Beyond Health Care: New Directions to a Healthier America

**Recommendations From the
Robert Wood Johnson Foundation
Commission to Build a Healthier America**

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Statement From the Commissioners

Making America healthier will require action at all levels of society. Individuals, communities, health care, businesses and unions, philanthropies, and local, state and the federal government must work together to improve our nation's health. Although medical care is important, our reviews of research and the hearings we've held have led us to conclude that building a healthier America will hinge largely on what we do beyond the health care system. It means changing policies that influence economic opportunity, early childhood development, schools, housing, the workplace, community design and nutrition, so that all Americans can live, work, play and learn in environments that protect and actively promote health. And it means encouraging and enabling people to make healthy choices for themselves and their families.

As our rather daunting task began, we decided to focus on a limited number of actionable steps to reduce inequalities in health and improve the health of *all* Americans. We call upon policy-makers, philanthropists, business and community leaders, educators, health care leadership and professionals in relevant fields to take immediate action on our recommendations. Our recommendations can be implemented if leaders in all sectors come to see their value and potential for significant return in health improvements. They are right for our current time and economic context, and for our children's and our nation's future. We endorse these recommendations whole-heartedly, and commit ourselves to enlisting the support of the American people in making them a reality.

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A Message From the Co-Chairs

Shortfalls in health take years off the lives of Americans and subject us to often-avoidable suffering. As co-chairs of the *Robert Wood Johnson Foundation Commission to Build a Healthier America*, we have been charged to identify knowledge-based actions—both short- and long-term that are outside the medical care system—for reducing and, ultimately, eliminating those shortfalls.

That is an urgent charge, one that each of us on this Commission has taken with utmost seriousness.

The Commission is a national, independent and nonpartisan body comprising innovators and leaders who, together, represent a rich diversity of experience and tremendous depth of knowledge. As a group, we have sought to go beyond traditional definitions of health to identify promising and important policies and programs that can help each person and each family live a healthier life. Supporting us in this endeavor have been our research partners at the Center on Social Disparities in Health at the University of California, San Francisco, the Commission staff at The George Washington University School of Public Health and Health Services and Commission Staff Director David R. Williams, Harvard School of Public Health.

This past year, we have explored and shed misconceptions about the state of our nation's health and taken a broader look at how health is shaped by how and where we live our lives. Our journey has led us to many places and discoveries across America—from North Carolina to Philadelphia to Denver to Tennessee, from school playgrounds to farmers' markets to workplaces.

Despite the economic challenges we face as a nation, across America, we have found good news: solutions are in plain sight and stakeholders are coming together to improve health and remove the obstacles that prevent people in particularly stressed circumstances and communities from making healthy choices. These pockets of success provide evidence that improving health and reducing disparities are within our reach. They energize us and give us hope, but they also show us how far we have to go. The scattered examples tell us we are far from incorporating health into all aspects of our society and our communities. This is something we must do, and do together, because the stakes for our nation and especially for our children are too high not to act. It will take all of us working together to create and nurture a culture of health, where we each take responsibility for improving our own health and building the kind of society that supports and enables all of us to live healthy lives.

Because Americans can't afford to wait, we hope that the findings and recommendations offered here spark a national conversation about committing to health and wellness for everyone—and then move us to collaborative action. The health of our nation depends on improving the health of *every* American.

Mark McClellan, M.D., Ph.D.
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Recommendations From the Robert Wood Johnson Foundation Commission to Build a Healthier America

Given the seriousness of our nation's economic condition, we chose our recommendations with particular care, focusing on those with the strongest potential to leverage limited resources and optimize the impact of federal investments. Commissioners studied and debated several options and crafted recommendations that:

- address the Commission's charge to identify interventions beyond the health care system that can produce substantial health effects;

- are likely to achieve a significant positive impact on Americans' health;

- address the needs of those who are most at risk or most vulnerable;

- are feasible and achievable in the current economic environment; and

- are supported by a strong knowledge base.

We found the strongest evidence for interventions that can have a lasting effect on the quality of health and life in programs that promote early childhood development and that support children and families. Therefore, many of our recommendations aim to ensure that our children have the best start in life and health. Along with social advantage and disadvantage, health is often passed across generations. Strategies for giving children a healthy start will help ensure future generations of healthy adults. This is indeed a wise long-term investment of scarce resources.

Recommendations From the Robert Wood Johnson Foundation Commission to Build a Healthier America

1   **Ensure that *all* children have high-quality early developmental support (child care, education and other services). This will require committing substantial additional resources to meet the early developmental needs particularly of children in low-income families.**

Children who do not receive high-quality care, services and education begin life with a distinct disadvantage and a higher risk of becoming less healthy adults, and evidence is overwhelming that too many children are facing a lifetime of poorer health as a result. Helping every child reach full health potential requires strong support from parents and communities, and must be a top priority for the nation. New resources must be directed to this goal, even at the expense of other national priorities, and must be tied to greater measurement and accountability for impact of new and existing early childhood programs.

2   **Fund and design WIC and SNAP (Food Stamps) programs to meet the needs of hungry families for *nutritious* food.**

These federal programs must have adequate support to meet the nutritional requirements of all American families in need. More than one in every 10 American households do not have reliable access to enough food, and the foods many families can afford may not add up to a nutritious diet. Nutritious food is a basic need to start and support an active, healthy and productive life.

3   **Create public-private partnerships to open and sustain full-service grocery stores in communities without access to healthful foods.**

Many inner city and rural families have no access to healthful foods: for example, Detroit, a city of 139 square miles has just five grocery stores. Maintaining a nutritious diet is impossible if healthy foods are not available, and it is not realistic to expect food retailers to address the problem without community support and investment. Communities should act now to assess needs to improve access to healthy foods and develop action plans to address deficiencies identified in their assessments.

4   **Feed children only healthy foods in schools.**

Federal funds should be used exclusively for healthy meals. Schools should eliminate the sale of "junk food" and federal school breakfast and lunch funds should be linked to demonstrated improvements in children's school diets.

5   **Require all schools (K-12) to include time for all children to be physically active every day.**

One in five children will be obese by 2010. Children should be active at least one hour each day; only one-third of high-school students currently meet this goal. Schools can help meet this physical activity goal, through physical education programs, active recess, after-school and other recreational activities. Education funding should be linked to all children achieving at least half of their daily recommended physical activity at school, and over time should be linked to reductions in childhood obesity rates.

6 **Become a smoke-free nation. Eliminating smoking remains one of the most important contributions to longer, healthier lives.**

Progress on many fronts—smoke-free workplaces, clean indoor air ordinances, tobacco tax increases, and effective, affordable quit assistance—demonstrates that this goal is achievable with broad public and private sector support.

7 **Create "healthy community" demonstrations to evaluate the effects of a full complement of health-promoting policies and programs.**

Demonstrations should integrate and develop successful models that can be widely implemented and that include multiple program approaches and sources of financial support. Each "healthy community" demonstration must bring together leaders and stakeholders from business, government, health care and nonprofit sectors to work together to plan, implement and show the impact of the project on the health of the community.

8 **Develop a "health impact" rating for housing and infrastructure projects that reflects the projected effects on community health and provides incentives for projects that earn the rating.**

All homes, workplaces and neighborhoods should be safe and free from health hazards. Communities should mobilize to correct severe physical deficiencies in housing, and health should be built into all efforts to improve housing, particularly in low-income neighborhoods. New federal housing investments should be held accountable to demonstrate health impact.

9 **Integrate safety and wellness into every aspect of community life.**

While much remains to be done to create safe and health-promoting environments, many schools, workplaces and communities have shown the way, with education and incentives for individuals, employers and institutions and by fostering support for safety and health in schools, workplaces and neighborhoods. Funding should go only to organizations and communities that implement successful approaches and are willing to be held accountable for achieving measurable improvements in health.

10 **Ensure that decision-makers in all sectors have the evidence they need to build health into public and private policies and practices.**

Decision-makers at national, state and local levels must have reliable data on health status, disparities and the effects of social determinants of health. Approaches to monitor these data at the local level must be developed by, for example, adapting ongoing tracking systems. Funding must be available to promote research to understand these health effects and to promote the application of findings to decision-makers.

Executive Summary

For the first time in our history, the United States is raising a generation of children who may live sicker, shorter lives than their parents. We must act now to reverse this trend.

Why aren't Americans among the healthiest people in the world? Why are some Americans so much healthier than others? What can be done to create opportunities for all Americans to live long and healthy lives?

These questions prompted the Robert Wood Johnson Foundation in 2008 to establish the Commission to Build a Healthier America, enlisting national leaders in business, labor, education, community development, health care services, philanthropy, media and research and public policy to find solutions *outside* of the medical care system for advancing the nation's health. This Executive Summary describes the context for the Commission's work and recommendations for moving forward to improve America's health, for harnessing forces across many sectors and for prompting action.

Americans Are Not as Healthy as We Could and Should Be
Despite spending more on medical care than any other nation

A nation's health is its most precious asset. Yet there are tremendous gaps between how healthy Americans are and how healthy we could be. At every income and education level, Americans should be healthier. Many people with middle-class incomes and education die prematurely from preventable health problems. And for those with more limited incomes and education, health outcomes are far worse. Diabetes is twice as common and heart disease rates are 50 percent higher among poor adults when compared with those in the highest income group. An obesity epidemic threatens our children's future health and the number of uninsured and underinsured Americans continues to climb.

Despite breakthroughs in medical science and a $1 trillion increase in annual health care spending over the past decade, America is losing ground relative to other countries when it comes to health. Astronomical medical bills strain family and government budgets and threaten America's global competitiveness. Health care spending consumes about 16 percent of the U.S. gross domestic product (GDP), much more than in any other industrialized nation, and is expected to climb to over 20 percent of GDP by 2018. The costs of medical care and insurance are now out of reach for many American households, pushing some families into bankruptcy, draining businesses, reducing employment and severely straining public budgets.

More health care spending will not solve our health problems. Even with technologically advanced care for conditions such as preterm births, diabetic complications and heart disease, we cannot expect this care to close the global health gap. Infant mortality and life expectancy rates in the United States lag behind most of Europe, Japan, Canada and Australia and in the last two decades, U.S. rankings have fallen lower on the scale relative to other nations, despite our rapid increases in spending. In 1980, the United States ranked 18th in infant mortality rates among industrialized nations. By 2002, 24 industrialized nations—including Korea, Hungary, the Czech Republic and Greece—had lower infant mortality rates than the United States. Meanwhile, the United States slipped from 14th among industrialized countries in life expectancy at birth in 1980 to 23rd by 2004. We need to look beyond medical care to other factors that can improve America's health.

Health is More Than Health Care
And some Americans face much poorer prospects for good health and long life than others

Although medical care is essential for relieving suffering and curing illness, only an estimated 10 to 15 percent of preventable mortality has been attributed to medical care. A person's health and likelihood of becoming sick and dying prematurely are greatly influenced by powerful social factors such as education and income and the quality of neighborhood environments. These *social determinants* of health can have profound effects. For example:

- American college graduates can expect to live at least five years longer than Americans who have not completed high school.

- Poor Americans are more than three times as likely as Americans with upper-middle-class incomes to suffer physical limitations from a chronic illness.

- Upper-middle-class Americans can expect to live more than six years longer than poor Americans.

- People with middle incomes are less healthy and can expect to live shorter lives than those with higher incomes—even when they are insured.

This shouldn't be the case in a nation whose highest ideals and values are based on fairness and equality of opportunity.

Where people live, learn, work and play affects how long and how well they live—to a greater extent than most of us realize. What constitutes health includes the effects of our daily lives—how our children grow up, the food we eat, how physically active we are, the extent to which we engage in risky behaviors like smoking and our exposure to physical risks and harmful substances—as well as the neighborhoods and environments in which we live. We must identify where people can make improvements in their own health and where society needs to lend a helping hand.

Our Neighborhood Affects Our Health

Unhealthy Community		Healthy Community
Unsafe even in daylight	···VS···	Safe neighborhoods, safe schools, safe walking routes
Exposure to toxic air, hazardous waste	···VS···	Clean air and environment
No parks/areas for physical exercise	···VS···	Well-equipped parks and open spaces/organized community recreation
Limited affordable housing is run-down; linked to crime-ridden neighborhoods	···VS···	High-quality mixed-income housing, both owned and rental
Convenience/liquor stores, cigarette and liquor billboards, no grocery store	···VS···	Well-stocked grocery stores offering nutritious foods
Streets and sidewalks in disrepair	···VS···	Clean streets that are easy to navigate
Burned-out homes, littered streets	···VS···	Well-kept homes and tree-lined streets
No culturally-sensitive community centers, social services or opportunities to engage with neighbors in community life	···VS···	Organized multicultural community programs, social services, neighborhood councils or other opportunities for participation in community life
No local health care services	···VS···	Primary care through physicians' offices or health center; school-based health programs
Lack of public transportation, walking or biking paths	···VS···	Accessible, safe public transportation, walking and bike paths

Good Health Requires Personal Responsibility

Good health depends on personal choice and responsibility. No government or private program can take the place of people making healthy choices for themselves or their families. To build a healthier nation each of us must make a commitment to:

- eat a healthy diet;

- include physical activity as a part of daily life;

- avoid risky behaviors including smoking, excessive drinking, misusing medications and abusing illegal substances;

- avoid health and safety hazards at home and at work; and

- provide safe, nurturing and stimulating environments for infants and children.

We Must Overcome Obstacles and Improve Opportunities For All Americans to Make Healthy Choices

Assuming responsibility for one's health may appear straightforward. But our society's institutions, from government to business to not-for-profits, must provide support to bring healthy choices within everyone's reach. Our society's leaders and major institutions can create incentives and lower barriers so that individuals and families can take steps to achieve better health. These are not necessarily easy steps for everyone to take. For many Americans, they may be quite difficult.

Many people live and work in circumstances and places that make healthy living nearly impossible. Many children do not get the quality of care and support they need and grow up to be less healthy as a result; many Americans do not have access to grocery stores that sell nutritious food; still others live in communities that are unsafe or in disrepair, making it difficult or risky to exercise. While individuals must make a commitment to their own health, our society must improve the opportunities to choose healthful behaviors, especially for those who face the greatest obstacles.

For example, members of disadvantaged racial and ethnic groups are more likely to live in poor neighborhoods. The characteristics of such neighborhoods—factors like limited access to nutritious food; living near toxic wastes, abandoned or deteriorating factories, freeway noise and fumes; and exposure to crime and violence and other hazards—increase the chances of serious health problems. All of these factors that increase illness or risk of injury are more common in the daily lives of our nation's poor and minority families.

Living in health-damaging situations often means that individuals and families don't have healthy choices they can afford to make. Protecting and preserving good health will mean focusing on communities and people, how and where they work, where their children learn; fixing what impairs our health and strengthening what improves it. The road to a healthier nation requires us all to understand that this is about everyone, rich and poor, minority and majority, rural and urban. We cannot improve our health as a nation if we continue to leave so many far behind.

The Charge to the Commission

The Robert Wood Johnson Foundation asked the Commission to Build a Healthier America to identify practical, feasible ways to reduce barriers to good health and promote and facilitate healthy choices by individuals, for themselves and their families. The Foundation charged the Commission with three tasks:

- Raise awareness among policy-makers and the public about the substantial shortfalls in health experienced by many Americans.

- Identify interventions beyond clinical services that demonstrate promise for improving overall health and reducing disparities.

- Recommend to the Foundation and the nation's leaders key actions outside medical care that communities, businesses, unions, philanthropies, faith-based organizations, civic groups, local governments, the states and the federal government can take to create greater opportunities for long and healthy lives for all Americans.

Commissioners solicited advice and information from experts, innovators, stakeholders and the public through activities including field hearings, public testimony, roundtable discussions, experts' meetings and fact-finding site visits. Commissioners and staff met and consulted

We need to cultivate a national culture infused with health and wellness—among individuals and families and in communities, schools and workplaces.

with elected and executive agency officials, representatives of business, advocacy, professional and policy organizations and the public. Through a portal on its Web site at *commissiononhealth.org*, the Commission solicited information about successful interventions.

