Risk Factors and Coronary Artery Disease: The Framingham Study." *American Journal of Hypertension* 7(pt 2):75-125.
- Woolcock, M. 2001. "The Place of Social Capital in Understanding Social and Economic Outcomes." *ISUMA: Canadian Journal of Policy Research* 2(1):11-7.
- Yen, I. H., and G. A. Kaplan. 1999. "Poverty Area Residence and Changes in Depression and Perceived Health Status: Evidence From the Alameda County Study." *International Journal of Epidemiology* 28:90-4.
- Yen, I. H., and S. L. Syme. 1999. "The Social Environment and Health: A Discussion of the Epidemiologic Literature." *Annual Review of Public Health* 20:287-308.
- Yen, I. H., D. R. Ragland, B. A. Greiner, and J. M. Fisher. 1999. "Workplace Discrimination and Alcohol Consumption: Findings From the San Francisco Muni Health and Safety Study." *Ethnicity and Disease* 9(1):70-80.
-