The Commission reached consensus on findings and recommendations through a series of meetings, monthly teleconferences and one-on-one discussions among Commissioners and with senior Commission and Foundation staff.

What We Learned

Although accessible, high-quality medical care is crucial, a healthy America cannot be achieved solely through the health care system. The solutions to our health problems lie not principally in hospitals and doctors' offices but in our homes, our schools, our workplaces, our playgrounds and parks, our grocery stores, sidewalks and streets, in the air we breathe and the water we drink.

Ultimately, the responsibility for healthy behaviors rests with each of us. Too many Americans, however, face daunting obstacles to healthy choices. Achieving a healthy America for everyone, therefore, will require *both* personal responsibility and policies and programs that break down barriers to good health, particularly for those who face the greatest obstacles.

The Commission identified a range of successful ways to improve health at the local, state and federal levels— practical, feasible and effective solutions often hiding in plain sight. But too often, they exist in isolation—too scattered to have a broad effect on the health of a community at large. To be fully effective, these programs need greater scale and geographic spread.

Still, these promising programs, policies and initiatives—and their successes—provide both hope and direction. Across populations and geographic regions, the Commission saw more similarities than differences. Commonalities among programs that work include collaboration, flexibility, leadership and continuity in funding. Repeatedly, we heard testimony that continuity of funding is a chronic problem. Too often, while start-up funds are provided to establish programs, funders move on to other issues once programs are under way. The value of collaboration to create a broader base of support is a key theme of this report and a necessity if successful programs are to expand across sectors and across the nation.

We recognize that a one-size-fits-all approach will not work to improve the health of all Americans. Rather, removing barriers to health and creating opportunities to promote more healthful behaviors must involve pursuing multiple strategies and adopting promising approaches across diverse settings. Federal intervention is not sufficient to produce and sustain the changes that need to be made in our society; leadership and public/private collaboration are needed at the local, state and national levels. We must also develop standards of accountability for programs aimed at improving health and measure progress toward our goals. As a nation we simply cannot afford to invest in programs that do not perform well and do not meet standards that should be demanded by taxpayers, funders and beneficiaries.

We were particularly impressed by the strong evidence and testimony across cities and regions about the need—and many opportunities—for intervening on behalf of our children in the first stages of life, when the foundation for health is being established. We found promising ways to build that foundation that cut across multiple sectors. Many of our recommendations address how to improve children's health—and thus their future health as adults.

Finally, we recognize that *income* and *education* are two of the most critical factors for enabling improvements in health and reducing health disparities. Given the short tenure of the Commission and our charge to issue recommendations that can have a direct, positive effect on health in years, not decades, we do not make specific recommendations to address persistent poverty and lack of education in our nation. But until we reduce poverty, particularly child poverty, and improve overall educational attainment and quality, America cannot and will not be as healthy as it should be.

Creating a National Culture of Health

Achieving better health requires action both by individuals and by society. If society supports and enables healthier choices—and individuals make them—we can achieve large improvements in our nation's health. Too often, we focus on how medical care can make us healthier, but health care alone isn't sufficient. We need to cultivate a national culture infused with health and wellness—among individuals and families and in communities, schools and workplaces. Just as America has "greened" in response to global warming, we can and must integrate healthier decisions in all we do.

A Call For Collaboration

Building a healthier nation will require substantial collaboration among leaders across all sectors, including some—for example, leaders in child care, education, housing, urban planning and transportation—who may not fully comprehend the importance of their roles in improving health. This Commission challenges individuals, communities, employers and unions, the business community, media, faith leaders and congregants, philanthropy and government officials at all levels to work together on promising strategies and solutions:

Community-based groups can adopt a "health lens" to view their communities by:

- establishing farmers' markets and advocating for local supermarkets where none exist;
- ensuring streets are pedestrian- and bike-safe, and advocating for cross walks, bike paths, sidewalks and security lighting; and
- assessing and remediating hazardous conditions in housing.

Schools can provide a quality education to give students the best opportunity to achieve good health throughout life; promote healthy personal choices by students; and provide a safe and healthy physical and social environment by:

- ensuring all school lunch and breakfast offerings meet the most current U.S. dietary guidelines; removing all junk food from cafeterias, vending machines and canteens; and
- making daily physical activity one of the *highest priorities*.

Businesses and employers can exercise local leadership and promote employee health by:

- making a visible commitment to increase physical activity at work;
- selecting health plans that include wellness benefits; and
- implementing a comprehensive smoke-free workplace policy and offering proven tobacco-use treatment to smokers.

Health care providers, particularly those whose patients have lower incomes or live in disadvantaged communities, can help connect patients with community services and resources.

Governments at all levels can provide incentives; seed assessments and plans; fund research and evaluations to identify effective approaches to improving health; and provide the foundation for collaborative efforts.

Local and state governments can lead by:

- making early child development services a *highest priority*;
- offering financial incentives for grocery stores to locate in underserved neighborhoods;
- incorporating health-conscious designs into building codes and zoning; and
- adopting state-wide smoke-free workplace and public spaces laws.

The federal government can lead by:

- ensuring that the early developmental needs of children in low-income families are met;
- fully funding WIC and SNAP and ensuring that these programs are designed to support the needs of hungry families with nutritious food; and
- funding research and evaluation of effective non-medical and community-based interventions in all sectors that influence health; holding programs that receive federal support accountable for achieving results.

Philanthropies can lead by:

- supporting initiatives in disadvantaged communities that create opportunities for healthy living and healthy choices; and
- identifying, supporting and championing innovative models of community building and design; joining with federal and state agencies and businesses as partners in supporting and rigorously evaluating place-based, multisector demonstrations.

We strongly support a realignment of existing and new private and public resources to support improved health for all Americans. This will require a concerted focus on achieving the most rapid progress among those who are farthest behind on the road to optimal health. Together, we can and must achieve a healthy America for all.

Introduction

The Problem

Despite spending more on health care than any other nation, the United States ranks below many countries on key health indicators like infant mortality and life expectancy. While both infant mortality and life expectancy have improved over the last quarter-century, U.S. rankings have fallen relative to other nations: infant mortality slipped from 18th in 1980 to 25th in 2002, and the ranking on life expectancy fell from 14th in 1980 to 23rd in 2004.[1]

Within our nation, health varies dramatically across states and localities, and among social and economic groups. New data released by the Commission illustrate these differences.[2] Figures 1 and 2 present recent data for health status—assessed for children by their parents or guardians, and self-reported by adults—a measure that corresponds closely with objective clinical assessments of overall health.

Health status among children (Figure 1) varies by family income and education and by racial or ethnic group. Children in the least-advantaged groups typically experience the worst health, but even children in middle-class families are less healthy than those with greater advantages. There is room for improvement in every income, education and racial or ethnic group that we studied, nationally and in every state. Even children in the most-advantaged groups are not as healthy as they should be, when compared with a national benchmark representing a level of health that should be attainable for all children in every state.

Figure 2 shows how adult health varies by education and racial or ethnic group, revealing that even college graduates and non-Hispanic whites fail to meet the national benchmark for adult health. (The child and adult benchmarks are defined in footnotes to Figures 1 and 2.)

Impressive gains have been made in recent decades in improving overall life expectancy and reducing overall rates of several chronic diseases and the factors that cause them. However, socioeconomic and racial and ethnic inequalities generally have *not* narrowed. Some studies have shown widening socioeconomic gaps in health and health-related behaviors, such as smoking, and widening racial/ethnic gaps in maternal mortality. Health disparities among Americans who differ by social or economic status are keeping America from being as healthy as it should be. Closing the gaps not only will improve the quality of life nationwide but also promises to rein in escalating medical costs.

The Economic Consequences

Health is essential to well-being and full participation in society, and ill health brings suffering, disability and loss of life. The economic implications of our nation's health shortfalls are sobering: We now spend more than $7,421 (the estimate for 2007) on health care for each person every year, totaling more than $2.2 trillion.[3] If current trends continue, health care costs, now more than 16 percent of the Gross Domestic Product (GDP), will exceed 20 percent of GDP by 2018.[4]

The costs of medical care and insurance are now out of reach for many American households, pushing some families into bankruptcy, draining businesses, reducing employment and severely straining the budgets of federal, state and local governments. The rising costs of providing care to aging baby boomers and the growing number of obese Americans will further strain public and private budgets. The current recession exacerbates the destructive effects of these health care cost pressures, which, in turn, make economic recovery more difficult.

In 2005, over 40 percent of Americans reported having at least one chronic condition that limited their activity and/or required ongoing medical care; the proportion who reported having three or more chronic conditions almost doubled to over 13 percent since 1996.[5] In 2005–2006, eight of these chronic conditions—arthritis and related conditions, hypertension, heart disease, lower respiratory disease, cancer, diabetes, depression and cerebrovascular disease—accounted for 25 percent of all visits to doctors' offices, clinics and hospital outpatient departments, as well as almost a third of all hospital discharges.[6]

The current path of rising costs and rising rates of chronic disease is simply not sustainable. Greater access to effective, efficient medical care is important for our nation's well-being, but medical care cannot deliver wellness, nor can health care system reforms alone bring costs under control. Instead, we need a new vision of health that rests on changing the lives of Americans in ways that lead to healthier, longer lives.
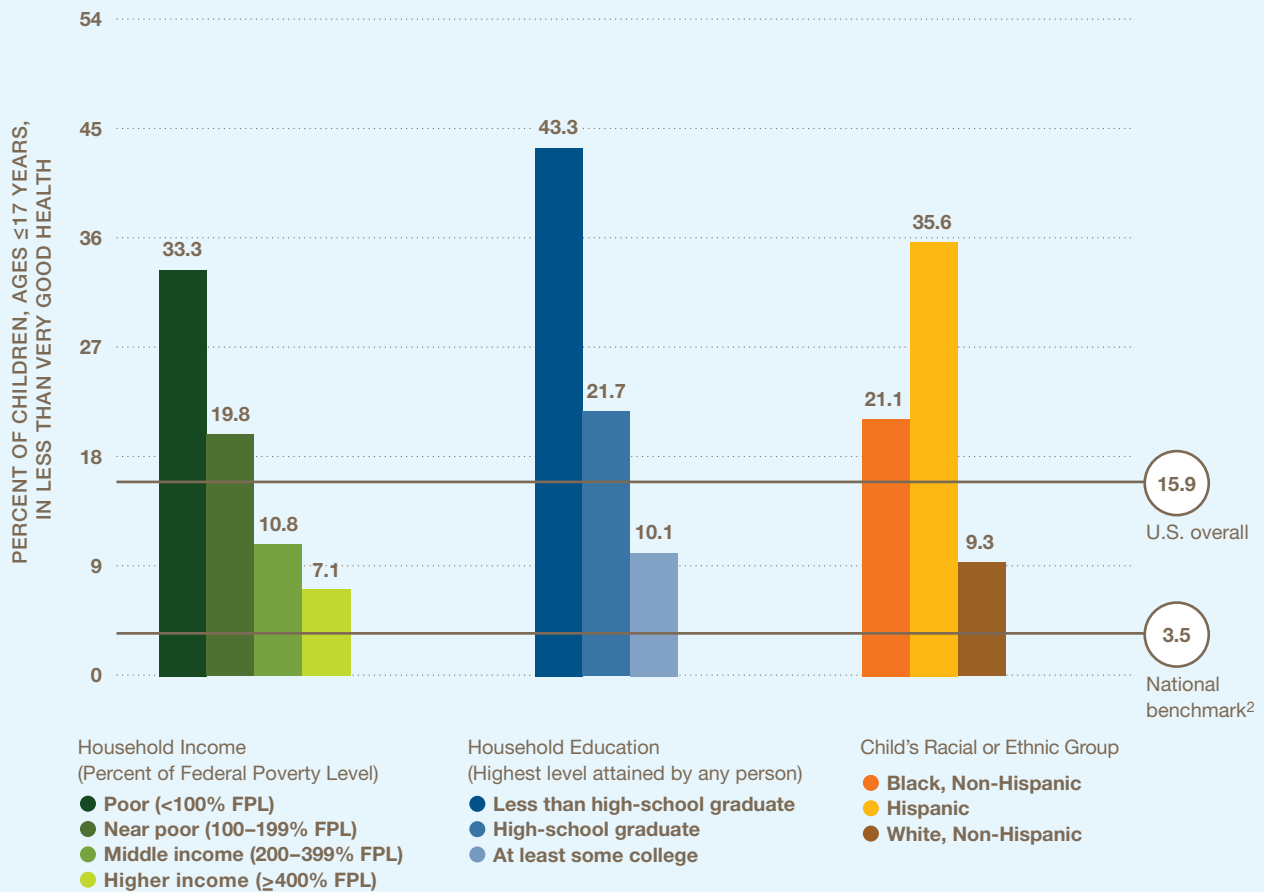
Gaps in Children's General Health Status

figure 1 In the United States overall, children's general health status[1] varies by family income and education and by racial or ethnic group. Children in the least-advantaged groups typically experience the worst health, but even children in middle-class families are less healthy than those with greater advantages.

• Compared with children in higher-income families, children in poor, near-poor or middle-income families were 4.7, 2.8 and 1.5 times as likely to be in less than optimal health.

• Compared with children living with someone who has completed some college, children in households without a high-school graduate were more than four times as likely—and those in households with a high-school graduate twice as likely—to be in less than optimal health.

• Non-Hispanic white children fare better than those who are non-Hispanic black or Hispanic.

Comparing these rates against the national benchmark[2] for children's general health status reveals unrealized health potential among children across income, education and racial or ethnic groups.

PERCENT OF CHILDREN, AGES ≤17 YEARS, IN LESS THAN VERY GOOD HEALTH

Household Income (Percent of Federal Poverty Level)
- Poor (<100% FPL)
- Near poor (100–199% FPL)
- Middle income (200–399% FPL)
- Higher income (≥400% FPL)

Household Education (Highest level attained by any person)
- Less than high-school graduate
- High-school graduate
- At least some college

Child's Racial or Ethnic Group
- Black, Non-Hispanic
- Hispanic
- White, Non-Hispanic

33.3 · 19.8 · 10.8 · 7.1 · 43.3 · 21.7 · 10.1 · 21.1 · 35.6 · 9.3
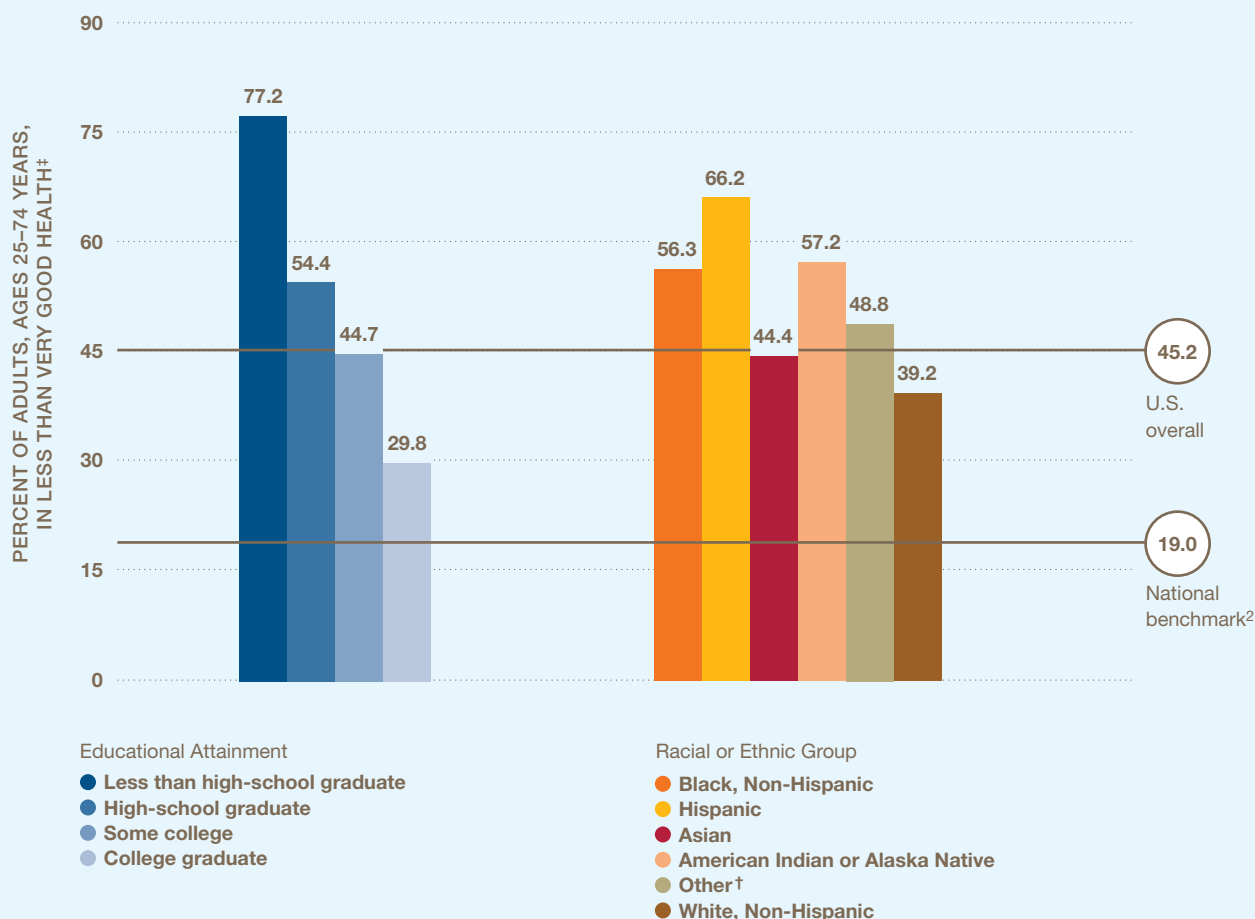
15.9 U.S. overall

3.5 National benchmark[2]

Gaps in Adult Health Status

figure 2 In the United States overall, adult health status[1] varies by level of educational attainment and racial or ethnic group.

• Compared with college graduates, adults who have not graduated from high school are more than 2.5 times as likely—and those who have graduated from high school are nearly twice as likely—to be in less than very good health.

• Non-Hispanic white adults fare better than any other racial or ethnic group.

Comparing these rates against the national benchmark[2] for adult health status reveals that, at every education level and in every racial or ethnic group, adults in this country are not as healthy as they could be.

PERCENT OF ADULTS, AGES 25–74 YEARS, IN LESS THAN VERY GOOD HEALTH‡

Educational Attainment
- ● Less than high-school graduate — 77.2
- ● High-school graduate — 54.4
- ● Some college — 44.7
- ● College graduate — 29.8

Racial or Ethnic Group
- ● Black, Non-Hispanic — 56.3
- ● Hispanic — 66.2
- ● Asian — 44.4
- ● American Indian or Alaska Native — 57.2
- ● Other† — 48.8
- ● White, Non-Hispanic — 39.2

45.2 — U.S. overall

19.0 — National benchmark[2]

1 Based on self-report and measured as poor, fair, good, very good or excellent.

2 The national benchmark for adult health status represents the level of health that should be attainable for all adults in every state. The benchmark used here—19.0 percent of adults in less than very good health, seen in Vermont—is the lowest statistically reliable rate observed in any state among college graduates who were non-smokers with recent leisure-time physical exercise. Rates with relative standard errors of 30 percent or less were considered to be statistically reliable.

† Defined as any other or more than one racial or ethnic group, including any group with fewer than 3 percent of surveyed adults nationally in 2005–2007.

‡ Age-adjusted.

The Commission's Charge

With the foregoing scene as a backdrop, the Robert Wood Johnson Foundation established the Commission to Build a Healthier America and posed three questions to us:

- Why aren't Americans among the healthiest people in the world?

- Why are some Americans so much healthier than others?

- What can be done to create opportunities for all Americans to have long and healthy lives?

The Commission was charged with three tasks, to:

- raise awareness of the shortfalls in health experienced by many Americans;

- identify interventions beyond clinical services that show promise for improving overall health and reducing disparities; and

- recommend key actions to be taken by communities, businesses, unions, philanthropies, faith-based organizations, civic groups, local governments, states and the federal government to create greater opportunities for long and healthy lives for all Americans.

This report documents the Commission's progress over the past 15 months as we turned a spotlight on the sometimes surprising sources of our nation's health shortfalls, learned about successful community initiatives and state and federal program innovations, and reached consensus on key recommendations for improving America's health.

Our Vision of a Healthy Society

The health of a society is grounded in the health of each individual member of that society. The vitality of our economy, the strength of our social fabric and the integrity of our political life depend on the health and well-being of individuals and families. Good health also makes it possible to achieve personal goals, fulfill family responsibilities and meet social commitments, including full participation in a democratic society. While a long and healthy life is universally valued, it is not equally attained across America.

Good health requires personal responsibility

Good health fundamentally depends on personal choice and responsibility. No government or private industry program can take the place of people making healthy, responsible choices for themselves and their families. It is fair and reasonable to expect individuals to take responsibility for safeguarding their own health and that of their families by trying to maintain healthy diets, get enough physical exercise, and avoid risky behaviors such as smoking, excessive drinking and substance abuse, and nurture their children. At the same time, social institutions and popular culture must help create an environment in which to make these individual choices.

What is a healthy society?

A healthy society, like a tree, develops from the ground up and begins with the health of children. In a healthy society, all children have nurturing, safe and stimulating experiences at home, in child care, in schools and in their encounters with the wider world. They get a healthy start in environments that allow their brains and bodies to develop as fully as possible.

In a healthy society, every individual, at every age:

- eats a nutritious diet and engages in regular physical activity;

- avoids risky behaviors including smoking, excessive drinking and substance abuse;

- lives in housing that protects and promotes physical and mental well-being;

Photo: Tyrone Turner

- enjoys safe and healthy neighborhoods and communities designed to promote physical activity and social interactions, and that are free from environmental toxins;

- attains education adequate to participate in the economy, make informed decisions, and safeguard the health of oneself and one's family;

- works in environments that protect workers from health hazards, encourage healthy choices and treat people with dignity;

- receives appropriate, high-quality physical and mental health care; and

- enjoys adequate income to afford all of the above.

Not Everyone Has the Same Opportunities to Be Healthy

Unquestionably, we must take individual responsibility for our health and the health of our families. At the same time, we must recognize that, in many instances, the barriers to good health exceed an individual's abilities, even with great motivation, to overcome these barriers on his or her own. In seeking a healthy society, we must consider the choices available to individuals and the contexts in which choices occur—including conditions in homes, neighborhoods, schools and workplaces—that can constrain or enable healthier living.

In the following section, we outline important contributors to health and note how differences in family and community circumstances and resources can translate into health disparities. Because some face particularly daunting obstacles to leading healthy lives, the Commission focused

on how to remove obstacles for those Americans with the greatest shortfalls in health. Identifying the important contributors to health and noting how opportunities to lead a healthy life vary by circumstances also points us towards key interventions for reducing health gaps and improving our nation's health.

Contributors to Health

Health care Medical care is central to relieving suffering and to improving the health and extending the lives of people once they are sick or injured. Assuring appropriate, high-quality care to all members of society expresses respect and compassion. But it is critical that we focus on keeping people healthy in the first place; this requires attention to, and investments in, improving our everyday habits and environments. Investment is especially critical in economically disadvantaged communities, where people of color are disproportionately represented. Our recommendations about how to keep more Americans from getting sick are meant to supplement—but not replace—efforts to ensure access to preventive and curative health care services.

Nutrition and physical activity Almost half of preventable deaths in the United States are related to behaviors such as poor dietary practices or inadequate physical activity.[8] Nutrition and physical activity are known risk factors for diabetes, heart disease and stroke, and may contribute to some cancers. Obesity contributes to arthritis and immobility, as well as related costs in quality of life and medical care. We know that informing people of the need for good nutrition and physical activity is important, but insufficient. While raising awareness of healthy behaviors has helped in adopting many improvements in health overall, little or no progress has been made in reducing important differences in health across

Photo: Tyrone Turner

socioeconomic groups.[9] Even while the message of nutrition and exercise is more prominent and has been more actively marketed than ever, Americans have become increasingly obese. We must identify and remove the obstacles that make it difficult for people to act in ways they know are important to their health.

Risky behaviors and supportive environments Smoking, excessive drinking and substance abuse are among the leading contributors to preventable death in the United States.[10] Most people are aware of the health risks associated with these behaviors. And we know that programs and policies focused exclusively on individual behaviors are not likely to succeed over the long term.[11] But support from family members, friends, co-workers and others striving for better health can provide useful motivation. Supports such as environmental changes or changes in culture—in schools, workplaces and neighborhoods—can likewise remove barriers to behavior change and promote healthier choices.

Early life experiences Our early years set us on paths that last a lifetime, paths toward or away from good health. Brain, cognitive and behavioral development early in life are strongly linked to an array of important health outcomes later in life, including cardiovascular disease and stroke, hypertension, diabetes, obesity, smoking, drug use and depression—conditions that account for a major portion of preventable morbidity and premature mortality in the United States. While all parents want the best for their children, not all parents have the same resources to realize this desire. Parents' education and income levels can support or limit their ability to provide their children with nurturing, stimulating environments and models for healthy behaviors.[12] Strong evidence supports the value of early intervention; the greater the economic disadvantage, the greater the value. Investing in children pays huge returns, and investing in improving

children's development at the beginning of life may be the most effective strategy for improving the health and well-being of our nation.[13]

Neighborhoods The material resource and health needs of some communities are far greater than the needs of others. Health disparities by race and ethnicity, as well as by socioeconomic characteristics like income and education, are profound and must be reduced. Although racial and ethnic discrimination are illegal, the legacy of such discrimination remains, with many members of some groups more heavily concentrated in resource- and opportunity-poor neighborhoods.[14] Blacks and Hispanics typically live in neighborhoods with higher concentrations of poverty than whites. Poorer neighborhoods have weaker tax bases, which can mean limited support for public schools and community programs; crime and social disorder; and limited access to fresh groceries. Low-income neighborhoods have often served as locations for toxic waste dumps or have bordered freeways, refineries and other sources of pollution. Neighborhood conditions can contribute to disease, such as asthma, as well as limit ability to make healthy choices in daily life.

Income Income is an essential contributor to health. Higher income can make it easier to pay for medical care, nutritious foods, quality child care, housing free of hazards, and neighborhoods with good schools and recreational facilities. Limited economic means can make everyday life a struggle, leaving little time or energy to adopt healthy behaviors and crushing motivation. Chronic stress associated with financial insecurity can seriously damage health, causing wear and tear on the heart and other organs and accelerating aging.[15] A range of strategies has been proposed to reduce poverty and raise family income through tax, minimum wage, income supports and other policy interventions.[16] Given the relatively

short tenure of the Commission and the work in this area by others, we have not developed specific recommendations for reducing poverty or maintaining incomes.

Education People with more schooling can better understand how their behaviors are linked to health. Basic literacy is a prerequisite for health literacy, and many Americans lack both—making it even more challenging to cope with chronic health problems and complex medical treatments. Higher educational attainment can open the door to opportunities for higher-paying jobs, which bring greater economic security, better benefits including health insurance, and healthier working conditions. Better education, higher income and improved health are inextricably linked.[17] Several strategies to improve educational quality, raise educational attainment and reduce disparities in access to higher education have been brought forward into the national policy arena.[18] As with health care and income, the Commission has not developed specific recommendations for improving educational quality, attainment and equity, while recognizing that progress in these areas is essential for better health among Americans.

. . . .

America's ability to realize its full health potential will continue to be limited as long as we continue to have high rates of child poverty and low educational attainment.

. . . .

What We Learned

Over the past year, the Commission has seen and heard from communities and innovators in businesses, states, faith-based and voluntary organizations, and public agencies who have demonstrated success in supporting healthier choices and creating health-promoting policies and environments for living, learning, working and playing. Several consistent themes emerged in every topic we explored. Those themes were reinforced at our site visits and field hearings focused on the development of young children, neighborhood conditions and resources in urban and rural areas, and work and workplace conditions. Our recommendations incorporate these themes and insights from successful local initiatives aimed at improving health:

- First, leadership and champions within an organization or community are essential for successful initiatives to change longstanding practices and promote better health.

- Second, successful initiatives invariably involve collaborations among many stakeholders: community groups, faith-based organizations and service providers, businesses, employees and unions, education, health, housing and welfare agencies.

- Third, successful programs are accountable to their sponsors and funders; they set goals with measurable outcomes and monitor progress toward achieving those goals.

- Fourth, successful and sustainable programs have local roots and build on community assets.

- Finally, major institutional and governmental support is needed to assist local communities in targeting resources and efforts to areas of greatest need—and therefore of greatest impact.

These themes and insights are reflected in the five following chapters that address:

- removing obstacles to healthy diets;

- building physical activity into every day;

- adopting healthy behaviors and creating safe, supportive environments;

- ensuring high-quality early life experiences for all children; and

- creating healthy homes and communities.

BACKGROUND: **Creating a National Culture of Health**

Achieving better health requires action both by individuals and by society. If society supports and enables healthier choices—and individuals make them—we can achieve large improvements in our nation's health. Too often we focus exclusively on medical care to make us healthier, but health care is not sufficient to ensure good health. We need to cultivate a national culture infused with health and wellness—among individuals and families and in communities, schools and workplaces. And we must ensure that all Americans—including those who face the greatest obstacles—can share in that culture. Just as America has "greened" in response to global warming, we can and must fulfill our unrealized opportunities for better health.

For each recommendation or set of recommendations, we document the problem, provide a rationale for the recommendation, offer examples of successful initiatives, propose how to measure and monitor progress and list resources. In many instances, data limitations make tracking improvements in health and reductions in disparities at the local level especially challenging. The seventh chapter presents recommendations focusing on changes needed to improve capacity for ongoing monitoring of health and health disparities in relation to social factors.

Measuring and monitoring progress towards achieving health objectives is vital for holding initiatives accountable for success. Without accountability, scarce human and financial resources will be wasted—something our society cannot afford—and even effective interventions will not be able to demonstrate success. Whenever possible, we propose indicators from existing population-based data sources to track progress and measure outcomes. In many cases, intermediate health-related outcomes, rather than ultimate health outcomes themselves, can be monitored. This strategy of using intermediate indicators of an intervention's impact is scientifically viable and absolutely necessary when health outcomes are manifest decades or generations later, as is the case, for example, for many interventions focused on infants and very young children.

The final chapter recapitulates and summarizes the recommended strategies, highlighting common, cross-cutting themes and categorizing by what different actors or sectors—community groups, schools, businesses, health care providers, local, state and federal government agencies, and philanthropies—can and should do.

The Time to Act Is Now

This is a difficult and challenging time, with a global economic recession, high and rising unemployment rates, and losses in the value of household savings and assets nationwide. It has never been more important to make good decisions at every level—from the individual to our federal government. In the quest for better health, we must look both to our everyday practices and personal choices and to the opportunities and environments that shape them. This will take nothing less than changes in habits and cultures, policies and practices. Pending investments in rebuilding America's infrastructure provide opportunities for incorporating health into programming and design—producing, for example, more green spaces, playgrounds, sidewalks and bike paths in community development and redevelopment projects, and more housing built around public transportation hubs.

This report is intended to inform and guide these necessary changes, building on three fundamental premises:

- Improving America's health will take more than improving the quality of medical care and access to care.

- Our behaviors and environments powerfully influence the underlying physiological mechanisms of health and disease.

- Solutions exist; we must lift up and build on the successes of many local initiatives around the country.

As we address the substantial challenges facing our nation, we call upon policy-makers and leaders in business and civil society to continually ask, "How would this affect people's health?" and "How would this reduce health disparities?"—and to take the answers seriously as they pursue new ventures, build structures and programs, and invest resources.

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One

Removing Obstacles to Healthy Eating

Recommendations From the Robert Wood Johnson Foundation Commission to Build a Healthier America

Recommendation:

Feed children only healthy foods in schools.

Federal funds should be used exclusively for healthy meals. Schools should eliminate the sale of "junk food" and federal school breakfast and lunch funds should be linked to demonstrated improvements in children's school diets.

Recommendation:

Fund and design WIC and SNAP (Food Stamps) programs to meet the needs of hungry families for *nutritious* food.

These federal programs must have adequate support to meet the nutritional requirements of all American families in need. More than one in every 10 American households do not have reliable access to enough food, and the foods many families can afford may not add up to a nutritious diet. Nutritious food is a basic need to start and support an active, healthy and productive life.

Recommendation:

Create public-private partnerships to open and sustain full-service grocery stores in communities without access to healthful foods.

Many inner city and rural families have no access to healthful foods: for example, Detroit, a city of 139 square miles has just five grocery stores. Maintaining a nutritious diet is impossible if healthy foods are not available, and it is not realistic to expect food retailers to address the problem without community support and investment. Communities should act now to assess needs to improve access to healthy foods and develop action plans to address deficiencies identified in their assessments.

Good nutrition is essential to good health throughout life and especially so for children. Proper nutrition for children supports not only physical health but learning, growth and development. For adults and kids, a nutritious diet helps prevent illness and maintain productivity.

So why do so many Americans have poor diets?

The Problem

For many Americans, maintaining a healthy diet has very little to do with choosing to follow recommended dietary guidelines. Where people purchase their food and eat their meals—often determined by the resources they have to pay for food and by food choices available in their community—has a major impact on the nutritional quality of American diets.

On school days, for example, children may easily consume over half of their daily calories at school, where their food options are often not healthy. In particular, students participating in the national school lunch and breakfast programs consume more fat and sodium than those who do not participate, although participants' meals satisfy other nutritional requirements to a greater degree.[1]

In 2007, 36.2 million Americans—including one of every six children—lived in households that at times were uncertain of having or unable to acquire enough food for all household members because they had insufficient money and other resources for food.[2] The cost of maintaining a healthy diet is particularly out of reach for many lower-income Americans. This has implications for the kinds of foods that families purchase; for example, processed foods cost less than fruits and vegetables, and processed food prices are less likely to increase as a result of inflation or fluctuations in supply.

In addition, community food sources are critical to the food choices available to families. Many low-income communities, both urban and rural, lack full-service grocery stores that sell fresh and minimally processed fruits and vegetables. For example, Detroit, a city of 139 square miles and very limited public transportation, has just five large (over 20,000 square feet) grocery stores. A market analysis found that the city actually could support 41 supermarkets of at least twice that size, based on its population and spending habits.[3] Communities without full-service grocery stores often have an abundance of fast food outlets and convenience stores. One recent study concluded that "people living in neighborhoods crowded with fast-food and convenience stores but relatively few grocery or produce outlets are at significantly higher risk of suffering from obesity and diabetes."[4] Children's diets, in particular, are susceptible to their surroundings; they are more likely than adults to eat what is easily available and to eat more when larger portions are provided.

These obstacles—unhealthy food environments, lack of resources to purchase nutritious food regularly, and lack of healthy food sources in the community—represent major challenges for people to maintain a healthy diet.

What are the impacts of poor eating on the nation's health?

Americans are both overfed and undernourished. Only 2 percent of American children eat a healthy diet.[5] Most children consume too much added sugar, sodium, total fat and saturated fat, while eating too little whole grains, fiber, fruits and vegetables and low-fat dairy. In a 2007 nationwide survey of high-school students, only one in five had eaten fruits and vegetables five or more times per day in the week prior to the survey.[6] Adults don't eat as well as they should, either: In 2005, only one-third of U.S. adults ate fruit at least twice per day and 27 percent ate vegetables at least three times per day.[7]
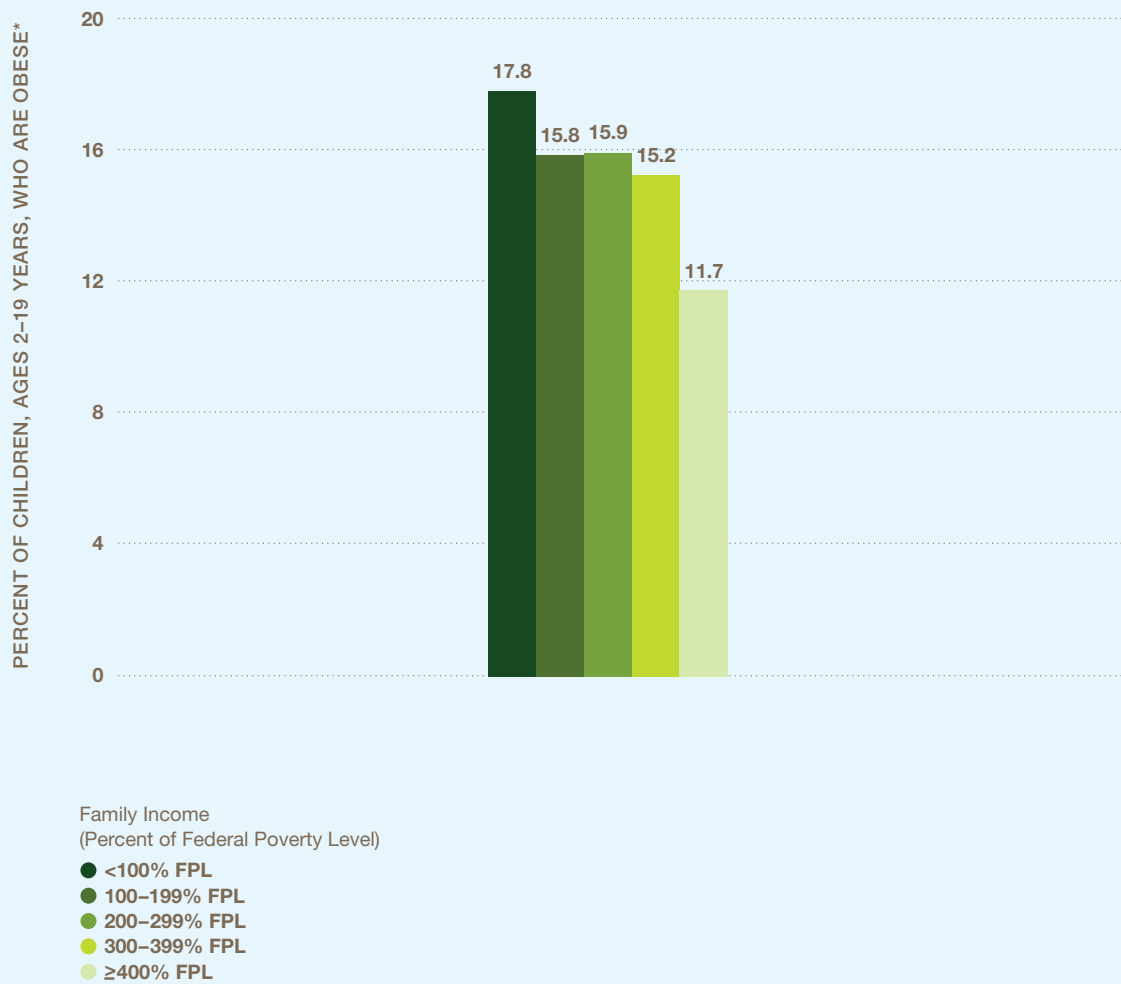
Rates of obesity among adults and children have increased alarmingly. Currently, one-sixth of U.S. children ages 2 to 19 are overweight and another sixth are obese, with a body-mass index at or above the 95th percentile.[8] Although poor children are most likely to be obese, more than one in nine children in families with higher incomes (at least four times the Federal Poverty Level) is also obese (Figure 3). One-third of the U.S. adult population age 20 and older are obese, with higher rates among non-Hispanic black and Mexican-American women.[9]

As rates of obesity have increased, obesity-related chronic diseases have become increasingly common.[10] Obesity is associated with increased mortality due to cardiovascular disease, diabetes, kidney disease and certain types of cancer.[11] Obesity and its associated health problems have a significant economic impact from direct medical costs and indirect costs related to morbidity and mortality; these costs have been estimated to be as high as $139 billion per year.[12]

Addressing the lack of regular, affordable and easy access to nutritious foods must be the centerpiece of efforts to stop the epidemic of obesity and its grave human and economic consequences. Given the high stakes, what can be done to reduce the obstacles that Americans face to healthier eating?

Lower Income, More Child Obesity

figure 3 Lower family incomes are related to higher rates of obesity in childhood.

PERCENT OF CHILDREN, AGES 2–19 YEARS, WHO ARE OBESE*

17.8	15.8	15.9	15.2	11.7

Family Income
(Percent of Federal Poverty Level)

- <100% FPL
- 100–199% FPL
- 200–299% FPL
- 300–399% FPL
- ≥400% FPL

*Age-adjusted

Recommendation: Feed children only healthy foods in schools.

Federal funds should be used exclusively for healthy meals. Schools should eliminate the sale of "junk food" and federal school breakfast and lunch funds should be linked to demonstrated improvements in children's school diets.

Rationale

Schools offer many opportunities to support better eating among children and adolescents, including improving publicly subsidized meals and changing policies regarding other foods sold or provided on the school premises (e.g., at sports events, parties and meetings). But meals and snacks served at schools must be tasty as well as healthy if students are to eat them, and school snack bars and vending machines must be purged of unhealthy alternatives such as candy and sweetened soft drinks. No amount of instruction in the classroom about the importance of eating right will counteract the impact on children's diets of food choices both in the school lunchroom and in snack and soda vending machines.

Meals provided at school

Schools should ensure that all options offered during breakfast and lunch meet the 2005 Dietary Guidelines for Americans, which include whole grains, lean proteins, more fruits and vegetables and lower sodium and fat content than previous standards. It is not enough to supply one option that meets these minimum guidelines if unhealthy options are also offered. We need to make nutritious choices the only choices available and to stock lunch lines with a variety of appetizing and healthy options.

The National School Lunch Program (NSLP) served 30.5 million children every school day in fiscal year 2007.[16] Of these, 15 million students received free lunches (because their family incomes were below 130% of the federal poverty

level) and another 3 million students paid a reduced price for lunch (with family incomes between 130% and 185% of the federal poverty level.) The remaining 12.5 million students paid full price for school lunch, but even full-price lunches are subsidized to a small extent through federal payments.

In 2007, federal cash support to NSLP totaled $7.7 billion, with federally donated commodities valued at $1.04 billion.[17] However, school food programs generally find the federal meal reimbursement amounts inadequate and often rely on vending machine proceeds and sales of à la carte items to make up the difference between their costs and the federal contributions.

About 10 million children participate daily in the School Breakfast Program (SBP); 81 percent of them receive breakfast free or at reduced price (based on the same eligibility standards in place for NSLP).[18] A meta-analysis of more than 100 studies concluded that the SBP is highly effective in laying the foundation for children to learn in school, eat more nutritious diets, and lead healthier lives.[19] Fewer than half of low-income students who participate in NSLP also participate in SBP; many more low-income students could be participating in SBP. Factors including the early time and place at which the meals are served and the stigma associated with taking free food (which may be greater for SBP than NSLP, given that most SBP participants are from poor or low-income families) can influence utilization.[20] Federal support for the SBP is about $2 billion annually.[21]

Universal free school breakfast programs increase participation in school breakfast among elementary and middle-school students whether or not they qualify for free/reduced cost meals.[22] Breakfasts provided in the classroom are also more likely to have higher participation rates.[23] Evaluations of programs that combined nutrition education with universal free breakfast found that these programs reduced stress at home, stigma associated with eating free breakfast at school and the likelihood that students (especially girls) skipped breakfast in efforts to lose weight.[24] To ensure greater overall participation in the SBP among those who will benefit the most, more school

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The HealthierUS School Challenge

HealthierUS is a voluntary certification process established by the USDA that rates an elementary school's nutrition environment to recognize and encourage schools' commitments to making healthy changes. Schools are certified as bronze, silver, gold or gold of distinction. To be certified, an elementary school must be enrolled as a USDA Team Nutrition School; offer reimbursable lunches that demonstrate healthy menu planning practices and principles of the *Dietary Guidelines for Americans* and meet USDA nutrition standards; provide students with nutrition education and physical activity opportunities; maintain an average daily participation of school enrollment for reimbursable lunches of at least 62 percent for Bronze or 70 percent for Silver and Gold Schools; and adhere to guidelines established by the Food and Nutrition Service for competitive foods.[29]

districts across the nation should offer universal breakfast in the classroom, especially in schools with high percentages of low-income students. Many urban school districts have indicated that this can be immediately implemented in schools with high concentrations of poverty.[25]

Schools have increased the number of lunch and breakfast offerings that meet the USDA benchmarks for key nutrients like calcium, protein, iron and vitamins A and C, but they have not significantly lowered the high fat, saturated fat and sodium in many school breakfast and lunch options. Whole grain products, beans, fruit (not juice) and non-fried vegetables are also scarce in most school lunches. A majority of schools *offer* low-fat or reduced-fat lunch options, but only approximately 25 percent of elementary and 12 percent of secondary school children *choose* these options.[26] Because students eat more healthful foods when other options are limited, it is important to provide *only* healthy options to affect eating habits and diet.[27] The National Alliance for Nutrition and Activity (NANA), which comprises more than 300 national, state and local organizations, has made specific recommendations for school meals to the USDA, based on the 2005 Dietary Guidelines for Americans.[28]

Foods available in schools besides school meals

Food and drink products sold in schools outside the federal meal programs pose a considerable challenge. These products, which are not required to meet USDA nutritional standards, tend to be "junk food" such as chips, candy, processed foods and sweetened sodas. Food sales, primarily the sale of soft drinks and snacks, were the most common form of commercial activity in schools.[30] Proceeds from junk food sales generally are used to subsidize the school's costs for the federal meal programs and for fundraising.

Considering the potential health consequences of these foods, however, they may not be worth offering. In 2006, 12 percent of all elementary schools, 25 percent of all middle schools and almost half of all high schools nationwide allowed students to purchase foods and beverages that were "high in fat, sodium, or added sugars from a vending machine or in a school store, canteen or snack bar during school lunch periods."[31] Only 18 percent of high schools sold fruits or vegetables in vending machines, a school store, canteen or snack bar.[32]

In 2007, the Institute of Medicine (IOM) set out guiding principles for the nutritional content of all foods served or sold in schools. *Nutrition Standards for Foods in Schools* advised that plain, potable water be available at no cost and that foods sold outside of the federally subsidized school meals consist of nutritious fruits, vegetables, whole grains and nonfat or low-fat milk and dairy products, consistent with the 2005 Dietary Guidelines for Americans.[33]

Related to the sale of junk food, food and soft drink advertising in public schools has grown in recent years.[34] Despite extensive evidence that commercial advertising and marketing of foods and beverages influence children's diets and health, most U.S. schools lack explicit policies about commercial marketing activities on campus.[35] Still, there has been some progress in reducing junk food in schools, as more states and school districts have prohibited schools from selling junk food as à la carte items not only during the school day but also after school. Between 2000 and 2006, the percentage of schools selling unhealthy foods from vending machines and school stores decreased, and low-fat à la carte items became more available in schools.[36] Some local initiatives have succeeded recently in eliminating soft drink vending machines and advertising from schools.

The Edible Schoolyard

School gardens are a promising strategy to improve students' attitude towards vegetable intake/food preferences and increase school connectedness. The Edible Schoolyard is a nonprofit program based at a middle school in Berkeley, Calif. that integrates organic gardening and cooking into the school curriculum. Students are active in maintaining the garden and using the produce to cook in the onsite kitchen; and classes across disciplines use the garden and kitchen in the curriculum.[37] Students participating in the Edible Schoolyard program had better grades, better understanding of garden cycles, ecosystems and sustainable agriculture (coined "ecoliteracy"), and improved their psychosocial adjustment. Students who made the biggest gains in ecoliteracy also reported the largest increases in fruit and vegetable intake.[38]

"The new organic garden on the White House lawn will provide herbs and vegetables to the White House kitchen and to Miriam's Kitchen, which serves the homeless in Washington, D.C. "Fresh, wholesome food is the right of every American… this garden symbolizes the Obamas' commitment to that belief."

ALICE WATERS, Chef and advocate for sustainable farming and childhood nutrition[39]

Other school-based nutrition initiatives

Over 8,700 schools in 40 states have partnerships with local farms to provide fresh healthy produce in school cafeterias.[40] Many schools integrate nutrition and environmental education, which may include farm visits, school gardens and waste management projects. Farm-to-school programs are supported by federal policies, including the 2008 Farm Bill, and by legislation in 18 states. Kentucky, for example, requires that state agencies purchase Kentucky-grown agricultural products whenever possible and that vendors participate in the Kentucky Grown labeling program in order to sell to a state agency. Similarly, Iowa established a statewide farm-to-school program administered by the Department of Agriculture and Land Stewardship, and Oregon created a full-time farm-to-school position within the Department of Education, Child Nutrition Programs. At the local level, the Davis Joint Unified School District in California recently approved a parcel tax to increase funding for fresh produce in school lunches, specifying that 60 percent of that produce be locally grown.

Recommendation: Fund and design WIC and SNAP (Food Stamps) programs to meet the needs of hungry families for *nutritious* food.

These federal programs must have adequate support to meet the nutritional requirements of all American households in need. More than one in every 10 American households do not have reliable access to enough food for an adequate diet, and the foods many families can afford may not add up to a nutritious diet. Nutritious food is a basic need to start and support an active, healthy and productive life.

Rationale

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is a mainstay of the U.S. public health infrastructure, serving half of all American infants and a quarter of all children ages 1 to 5.[41] WIC, funded through the USDA and administered by the states, provides supplemental foods, nutrition education and social service and health care referrals to low-income women who are pregnant, breastfeeding or postpartum and infants and children up to age 5. WIC serves an important role in promoting breastfeeding among low-income mothers, who are significantly less likely to breastfeed their infants than their higher-income counterparts, both through education and counseling of pregnant women and new mothers and

Photo: Tyrone Turner

by providing additional food benefits for women who choose to breastfeed their babies.[42] WIC services and supplements have been shown to increase participants' consumption of fruits and vegetables, low-fat dairy products and whole grains even on tight budgets and WIC participation has been demonstrated to improve birth outcomes and reduce illness among children in participating low-income families.[43]

The number of women and children receiving WIC benefits increased from 7.4 million in 1998 to 8.7 million in 2008. Program spending increased over the same period from $3.9 billion to $6.2 billion.[45] Because WIC is supported by annual appropriations and is not an entitlement program, states may, in times of high demand, institute waiting lists for eligible families to receive services through the program. Furthermore, current WIC food packages provide less than the full amounts of fruits and vegetables recommended by the IOM.[46] In 1993 the General Accounting Office (now the Government Accountability Office) estimated that, "for every dollar spent on WIC, the federal government saves up to $3.50."[47] Given its cost-effectiveness and success as a health intervention, funding for WIC should match the demand for WIC services.

The Supplemental Nutrition Assistance Program (SNAP; formerly Food Stamps) provided $34.9 billion in benefits to more than 31 million low-income Americans at the end of 2008. The number of SNAP participants in November 2008 was more than double Food Stamp enrollment in mid-2000.[48] SNAP serves as a nutritional safety net for families and has

demonstrated its ability to respond quickly to changing levels of demand, such as during the current recession.[49] At the same time, for many participants the value of the SNAP monthly benefit (which ranges from a minimum benefit of $16 per month to a maximum benefit of, for example, $668 per month for a four-person household) is insufficient for purchasing enough nutritious food throughout the month.[50] Based on household spending patterns from 30 years ago, SNAP benefit rules assume that an eligible family has 30 percent of its net income available to spend on food. As a result, few households receive the maximum benefit, since this level of income assumed available for food may be too high.

While demand for food assistance programs has risen sharply in recent months, a significant gap remains between the number of eligible individuals and the number of SNAP participants. Across states, overall participation in Food Stamps in FY 2006 ranged from just 50 percent of eligible persons to over 95 percent, indicating that some states could do much more to reach the target population.[52]

The American Recovery and Investment Act of 2009 included $20 billion for SNAP.[53] Most of this funding—approximately $19 billion—was allocated to support a 13.6 percent increase in SNAP benefits. As of April 2009, the maximum benefit increased by $80 for a family of four. While it is critical to ensure that all food assistance and nutrition programs have adequate funding to deliver the benefits people need, it is equally important that these programs provide enough

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NOTE: **WIC Eligibility**

Eligibility for federal WIC benefits is limited to members of families with incomes below 185 percent of the federal poverty threshold or who participate in Medicaid, Temporary Assistance for Needy Families (TANF) or SNAP.[44]

NOTE: **SNAP Eligibility**

Households eligible for SNAP have incomes less than 130 percent of the federal poverty threshold, and the monthly benefit is calculated as the difference between 30 percent of the household's monthly income and the maximum SNAP benefit.[51]

Photo: Tyrone Turner

assistance to support the *ongoing purchase of nutritious foods*—a clear prerequisite for healthy diets.

SNAP benefits are predicated on The Thrifty Food Plan (TFP), developed by the U.S. Department of Agriculture, which serves as a national standard for a "nutritious diet at low cost."[54] Until 1996, the maximum food stamp benefit for a fiscal year was set at 103 percent of the TFP cost (as estimated four months before the new benefit value took effect). Since 1996, the maximum benefit has been 100 percent of TFP, resulting in shortfalls each year; in fiscal year 2007 the maximum monthly benefit fell short by $12 and in 2008 by $22.[55]

In addition, the SNAP benefit benchmark does not account for regional variations in food costs. TFP costs are based on national average prices paid by low-income households for basic food items. Because the cost of food generally is higher in central cities than in suburban and rural communities, the amount of food a family can purchase with SNAP benefits varies widely depending on where the family lives. For example, one study that investigated local prices in two urban areas found that families receiving the maximum food stamp benefit would have to significantly supplement their annual food spending to provide a "thrifty" nutritious diet for a family of four—with an additional $2,520 in Boston and $3,165 in Philadelphia.[56]

Items that can be purchased with SNAP benefits include most foods, including candy and soft drinks, but exclude "ready to eat" items, such as rotisserie chicken, which may be a healthier option than frozen fried chicken pieces. Household staples such as paper products, diapers and cleaning supplies are also excluded. Excluding junk foods from items eligible for purchase with SNAP benefits has been proposed; the impact of such a policy on consumption patterns, however, is uncertain, and additional restrictions on

foods that can be purchased would increase administrative complexity and likely increase error rates in the program. Any such change should be carefully considered.

Because the cost of food generally is higher in central cities than in suburban and rural communities, the amount of food a family can purchase with SNAP benefits varies widely depending on where the family lives.

One alternative for improving diets for SNAP beneficiaries is to offer additional or "bonus" value for fruits and vegetables. A reduction in the cost of fruits and vegetables can be expected to increase their consumption.[57] The Boston Bounty Bucks program, a public-private partnership to encourage beneficiaries to buy produce in farmers' markets, provides coupons that double the value of food stamp dollars for purchases between $5 and $10 at participating markets. Participating farmers' markets in low-income neighborhoods are equipped to accept electronic benefit transfer (EBT) cards and honor Bounty Bucks coupons. This approach encourages the purchase of fresh fruits and vegetables and helps SNAP recipients stretch their food dollars. It also benefits local farmers by increasing the number of customers they serve and by increasing their overall sales at markets.

Special Farmers' Market Nutrition Programs for Seniors, Women, Infants and Children

The WIC Farmers' Market Nutrition Program (FMNP) and the Senior Farmers' Market Nutrition Program provide participants with coupons that can be exchanged for eligible foods at farmers' markets, roadside stands and community-supported agriculture programs. The program provides fresh, unprepared, locally grown fruits and vegetables to participants in supplemental food programs such as WIC or SNAP, and expands awareness of, use of and sales at farmers' markets.

The farmers' market programs promote access to nutritious commodities for low-income seniors, women, infants and children, increase the purchase and consumption of locally grown fruits and vegetables and create a demand for additional farmers' markets, roadside stands and community-supported agriculture programs. In 2007, over 20,000 farmers, farmers' markets and roadside stands were authorized to accept FMNP coupons. Coupons redeemed through the FMNP generated more than $20 million in revenue to farmers in fiscal year 2007.[58]

Recommendation: Create public-private partnerships to open full-service grocery stores in communities without access to healthful foods.

Many inner city and rural families have no access to healthful foods: for example, Detroit, a city of 139 square miles has just five large grocery stores. Maintaining a nutritious diet is impossible if healthy foods are not available, and it is not realistic to expect food retailers to address the problem without community support and investment. Communities should act now to assess needs to improve access to healthy foods and develop action plans to address deficiencies identified in their assessments.

Rationale

The Pennsylvania Fresh Food Financing Initiative (FFFI) has demonstrated that sustainable business models for grocery stores can be implemented in distressed communities through concerted public-private partnerships. But attracting full-service grocery stores to low-income and economically depressed communities poses several challenges:

- lack of adequate space for a supermarket and/or adequate population density to support a business of necessary scale;

- lack of convenient and affordable transportation to attract employees and customers to the store; and

- lack of confidence by the business in the ability to ensure physical safety and the security of the business property in an economically disadvantaged community.

Addressing these challenges requires the involvement of public agencies to provide services (policing, public transport) and financial support (through tax concessions or construction subsidies) to assist the private sector in undertakings that would otherwise be rejected as too risky or not profitable. A less obvious infrastructure cost is employee training for local residents who are likely to have received poor quality schooling and little or no preparation to enter the workforce; this may require supplementary funding from public or philanthropic sources for amounts needed beyond an employer's typical investment in employee training.

The Pennsylvania Fresh Food Financing Initiative

In the late 1990s, Philadelphia had the second lowest number of supermarkets per capita among major cities in the nation. Philadelphia's City Council responded by holding hearings in 2002 on the relationship between supermarket access and health and convened a task force to identify policy changes to improve food access. The Food Marketing Task Force, co-chaired by a Senior Vice President of Acme Markets and the CEO of the United Way of Southeastern Pennsylvania, included more than 40 experts from city government, the supermarket industry and the civic sector.[59]

Over the next two years, the Task Force examined the barriers to and opportunities for increasing the availability of food in Philadelphia neighborhoods, releasing its report, *Stimulating Supermarket Development: a New Day for Philadelphia*, in 2004.[60] The Task Force made 10 recommendations to increase the number of supermarkets in Philadelphia's underserved communities. The recommended policy changes were designed to improve the climate for supermarket development, create jobs, prevent diet-related disease and contribute to the revitalization of Philadelphia. A key feature of the process was including the private sector in the conversations from the very beginning.[61]

Photo: Tyrone Turner

Kenyon McGriff

It's easy to be healthy in a nice neighborhood, with tree-lined streets, sidewalks, good grocery stores and farmers' markets—but Kenyon McGriff didn't grow up in a neighborhood like that. Weighing 270 pounds by the time he was in 10th grade, Kenyon learned that his environment in urban West Philadelphia, with all of its fast-food restaurants and corner markets, was more of a challenge to his health than he had ever imagined. But when Kenyon's doctor told

At the same time, the Pennsylvania House of Representatives Committee on Health and Human Services held hearings and issued a report that concluded that the lack of full-service grocery stores was hurting urban and rural communities across the state and called for a new partnership between government and industry to respond to the problem. With the support of state legislators, the leaders of the Food Marketing Task Force successfully lobbied for a $10-million allocation in 2004 to create the FFFI. The legislature allocated an additional $10 million to the initiative in each of the two following years. The Reinvestment Fund has leveraged each dollar of state investment with three dollars of private equity, creating a $120-million initiative.[62] The Food Trust promotes the initiative statewide and determines if projects are located in eligible areas.

By providing the necessary capital financing to operators, FFFI allows store operators to enter neighborhoods that can support a store but might otherwise be overlooked. The initiative uses a market-based economic development strategy for a public health goal—bringing leaders from the supermarket industry together with public health and economic development professionals to address the barriers to supermarket development. An important component of the initiative is the targeting of the public sector investment to meet pre-development and capital costs rather than ongoing operation expenses. Sustainability is built into the program to ensure that its success is grounded in profitable business models as opposed to ongoing subsidy.

The FFFI has increased access to fresh food, created jobs and leveraged existing resources. The $58 million in funding for 69 projects approved to date in 27 Pennsylvania counties have created over 1.3-million square feet of new food retail space.[63] The supermarkets approved to date have created or retained 3,900 direct jobs, most of them for employees living in the community surrounding the stores. In addition, the

projects have attracted a total of $166 million of development investment into the served communities.[64]

The Food Trust also provides advice and support to states and localities that want to create a similar initiative. To date, New York State and the city of New Orleans have adopted the FFFI model. In his January 2009 State of the State address, New York governor David A. Paterson announced the Healthy Foods/Healthy Communities Initiative, a revolving loan fund modeled on the Pennsylvania initiative.[65] New Orleans is creating a similar program, called the Fresh Food Retail Incentives program, which is seeking state approval to use federal Community Development Block Grant money for a $7-million revolving fund.[66] New Orleans expects to launch its program in 2010. The State of Illinois is planning a grocery store financing initiative.

"In an era when we are acutely aware of the effect of our diets on our overall health, we are leaving millions of Americans adrift in neighborhoods where healthy eating is next to impossible. For many people, food 'choices' are really nothing of the sort."

ANGELA GLOVER BLACKWELL

The USDA Economic Research Service and the National Poverty Center at the University of Michigan recently convened researchers to increase understanding of and

him he was on the road to a life time of back pain, insulin shots and heart attacks, he took that as a wakeup call. He changed his eating habits, cutting back on calories and fat, learning to read nutrition labels on food products, and choosing items such as yogurt and sushi over cheeseburgers and potato chips.

During his senior year of high school, Kenyon took a job at a Papa John's pizza parlor, which he says afforded him healthier food choices. "I can create my own subs, say with less cheese or all vegetables," he says. Other days he'll eat a pizza, the bread sticks or go to the nearby McDonald's, where three cookies cost just one dollar. "You gotta have income to have good health," says Kenyon, who considers himself better off than many.[76]

develop methods and measures for determining communities' access to food.[67] This work is part of the USDA's study of the incidence of "food deserts," authorized in the 2008 Farm Bill. The science of characterizing neighborhood food environments is relatively new; definitions, identification of useful proprietary (in addition to public) datasets and applications of geographic information systems are all under development.

Accountability

Here and in the following chapters we propose illustrative, feasible markers of progress toward achieving the goals laid out in the recommendations. We identify relevant health and health-related indicators in existing routine surveys and datasets that can be tracked for overall populations and (whenever possible) for socioeconomic and racial/ethnic groups. In cases where no current data sources provide relevant information, we suggest how performance information might be collected. Linking data from different sources could greatly improve the effectiveness of monitoring.

To assess progress in the nutritional quality of school meal and snack offerings at the national and, in some cases, state levels, the following indicators in existing data sources could be used:

- The percentage of high school students who eat fruits and vegetables five or more times daily (CDC's Youth Risk Behavioral Surveillance System)[68]

- The percentage of schools meeting USDA nutrition standards for food served under the National School Lunch Program and School Breakfast Program (USDA's School Nutrition Dietary Assessment Survey)[69]

- The percentage of schools offering specified à la carte foods, e.g., fruit, vegetables, junk food (CDC's School Health Policies and Programs Study, next scheduled in 2012)[70]

States should also track the percentage of eligible children enrolled in school meal programs, and the use of direct certification of school-age SNAP participants for free school meals.[71]

Both participation in and the impact of using WIC and SNAP benefits could be monitored at the national and, in some cases, state levels using the following indicators in existing data sources:

- The percentage of adults who have consumed fruits and vegetables five or more times per day, by state, according to educational attainment, income and race/ethnicity (CDC's Behavioral Risk Factor Surveillance System)[72]

- The percentage of households that are food secure, according to income and race/ethnicity at the state and national level (Food Security Supplement to the Census Bureau's Current Population Survey)[73]

- The percentage of infants who are breastfed, according to duration, by maternal education, family income, infant's race/ethnicity and WIC participation at state and national levels (CDC's National Immunization Survey)[74]

- The USDA's "Healthy Eating Index" based on multiple indicators of nutritional intake (and BMI) among children and adults in NCHS' National Health and Nutrition Examination Survey according to income and race/ethnicity at national level.[75]

Tracking the growth in availability of full-service grocery stores in communities will require new and local data collection. Some studies have used commercial data on food store outlets linked to census data at ZIP code level. State and local governments should be encouraged to commission such studies in disadvantaged neighborhoods and regions.

Resources

Dietary Guidelines for Americans 2005
www.healthierus.gov/dietaryguidelines

USDA Center for Nutrition Policy and Promotion
www.cnpp.usda.gov

USDA Team Nutrition Schools
http://teamnutrition.usda.gov/HealthierUS/index.html

USDA School Breakfast Program Expansion Toolkit
www.fns.usda.gov/cnd/breakfast/expansion/default.htm

CDC National Fruit and Vegetable Program
www.fruitsandveggiesmatter.gov

CDC School Health Index
https://apps.nccd.cdc.gov/shi/default.aspx

Alliance for a Healthier Generation Healthy Schools Program
www.healthiergeneration.org/schools.aspx?id=82

Children's HealthWatch
www.childrenshealthwatch.org

The Edible Schoolyard
www.edibleschoolyard.org/

Child and Adolescent Trial for Cardiovascular Health (CATCH)
www.epi.umn.edu/cyhp/r_catch.htm

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Two

Increase Opportunities for Daily Physical Activity Among Children

Recommendations From the Robert Wood Johnson Foundation Commission to Build a Healthier America

Recommendation:

Require all schools (K-12) to include time for all children to be physically active every day.

One in five children will be obese by 2010. Children should be active at least one hour each day; only one-third of high-school students currently meet this goal. Schools can help meet this physical activity goal, through physical education programs, active recess, after-school and other recreational activities. Education funding should be linked to all children achieving at least half of their daily recommended physical activity at school, and over time should be linked to reductions in childhood obesity rates.

Regular physical activity is critical to a lifetime of good health and disease prevention, and should be integrated into every person's daily routine. Physical activity is important to health at all ages. In this chapter, we focus on increasing physical activity levels among children and the central role that schools play in creating both expectations and opportunities for activity. In the following chapter, we consider how workplaces can serve a comparable role for adults in supporting regular physical activity.

Physical activity can improve children's and adolescents' cardiovascular, musculoskeletal, emotional, mental and psychological health.[1] Physical activity helps determine a child's energy and food needs, and can help prevent obesity, type 2 diabetes and hypertension in children and adolescents.[2] Lifetime habits take root during childhood, and inactivity during childhood increases the likelihood of a sedentary adulthood. Federal government guidelines advise that children get at least one hour of moderate to vigorous physical activity a day.[3]

Why aren't children more active?

The Problem

Youth face several significant barriers to becoming more active. Physical and social environments can severely limit a child's ability—and motivation—to exercise. Access to safe, walkable streets, open spaces, playing fields and parks can influence opportunities to engage in regular physical activity. Long distances to travel and danger from traffic or crime are often cited as barriers to walking or biking to school. In addition, the amount of time and resources devoted to physical education programs and recess in schools have decreased.[4] Nationwide in 2007, only 35 percent of high school students met recommended physical activity levels of an hour of cardiovascular activity per day five or more days a week.[5] For the most vulnerable children—those who come from minority or low-income families—these barriers to engaging in physical activity are the greatest. A 2006 study by the National Center for Education Statistics found that children who attend schools that serve predominantly low-income students get only two-thirds of the time on the playground as their middle- and upper-class peers.[6]

Teresa Rubio and Ana Baltazar

Teresa tries to guide her daughter, Ana, toward healthy choices—less bread and burgers, more vegetables. But busy parents can't be with their children every minute of every day. "Parents are working a lot, so they go to fast-food restaurants or get pizza," explains Teresa.

Now there's another voice or two reminding Ana how to take better care of herself. They are the coach/mentors of Girls on the Run, an international nonprofit organization that aims to build self-esteem and healthy habits in preteen girls. In a 12-week after-school program, as they train for a 5K run,

girls are introduced to healthy ways to develop physically, mentally, emotionally and spiritually.

"It tells you what to do and what not to do, like not (to) be in gangs or take drugs, drink lots of water, eat fruits and vegetables," says Ana, a chatty, bilingual 9-year-old. "Those are healthy for your body and drugs are not healthy."

Teresa is happy to see that her daughter has more confidence and energy. She has noticed her daughter has cut back on fattening snacks in favor of more fruit. And she is safe. Teresa observes, "The kids are kept busy; they're not getting into trouble. I'm not worrying about where she is."[7]

What are the potential impacts of a lifetime of physical inactivity that begins in childhood?

- An obesity epidemic threatens the health of America's children, greatly increasing the odds that they will develop diabetes, heart disease and physical limitations and disabilities during their lives. Over the past two and a half decades, rates of obesity more than doubled among children ages 6 to 11, from 6.5 percent to 17.0 percent, and more than tripled among adolescents ages 12 to 19, from 5.0 percent to 17.6 percent.[8] (More details are available in Chapter One of this report.)

- The economic consequences of physical inactivity include both substantial health care costs and even greater costs related to lost productivity and lower economic output due to illness, disabilities and premature death. One estimate puts the annual costs of obesity and overweight at $139 billion in medical spending and lost productivity.[9]

We must act now to expand opportunities for young people to engage in physical activity. Our schools are a good place to start.

Recommendation: Require all schools (K-12) to include time for all children to be physically active every day.

One in five children will be obese by 2010. Children should be active at least one hour each day; only one-third of high-school students currently meet this goal. Schools can help meet this physical activity goal, through physical

education programs, active recess, after-school and other recreational activities. Education funding should be linked to all children achieving at least half of their daily recommended physical activity at school, and over time should be linked to reductions in childhood obesity rates.

Rationale

That schools have an important role to play in providing children with opportunities for physical activity is widely recognized. Yet, overall, schools are not doing enough. Although every state requires some form of physical education (PE) for students, few states strictly enforce PE requirements, and such requirements vary considerably across the nation and within each state.[10] Most states do not require a specific amount of instructional time for PE and it is difficult to assess the actual amount of dedicated PE class time that is spent being physically active; time is often divided between instruction, health education and physical activity.

Schools must do more to help overcome obstacles children face to being more physically active. Children should be active at least one hour each day.[11] Schools can help meet this goal in many ways, including physical education programs, active recess, after-school and other informal activities.

Physical education and recess

Quality PE classes have been shown to increase physical activity during class and improve children's physical fitness, and they may also increase physical activity outside of class and lead to improved health in adulthood.[12] School-based PE helps children be more physically active overall; the more time per week that children attend PE, the more likely that

Sports4Kids

Sports4Kids, a nonprofit public-private partnership, provides safe, healthy physical activity at low-income schools so that "every child has the chance to play." Sports4Kids promotes recess as an integral part of every school day and places "coaches," well-trained adults, in elementary and middle schools to support healthier school environments. Sports4Kids coaches become part of the school community, working daily in the schoolyard during recess, class time and after school. Through structured and unstructured play, children learn simple conflict resolution and see how to take charge of their own health and well-being. Evaluations have shown both overall satisfaction and promising returns— participating schools noted that modest investments in recess have had positive effects throughout the school including improved teamwork and cooperation skills, helping youth to feel safe on the playground and in the classroom and contributing to a more positive academic environment.[20]

they will be active. However, in 2007, only 30 percent of high-school students nationwide attended PE five days per week, while 54 percent of students attended PE classes at least once a week.[13] PE in school is particularly important for students from low-income or minority families, who are more likely to live in neighborhoods with fewer parks, green spaces and recreational areas. These students tend to have fewer opportunities to be involved in organized physical activity or to be physically active and are more likely to be physically inactive.[14]

The amount of school time and resources devoted to physical education may be limited by budgetary constraints and intense pressure on schools to improve students' performance on standardized tests.[15] Studies have shown, however, that academic performance is neither improved by decreasing PE time nor hurt by limiting classroom instructional time by increasing PE time.[16] Some studies have also shown that physical education is associated with improved academic performance and children who are physically active and fit have performed better in the classroom.[17]

Formal physical education classes are not the only venues for physical activity at school; recess time offers another important opportunity for students to be active. *Recess Rules*, a 2007 report issued by the Robert Wood Johnson Foundation, identified recess as the single most effective yet underfunded way to increase physical activity among children.[18] However, in 2006, only 12 percent of states required and 26 percent recommended that elementary schools provide regularly scheduled recess.[19] While school districts were more likely to require or recommend recess in elementary and middle schools than for later grades,

the amount of time devoted to active recess fails to meet the National Association for Sport and Physical Education recommendations: at least one daily period of recess of at least 20 minutes and no extended periods of inactivity (two hours or more) for children ages 6 to 12.

Many schools and school districts are making the difficult choice of cutting back on recess to make more time for standardized test preparation.[21] These cutbacks in recess tend to be concentrated in schools serving the highest number of minority and low-income students.

"…We are now two months into having Coach Abby [from Sports4Kids] full time and I never dreamed recess could be this wonderful. Every child wants to go to recess now, and we rarely get any negative feedback about behavior… Students are getting more exercise than ever before and letting aggression out in a positive way…"

ROXANNE SARAVELAS, teacher, Ohrenberger Elementary[22]

Marin County Safe Routes to School

In Marin County, Calif., the Safe Routes to School program aims to increase the number of students walking and biking to school through activities such as: mapping safe routes to school and changing sidewalks and bike lanes to make routes safer; scheduling regular Walk and Bike to School Days; and providing incentives, classroom education and community outreach. The program serves 22,500 students in 50 schools. Participating schools report increases in walking, biking and carpooling to school (64%, 114% and 91% increases, respectively) and a 39 percent decrease in car trips delivering only one student.[29]

Active commuting to school

Children can also get more physical activity by walking or biking to school, instead of riding in cars or buses. In *Preventing Childhood Obesity: Health in the Balance*, the Institute of Medicine (IOM) recommends that local governments and school districts "ensure that children and youth have safe walking and bicycling routes between their homes and schools and that they are encouraged to use them."[23] In Chicago, for example, 90 percent of public school students walk to school. The city has promoted a Walking School Bus Program, which consists of one or more adults accompanying a group of children walking to and from school.[24]

> "I'm guaranteed my kids are walking close to a mile every day. And that's important to me because, particularly in the winter when they're not in a lot of sport-related things, I know they're getting exercise."
>
> **VALERIE WILSON, mother**[25]

The federally funded Safe Routes to School program (SRTS) was established in 2005 under the umbrella of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users.[26] The program's objectives are to "enable and encourage children, including those with disabilities, to walk and bicycle to school; make walking and bicycling to school a safe and more appealing transportation alternative; and facilitate the planning, development and implementation of projects and activities that will improve and reduce traffic, fuel consumption and air pollution in the vicinity of schools."[27] Monies can be used for infrastructure, education, enforcement and coordination activities.[28] All states and the District of Columbia have participated, to varying degrees, in SRTS.

Accountability

Every state should set goals for activity programming and student participation to be met by schools and school districts, based on their individual starting points. School wellness councils and policies (see Chapter One) offer an important avenue and collaborative forum for setting goals, determining priorities among alternative interventions, and identifying indicators for measuring progress toward improvements in physical activity among children at school.[30]

Feasible markers of progress towards increasing daily physical activity in schools at the national and, in some cases, state level are available in existing routine surveys and datasets that can be tracked for overall populations and for socioeconomic and racial/ethnic groups. The ability to monitor important measures could be greatly increased by linking existing datasets; exploring potential linkages should receive high priority, along with achieving consensus about useful methods for monitoring at the local level.

Photo: Miriam Sushman

The following indicators of progress are available through existing data sources:

- Data on children's physical activity, included in: the National Health and Nutrition Examination Survey (NHANES) by income and racial/ethnic group, at the national level only; the National Survey of Children's Health (NSCH) by income, education and race/ethnicity, at the national and state levels; and the Youth Risk Behavior Surveillance System (YRBSS), at the national, state (not all states) and school district levels.[31]

- Adult physical activity data in the National Health Interview Survey (NHIS) by income, education and race/ethnicity, at the national level only.[32]

- Adult physical activity data in the Behavioral Risk Factor Surveillance System (BRFSS) by education, income and race/ethnicity, at the state level.[33] Overall population information available at the level of metropolitan/micro-metropolitan statistical areas via Selected Metropolitan/Micropolitan Area Risk Trends (SMART), although numbers are insufficient for further breakdowns by education, income or race/ethnicity.[34]

Resources

Specific guidelines regarding physical activity for children and adolescents can be found in the *2008 Physical Activity Guidelines for Americans. www.health.gov/PAGuidelines/default.aspx*

Energizers for Elementary School are classroom-based physical activities that help teachers integrate physical activity with academic concepts.
www.eatsmartmovemorenc.com/Energizers/Texts/K-5-Energizers.pdf

Action for Healthy Kids is a public-private partnership focused on changes in schools to improve nutrition and increase physical activity. *www.ActionForHealthyKids.org*

Alliance for a Healthier Generation offers the Healthy Schools Program. *www.healthiergeneration.org/schools.aspx?id=82*

The CDC's *Physical Education Curriculum Analysis Tool (PECAT)* helps school districts conduct analyses of physical education curricula, based upon national physical education standards. *www.cdc.gov/healthyyouth/PECAT*

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Three

Promote Healthy Environments and Support Healthier Behaviors

Recommendations From the Robert Wood Johnson Foundation
Commission to Build a Healthier America

Recommendation:

Become a smoke-free nation. Eliminating smoking remains one of the most important contributions to longer, healthier lives.

Progress on many fronts—smoke-free workplaces, clean indoor air ordinances, tobacco tax increases, and effective, affordable quit assistance—demonstrates that this goal is achievable with broad public and private sector support.

Recommendation:

Integrate safety and wellness into every aspect of community life.

While much remains to be done to create safe and health-promoting environments, many schools, workplaces and communities have shown the way, with education and incentives for individuals, employers and institutions and by fostering support for safety and health in schools, workplaces and neighborhoods. Funding should go only to organizations and communities that implement successful approaches and are willing to be held accountable for achieving measurable improvements in health.

Both behavior and environment profoundly influence health. The environments in which we live, work, learn and play may expose us to or protect us from risks and can limit or promote healthy choices. Earlier chapters explored some of the links between our environment and healthy behaviors, such as access to nutritious food and healthy eating.

This chapter looks at how changes to the physical and social environment can reduce harm from risky behaviors—tobacco use in particular—and how the places where we spend most of our time outside home—schools, workplaces and neighborhoods—can be safer and more supportive of good health. We focus here on how schools and workplaces can promote health and safety more deliberately and effectively, and address community environments in Chapter Five.

Set Free Indeed Treatment Center

Set Free Indeed Treatment Center is Louisiana's first faith-based, licensed outpatient treatment clinic. The clinic provides outpatient treatment services that emphasize total recovery from substance abuse and other related addictions and/or destructive behaviors. Services include treatment interventions and counseling, as well as case management, housing, transportation, vocational/educational and other recovery support services, and peer- and faith-based services. The Access to Recovery Program (ATR), an initiative started by President Bush, provides vouchers to clients for purchase of substance abuse clinical treatment and recovery support services. Clients with ATR program vouchers can participate in the programs and services of the Free Indeed Clinic. The Free Indeed Clinic treats more than 500 outpatient clients weekly.[11]

The Problem

Smoking, alcohol abuse and substance abuse

Tobacco use and the abuse of substances including alcohol, prescription medicines and illegal drugs exact a heavy toll on Americans. Cigarette smoking accounts for more than 400,000 premature deaths a year.[1] Environmental tobacco smoke, also known as secondhand smoke, is responsible for the early deaths of approximately 35,000 children and non-smoking adults each year.[2] Nearly 18 million Americans meet the diagnostic criteria for alcohol abuse and alcohol dependence and another 3 million Americans have serious drug problems.[3] Each year more than 100,000 Americans die of alcohol and drug related causes.[4]

Decisions to engage in risky behaviors are partly a matter of individual choice. However, many social, economic and environmental pressures make it more likely that some people will use or abuse tobacco, alcohol or drugs.

- People with less than a college degree are more than twice as likely to smoke cigarettes as are college graduates.[5]

- Blacks and Hispanics are more likely to live in areas with a high concentration of tobacco and alcohol outlets and are more likely to be targeted by advertising and marketing of these products.[6]

- Unemployed adults are more likely to engage in illicit drug use than are those fully employed (18% vs. 8%).[7]

- Adults with higher levels of education are less likely to abuse or depend on alcohol or drugs.[8]

People who seek treatment for addiction often find that they cannot afford it. In 2007, 19.3 million persons needed treatment for alcohol abuse but only 1.6 million received it—leaving 17.7 million people without appropriate care.[9] Almost a third of those who needed treatment reported that the costs of care and lack of health care insurance presented insurmountable obstacles to them. More than half of recipients of specialty substance abuse treatment use their own savings to pay for care. However, low-income and minority populations often cannot afford to pay out-of-pocket and may go without work in order to take care of themselves.[10]

There are similar barriers to effective tobacco cessation treatments. Too many smokers fail in their efforts to quit because they lack information regarding effective strategies or the support systems that would enhance their efforts. Even well-informed and highly motivated individuals may face significant barriers. Lack of insurance coverage for smoking cessation treatments, the inability to obtain a prescription and the cost of cessation treatments can be prohibitive for many disadvantaged smokers.[12]

Health, safety and the school environment

Nearly 55 million children and 6 million adults spend a significant portion of their days in school.[13] Ideally, our nation's schools should be places that promote teaching and learning, free of crime, violence and environmental hazards. Unfortunately, many school buildings are old and in poor condition, and may contain environmental conditions that inhibit learning and pose health risks to students, teachers and school personnel. And while students are far less likely to encounter harm at school than away from school, some schools continue to face serious problems of crime and violence.

About one-third of schools nationwide have problems related to poor indoor air quality and one-third of schools have reported needing extensive repair or replacement of one or more buildings.[14] Low-income schools are more likely to have leaky roofs, inadequate plumbing and heating, problems with lighting, inadequate ventilation and acoustical deficiencies.[15] These environmental conditions can contribute to acute and chronic health conditions—most notably asthma—and can affect concentration, attendance and student performance.[16]

Health, safety and the work environment

The American workforce is not as healthy, and therefore not as productive, as it could and should be. Work-related injuries, accidents and illnesses hurt workers, their families and employers:

- In 2007, more than 5,000 fatal and 4-million nonfatal work-related injuries and illnesses were reported in private industry workplaces; about half of non-fatal injuries resulted in time away from work due to recuperation, job transfer or job restriction.[17]

- The total economic costs to the nation of occupational illness and injury are reported to match those of cancer and nearly those of heart disease.[18]

- In 2006, the cost to employers for workers' compensation totaled $87.6 billion.[19]

Some segments of the workforce are particularly vulnerable to occupational health risks, including:

- younger and older workers;

- minority and foreign-born workers;

- workers in the agricultural, fishing and forestry industries;

- migrant and seasonal workers;

- contract workers and the self-employed;

- workers with developmental disabilities; and

- workers new to their jobs.[21]

Many characteristics of a person's work environment—including workplace culture, job demands, benefits, flexibility of work schedules and level of autonomy granted to employees—also affect a person's physical and mental health. The experience of work itself—how time is organized and the social and psychological aspects of working conditions—affect both physical and mental health. About 40 percent of workers report that their job is very or extremely stressful; one-fourth of employees view their job as the largest stressor in their life.[22] Job stress can lead to the development of cardiovascular disease, psychological disorders and workplace injury.[23]

Employers interested in promoting worker health and well-being have an opportunity to assess the characteristics of their workplaces and identify ways to support health, safety and productivity. Understanding the health assets workers bring to the workplace and the health challenges they face is a critical first step towards eliminating obstacles to promoting health and well-being in the workplace.

Successful Smoke-Free Workplace Policies

Successful smoke-free workplace policies:

- are clearly written and well-communicated;

- actively engage employees, workers' organizations and managers in all phases of the policy;

- provide information to all workers on benefits of quitting and how to support colleagues;

- promote access to resources such as counseling and proven pharmacological treatments for workers who want to quit;

- integrate tobacco-use treatment benefits into the workplace health plan; and

- enlist the support of family members; if possible, provide spouses/dependents with similar tobacco cessation resources.[25]

Recommendation: Become a smoke-free nation. Eliminating smoking remains one of the most important contributions to longer, healthier lives.

Progress on many fronts—smoke-free workplaces, clean indoor air ordinances, tobacco tax increases and effective, affordable quit assistance—demonstrates that this goal is achievable with broad public and private sector support.

Rationale

Aggressive anti-smoking campaigns, tax increases on cigarettes, laws and policies to restrict smoking and advances in clinical and therapeutic treatments have helped to reduce smoking rates among U.S. adults to below 20 percent, the lowest level on record.[24]

There is no risk-free level of exposure to secondhand smoke. The only way to protect people from secondhand smoke is to ban smoking in indoor spaces or buildings. Separating smokers from non-smokers, cleaning the air and ventilating buildings are not sufficient.[26] Yet only 32 states, the District of Columbia and Puerto Rico have statewide partial or full smoking bans in public places, including parks, workplaces and public buildings.[27] New indoor clean air ordinances should be introduced in concert with programs to provide smokers with affordable access to effective cessation treatment. The introduction of a ban offers an opportunity to help smokers quit; without access to cessation assistance, however, the barriers to cessation may remain too high.

Nearly 23 percent of working Americans smoke; only half of all blue collar workers are covered by smoke-free policies.[28] Smoking in the workplace is associated with higher worker absenteeism due to respiratory illness as well as lower productivity and higher health insurance rates. The Surgeon General concluded that eliminating secondhand smoke

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NOTE: Secondhand Smoke Exposure in the Home

The home is the primary location in which children and adults are exposed to secondhand smoke. Parents are responsible for 90 percent of children's exposure to secondhand smoke.[29] The consequences are grave. In children, secondhand smoke exposure:

- increases the frequency and severity of asthma symptoms and the risk of developing asthma;

- causes up to 300,000 cases of respiratory infections like bronchitis and pneumonia each year in children under 2 years of age;

- increases the risk of ear infections; and

- increases the risk of Sudden Infant Death Syndrome (SIDS).

Non-smokers who are exposed to secondhand smoke at home significantly increase their risk of developing heart disease and lung cancer by about 30 percent.[30] One study demonstrated that being married to a smoker increased the risk of stroke by over 40 percent in people who have never smoked compared to those married to someone who never smoked.[31] Exposure to secondhand smoke is higher in households with low income and low education levels.[32]

Quitting smoking and refraining from smoking in the home is critical to protecting the health of children, spouses and others living in the same household.

Project STAR (Students Taught Awareness and Resistance) is a comprehensive, community-based substance abuse prevention program for students in early adolescence. The program, which began in 1984 in Kansas City, Mo., has been successful in changing middle-school students' attitudes regarding cigarette, alcohol and marijuana use. One- and three-year follow-ups suggested program participants had lower cigarette and marijuana use rates than comparison students. This program was implemented in concert with efforts to change the broader environment through parent, community, local drug policy and mass-media activities.[41]

exposure in the workplace is possible only through smoke-free workplace policies.[33] Smoke-free workplaces not only protect non-smokers from the dangers of exposure, but they also encourage smokers to quit or reduce smoking.[34] Such policies also can reduce employers' legal liability, create safer working environments, improve workers' health and enhance corporate image. Employers should implement comprehensive, smoke-free workplace policies that include offering proven tobacco-use treatment benefits through their health plan and connect tobacco users with community resources and supports.

Another opportunity to encourage smoking cessation and prevent smoking initiation rests with higher cigarette taxes: when taxes are raised, consumption falls. According to the 2000 U.S. Surgeon General's Report, *Reducing Tobacco Use*, raising tobacco taxes is an effective tobacco prevention and control strategy, especially in preventing youth from initiating smoking and the escalation of smoking among young adults.[35] Increases to cigarette taxes are also effective at reducing the number of pregnant women and lower-income individuals who smoke.[36] The State Children's Health Insurance Program Reauthorization Act of 2009 (SCHIP) included an increase in the federal excise tax on tobacco products. The 62-cent increase per pack of cigarettes is projected to lead to nearly 2 million fewer children and adolescents starting to smoke and to help more than 1 million adult smokers quit.[37]

Programs that provide evidence-based and affordable cessation treatment to smokers are important adjuncts to smoking bans and taxes. For example, the federal-state 1-800-QuitNow hotline offers free cessation advice, and some states have provided free cessation pharmaceuticals for limited periods of time with high rates of success.[38] Smoking cessation products and prescriptions can be extremely costly. The average cost for Bupropion, a drug that helps stop cigarette cravings, is $336 for a three-month treatment.[39] And while paying for tobacco use cessation treatments is the single most cost-effective health insurance benefit for adults, some managed care organizations do not offer it.[40] For low-income families—those who are more likely to smoke, more likely to face income and access barriers to physicians, and more likely to benefit from quitting tobacco—these Quitline programs are extremely helpful.

Recommendation: Integrate safety and wellness into every aspect of community life.

While much remains to be done to create safe and health-promoting environments, many schools, workplaces and communities have shown the way, with education and incentives for individuals, employers and institutions and by fostering support for safety and health in schools, workplaces and neighborhoods. Funding should go only to organizations and communities that implement successful approaches and are willing to be held accountable for achieving measurable improvements in health.

Rationale

Earlier, we discussed the importance of developing a "culture of wellness"—making health a fundamental priority and incorporating it into all components of everyday life. This means changing the way our schools, workplaces, government agencies and other key sectors of society think about and address health.

Hancock County School-Based Health Center

Hancock County in Northeast Tennessee is one of the poorest counties in the U.S., with annual per capita income of less than $16,000 and a poverty rate of 29 percent. Pediatric and other specialty care are lacking. In addition, the county has high rates of adolescent injuries and accidents, pregnancies, tobacco use, lack of exercise, poor nutrition and poor seatbelt use.

The Hancock County School-Based Health Center (SBHC) is a public-private collaboration with partners in the local school administration and board, physicians in the area, county government and mental health professionals. In addition to health services, the SBHC offers a broad range of health education and health promotion activities, including programs that promote physical activity, tobacco-cessation and the use of seatbelts and sunscreen. The SBHC staff trains teachers and administrators to recognize attention deficit disorder and depression among students and provides wellness programs to school personnel.

Schools

At school, students learn about healthful and safe practices not only through academic curricula but also through the school's physical environment, food offerings, clinical services, and institutional culture and norms of conduct. To be effective, classroom lessons must be validated and reinforced with health-promoting policies and practices: in building and grounds maintenance; cafeteria offerings; constructive encounters with health professionals such as school nurses; and respectful interactions between adults and students and among students.

Health education addresses physical, mental, emotional and social aspects of health for students of all ages. It includes environmental health, reproductive health, mental health, nutrition, disease prevention and relationship skills. Health education requirements are established by each state. Forty-one states and the District of Columbia require health education by regulation and provide standards or guidance for content through statutes, regulations or recommendations.[42]

Several federal agencies provide support for health education: the CDC Division of Adolescent and School Health funds health education agencies and their projects related to HIV prevention, coordinated school health programs, abstinence, asthma, professional development and food safety. The Office of Safe and Drug Free Schools of the Department of Education funds drug prevention education programs; the Safe Schools/ Healthy Students program is funded by the Departments of Health and Human Services, Education, and Justice.[43]

School-based health centers (SBHCs) can increase students' access to health services improve student health overall, and in particular can fill an unmet need for physical and mental health services among low-income and uninsured students.

During the 2004–2005 school year, over 1,700 SBHCs provided services to students in elementary, middle and high school.[44] Students who attend schools with health centers are more likely to receive routine care such as physical exams, vaccinations, reproductive health services and counseling, dental exams and treatment for illnesses and injuries.[45] Students with access to SBHCs for at least one year use emergency departments less and are associated with lower Medicaid costs.[46]

SBHCs can affect academic performance by improving intermediate health outcomes. Each of the health factors affected positively by SBHCs—nutrition, physical activity, substance abuse, risky sexual behaviors, health care utilization, self-esteem and a sense of connectedness with the school—has been linked to academic outcomes.[47] Additionally, prenatal services offered at SBHCs may reduce drop-out rates among pregnant students and demonstrate positive effects on pregnancy outcomes.[48]

> Members of the local community contribute their time and services through the SBHC; dentists provide oral screening in relation to tobacco use and emergency medical service personnel teach CPR and bicycle safety. In turn, the SBHC engages the local community by offering classes focused on parenting, nutrition, weight-reduction and diabetes to its residents.[49]

Photo: Tyrone Turner

For schools that provide onsite health services, coordinated school health programs reflect a holistic view of health and its place in schools and can bring multiple agencies together to support the health of young people. The U.S. Centers for Disease Control and Prevention (CDC) has identified eight components to a coordinated school health program:

- Health Education
- Physical Education
- Health Services
- Nutrition Services
- Counseling and Psychological Services
- Healthy School Environment
- Health Promotion for Staff
- Family and Community Involvement[50]

Because communities vary in their populations, needs and resources, each coordinated school health program is locally tailored. A group of people and agencies is established to determine the specific needs of children and youth in their schools and to build on resources that are already in place

to support positive youth development. In Tennessee, for example, Coordinated School Health encourages healthy lifestyles, provides support to at-risk students and helps reduce the prevalence of health problems that impair academic success. The program improves students' health and their capacity to learn through the support of families, communities and schools working together.

In 2000, the state received a CDC Coordinated School Health grant and funding from the General Assembly for 10 pilot sites. In 2006, the Coordinated School Health Expansion and Physical Activity Law established authority and funding ($15 million) for the expansion of coordinated school health statewide, including positions for a physical education specialist and a school health coordinator within the state Department of Education. Ninety minutes per week of physical activity were also mandated in grades K-12. Since 2003, more than 104,000 children at the 10 pilot sites have been referred for clinical follow-up, mainly for overweight or obesity, vision problems and dental care. The state reports that absenteeism has fallen because more school nurses provide routine care on-site, and that students' BMI measures have improved.[51]

NOTE: What are the components of healthy work?

Healthy work is characterized by:

- policies and practices that encourage and enable healthy behaviors, mitigate physical and emotional stress;
- an organizational culture that values individual workers;
- opportunities for career development and advancement; and
- provision of adequate wages and reasonable job security.

Healthy workplaces provide the above, as well as:

- limit physical hazards and harmful working conditions;
- create and support a "culture of wellness" among the leadership, employees and their dependents with a focus on shared goals and responsibilities;
- provide health and leave benefits; and
- maintain high rates of productivity and low turnover.

Photo: Tyrone Turner

Workplaces

A holistic approach is needed to achieve better health for America's workforce. Strategies that address occupational health and safety, the organization and conditions of work, leave policies and benefits design and workplace wellness initiatives should be integrated to maximize resources and ensure success. The most promising approaches, some of which are highlighted in this section, feature a strong employer commitment and are responsive to employees' needs.

The workplace can be a health-promoting environment, and employee health and the health of business are interconnected.

Health and safety In order for workplaces to promote health, they must first be safe. Throughout the 20th century, minimal occupational safety standards and regulations were established to ensure safer working conditions for the U.S. workforce culminating in the *Occupational Safety and Health Act of 1970*, which was passed to ensure "so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources."[52] In spite of such measures, work-related injuries and fatalities remain a considerable threat to public health.

One promising approach to engaging employers and employees deeply in workplace health and safety concerns is the Occupational Safety & Health Administration's Voluntary Protection Program (OSHA VPP). The VPP establishes a cooperative relationship between employees, management and government to achieve safety and health excellence. Participants develop and implement systems to identify, evaluate, prevent and control occupational hazards to prevent employee injuries and illnesses. More than 270 federal and private sector industries participate in VPP. Sites vary in size from three employees to over 18,000 employees.[53]

"Employers realize the gains through reduced medical benefit expenses, increased productivity and reduced absenteeism. This is a real and measurable return—better for the business and better for the employee."

RONALD GOETZEL[54]

Over 25 years of experience demonstrate that the VPP model works in all industries, in large and small workplaces and in union and non-union environments. VPP participants establish more stringent workplace health and safety rules for themselves that exceed the minimum compliance requirements established by OSHA standards. In 2007, VPP participants experienced an injury and illness incidence rate more than 50 percent below the average for their respective industries.[55]

Wellness Given the amount of time most people spend at their jobs, the workplace provides an ideal setting for promoting health and healthy behaviors through workplace wellness initiatives. *Healthy People 2010* goals include increasing the numbers of employers offering worksite health promotion programs and of employees participating in these programs. Implementation of such programs by more employers can exert a strong influence on improving the health and well-being of Americans.

USAA Take Care of Your Health

The national insurance company, USAA, takes a comprehensive approach to health benefits and wellness centered around simple health messages to employees and their families. Wellness services and initiatives—ranging from on-site fitness centers and healthier food choices in worksite cafeterias to lifestyle coaching—are integrated with disability management, a consumer-driven health plan and paid time off. Participants have lost weight, quit smoking and improved their health. The program collects data to track participation and health and cost outcomes, and the firm reports fewer absences from work and $105 million in savings over three years.[62]

According to a 2004 survey fielded by the Office of Disease Prevention and Health Promotion, only 7 percent of U.S. employers offered a comprehensive program containing five best-practice elements for achieving meaningful and sustainable outcomes:

- health education;
- links to related employee services;
- supportive physical and social environments for health improvement;
- integration of health promotion into the organization's culture; and
- employee screenings with adequate treatment and follow-up.[56]

A recent review found that workplace wellness programs reduced tobacco use among participants, lowered high blood pressure, decreased work absences due to illness or disability and improved other general measures of worker productivity.[57] A growing body of evidence indicates that health promotion programs are cost-effective. One review found an average return of $5.81 per $1 invested in these programs, from improved employee health, reduced medical benefit expenses and reduced absenteeism.[58]

One of the first workplace programs to integrate wellness services into employee benefits, Johnson & Johnson's Healthy People provides benefit credits as incentives for employees to participate in comprehensive physical and mental health programs. More than 90 percent of U.S-based employees receive health risk assessments, which are followed by "Pathways to Change" interventions designed to address elevated risks related to tobacco use, physical inactivity, blood pressure and cholesterol. The program also offers disability management and occupational medicine, on-site gyms, support for balancing work and life responsibilities and counseling to resolve job performance issues.[60] A study investigating the long-term outcomes of the LIVE FOR LIFE program—the precursor to Healthy People 2005—found it achieved $224 in savings per employee per year, primarily through reductions in inpatient hospital stays, mental health visits and outpatient services.[61]

> "How companies and their workers address the intersection of work and life is a critical factor in determining the opportunities workers—and their children and families—have to lead healthy lives."
>
> **CORPORATE VOICES FOR WORKING FAMILIES**[62]

Small employers and health promotion Slightly more than half of the private-sector workforce in the U.S. is employed by smaller businesses—those with fewer than 500 employees.[63] Workers in small businesses typically have less flexibility in the workplace, enjoy fewer employer-sponsored benefits and are less likely to have access to workplace wellness initiatives than other workers.[64] Strategies for increasing the offering of health-promoting benefits by small employers include creating a consortium of small employers, using health care insurers to provide wellness services and partnering with community organizations such as YMCAs and recreation centers to provide exercise facilities and classes.

Photo: Janet Jarman

Local business groups, such as chambers of commerce, and public health agencies can develop models and identify and recognize successful local programs. Several organizations have spotlighted and celebrated outstanding workplace initiatives, including the National Business Group on Health's *Best Employers for Healthy Lifestyles*; the WELCOA *Well Workplace Awards*; the C. Everett Koop *National Health Awards for Worksites*; the American Psychological Association's *Psychologically Healthy Workplace Award*; and the *California Fit Business Awards*.[66]

"Expansion of paid sick leave and integration of family caregiving activities into authorized uses of paid sick leave are crucial work and health supports for workers, their families, employers and our communities at large."

VICKY LOVELL
Institute for Women's Policy Research[67]

One example of a local collaborative effort to extend health promotion to small businesses is the Harlem Business Wellness Initiative (HBWI), which involves the Mailman School of Public Health at Columbia University, Harlem Hospital Center, and the Harlem (New York City) business community.

The goal of the project is to translate principles for health promotion programs that work in large business to the small business environment found in inner city settings. Through the HBWI, the services of a team of health educators are offered free of charge to small businesses. Services include conducting computerized health appraisals, creating personalized counseling sessions, and collaboratively developing health action plans that may include lifestyle changes and/or referrals to preventive services.[68] A field experiment is under way to evaluate HBWI's feasibility and effectiveness—results to date indicate that this approach to health promotion in small businesses is feasible.[69]

Workplace flexibility Workplace flexibility supports health. Overall, 41 percent of civilian workers receive paid personal days, but this percentage varies by occupation—from 58 percent in management, professional and related fields to 30 percent in service fields.[70] Workplace policies should provide enough flexibility for employees to attend to their own health needs and those of their families. Paid sick days can help workers recover from illnesses and provide care for sick family members, potentially preventing more severe illness and use of expensive hospital care. The CDC recommends that workers who are ill stay home from work to prevent spreading disease at the workplace.[71] Apart from San Francisco, the District of Columbia and Milwaukee where city ordinances require employers to provide paid sick leave to all employees, employers in the U.S. provide this benefit voluntarily. At least 15 states have introduced but not yet enacted paid sick leave legislation.[72]

Lactation support in the workplace There are more new mothers in the American workforce than at any other time

and over half of them work outside the home. These women and their infants would benefit from employer policies allowing new mothers three months' leave before returning to work to encourage breastfeeding and from workplace accommodations supporting milk expression at work. As things stand, many employed mothers who choose to breastfeed encounter significant challenges in the workplace.

Employers may reap large benefits by providing nursing workers with accommodations to express milk privately, as well as flexible breaks, education and support. A growing body of evidence supports a business case to accommodate nursing mothers. Several studies indicate that employers that provide on-site lactation support report decreased absenteeism, health care costs and employee turnover.[73] Productivity and staff loyalty may also be enhanced. By some estimates, provision of basic lactation programs is associated with a two-to-one return on investment.[74] The U.S. Department of Health and Human Services, Health Resources and Services Administration recently published *The Business Case for Breastfeeding*, a toolkit that outlines the bottom line benefits of supporting breastfeeding employees (see Resources). Lactation support is a cost-effective strategy for large and small businesses that requires few resources.

Work in the second half of life Individuals in their second half of life possess a tremendous amount of experience and have demonstrated a deep commitment to service through volunteering. This growing population constitutes a valuable and largely untapped resource—one that is poised to tackle some of today's most pressing challenges. Public-private partnerships represent one powerful strategy for connecting this resource with unmet community needs.

One model, Experience Corps, leverages the experience and leadership of people over 55 to address shortfalls in America's education system. Experience Corps participants help elementary-school students who are struggling to learn to read by providing literacy coaching, help with homework, and caring attention from committed and consistent role models during and after the school day.[77]

In addition to enhancing student academic performance and advancing the goals of schools and youth-serving organizations, research has shown that Experience Corps improves the health and well-being of older adults. Participants show significant increases in physical activity, strength and cognitive ability—potentially important predictors of health in later life.[78] Participants also report social gains as a result of participating in the program. This includes an increased "sense of usefulness" and "social connectedness" as well as a significant decrease in time spent watching TV. These notable gains in participants' health and well-being illustrate that Experience Corps is an effective model of health promotion for older adults.[79]

NOTE: **State Policies**

Twenty-two states, Washington, D.C. and Puerto Rico have laws related to breastfeeding in the workplace. In Colorado, for example, a law implemented in August 2008 protects an employee's right to breastfeed in a private room (other than a toilet stall) during her break time for up to two years after giving birth. The Colorado law also requires the Department of Labor and Employment to provide information to employers on accommodating employees who breastfeed.[76]

Accountability

We propose illustrative, feasible markers of progress toward achieving the goals specified in our recommendations, and identify relevant health and health-related indicators in existing routine surveys and datasets that can be tracked for overall populations and (whenever possible) for socioeconomic and racial/ethnic groups. In cases where no current data sources provide relevant information, we suggest how performance information might be collected.

To assess progress in achieving a smoke-free nation at both the national and state levels, the following indicators in existing data sources could be used:

- Smoking-attributable morbidity (years of potential life lost), mortality (deaths from cancer or cardiovascular and respiratory diseases), and economic costs (productivity losses and expenditures from cigarette smoking) estimated at the national and state levels (CDC Smoking-Attributable Morbidity, Mortality, and Economic Costs).[80]

- The percentage of adults who have smoked 100 or more cigarettes in their lifetime and who currently smoke some days or every day, by education and racial/ethnic group, at state level (CDC's Behavioral Risk Factor Surveillance System).[81]

- The percentage of youth who have ever tried smoking and the percent of youth who have smoked at least one cigarette in the past 30 days by racial/ethnic group, for each state (Youth Risk Behavior Survey).[82]

- National, state and sub-state level data on smoking and tobacco use, workplace smoking policies and attitudes toward smoking in public places by race or ethnic group, education (adults over 25) and income (Tobacco Use Supplement to the Current Population Survey, CDC and National Cancer Institute).[83]

- Tobacco use prevention and control legislation enacted in each state (State Tobacco Activities Tracking and Evaluation).[84]

A broad range of indicators can be used to track progress in supporting health and safety everywhere people live, work, learn and play. National and sometimes state-level data are available in existing sources on many indicators. In most cases, individual workplaces, schools and neighborhoods will need to collect new data to monitor how well each local environment ensures safety and promotes healthy behaviors.

Although measurement tools should allow for some local flexibility, it is essential to have sufficient standardization to permit comparisons across different types of communities and to monitor disparities. Some tools already exist:

- Individual schools can track their progress towards comprehensive wellness policies using tools such as the *USDA School Improvement Checklist and CDC School Health Index*.[85]

- The *Healthy Community Checklist*, a 40-item questionnaire, quickly assesses the health environment of a community's neighborhoods, worksites, schools and restaurants. Questionnaire items gauge promotion and support of physical activity, healthy eating and smoke-free environment (Michigan Department of Community Health).[86]

- The *Communities of Excellence in Nutrition, Physical Activity and Obesity Prevention* (Network for a Healthy California) is a compilation of indicators that measure the extent to which a community supports healthy eating and physical activity where people live, work, play, socialize, go to school and shop for food, and was designed for use in low-income and higher-income environments.[87]

Many other online tools and guidebooks can help communities design and undertake health self-assessments. Leadership will be needed to achieve and maintain sufficient standardization of evaluation/monitoring methods to permit monitoring of disparities across different communities.

Photo: Christian Peacock

Examples of single indicators:

- The number of work-related non-fatal injuries and illnesses reported by the Bureau of Labor Statistics' Survey of Occupational Injuries and Illnesses.[88]

- The number of employers offering a comprehensive work wellness program, and employee participation rates (measured by annual workplace surveys).

- The percentage of home-based injuries or poisonings per year, reported in the National Health Interview Survey (NHIS) by age, income, education and race/ethnicity at national level.[89]

- The percentage of residents who feel safe in their neighborhood (measured by annual resident survey).

- Types and levels of toxins released by nearby industrial firms measured by Toxic Release Inventory; lead content in neighborhood soil measured by city and state health officials.[90]

- Measures of transit infrastructure (availability, accessibility, affordability, quality), including sidewalks, bike lanes, buses and other public transport (e.g., measured by annual resident survey, transit audit tool).[91]

- See Chapter One for nutrition indicators influenced by school meal and snack policies.

- See Chapters Two and Five for physical activity indicators influenced by school policies and neighborhood characteristics.

As for other recommendations, indicators of population health (such as overweight/obesity, heart disease, diabetes, school/work absence, etc.) would be appropriate long-term measures of the impact of implementing this chapter's recommendations. Data are available on these indicators in existing data sources.

Resources

Online tools, such as from the National Cancer Institute can help people determine whether they are addicted to nicotine and can provide resources and services to helping quit tobacco use. *www.smokefree.gov/quit-smoking/nicotine_addiction.asp*

The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. *www.surgeongeneral.gov/ library/secondhandsmoke/factsheets/factsheet3.html*

CDC's *Best Practices for Comprehensive Tobacco Control Programs—2007* is an evidence-based guide to help states plan and establish effective tobacco control programs to prevent and reduce tobacco use. *www.cdc.gov/tobacco/tobacco_control_ programs/stateandcommunity/best_practices/index.htm*

Individuals can assess their alcohol intake by talking to their physician about how much they drink or by taking online alcohol screening tests, such as the one found on the Boston University Join Together Web site. *www.alcoholscreening.org/*

The Environmental Protection Agency has developed the Healthy School Environments Assessment Tool (HealthySEAT), a software tool to help school districts evaluate and manage their school facilities for key environmental, safety and health issues. *www.epa.gov/schools/index.html*

The Healthier Worksite Initiative was designed by the Centers for Disease Control and Prevention as a resource for Workforce Health Promotion program planners in state and federal government. It is useful for any organization. *www.cdc.gov/nccdphp/dnpa/hwi/index.htm*

Wellness Council of America has workplace wellness information specifically tailored for small business groups. *www.welcoa.org/*

Resources and guidance for encouraging health in a workplace of any size can be found on the Partnership for Prevention website and toolkit, "Investing in Health: Proven Health Promotion Practices for the Workplace." *www.prevent.org/content/view/133/*

The Maternal and Child Health Bureau in the U.S. Health Resources and Services Administration has developed The Business Case for Breastfeeding, which includes materials for upper management, human resource managers, and others involved in implementing on-site programs for lactation support. *www.cdc.gov/breastfeeding/pdf/breastfeeding_interventions.pdf*

Chronic disease prevention programs might already exist in your city or state. To find out, search The Partnership to Fight Chronic Disease programs tool by state or by health topic to find prevention programs in your area. *http://promisingpractices.fightchronicdisease.org/*

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Chapter

Four

A Lifetime of Good Health Begins Early

Recommendations From the Robert Wood Johnson Foundation
Commission to Build a Healthier America

Recommendation:

Ensure that *all* children have high-quality early developmental support (child care, education and other services). This will require committing substantial additional resources to meet the early developmental needs particularly of children in low-income families.

Children who do not receive high-quality care, services and education begin life with a distinct disadvantage and a higher risk of becoming less healthy adults, and evidence is overwhelming that too many children are facing a lifetime of poorer health as a result. Helping every child reach full health potential requires strong support from parents and communities, and must be a top priority for the nation. New resources must be directed to this goal, even at the expense of other national priorities, and must be tied to greater measurement and accountability for impact of new and existing early childhood programs.

The early years of life are crucial, including how they set us on paths leading toward—or away from—good health. Brain, cognitive and behavioral development early in life are strongly linked to an array of important health outcomes later in life, including cardiovascular disease and stroke, hypertension, diabetes, obesity, smoking, drug use and depression.[1] Family income and education, along with neighborhood conditions resources and other social and economic factors, affect health at every stage of life, but the effects on young children are particularly dramatic. While all parents want the best for their children, not all parents have the same resources to help their children grow up healthy.

The Problem

In the United States we typically rely on parents to be responsible for providing their young children with environments and experiences that promote healthy physical, intellectual, psychological and social development. But parents' education and income levels in turn shape their capacities to give their children nurturing and stimulating

environments and to adopt healthy behaviors for their children to model. The differences in opportunities associated with education and income, along with their health impacts, accumulate over time and can be transmitted across generations as children grow up and become parents themselves.

All new parents need social support (formal or informal) and information if they are to successfully meet the demands of rearing children at the youngest ages. Families that are socially isolated, whose lives are in crisis or who are experiencing severe financial difficulties face particular challenges in meeting their children's health and developmental needs.

More than two of every five children under age 6 in the United States—10.6 million infants, toddlers and preschoolers—live in families with incomes below 200 percent of the federal poverty level, which most experts consider barely enough for families to make ends meet.[2] Families with limited financial resources face particular challenges in providing their young children with healthy food, safe and healthy living and play

Photo: Tyrone Turner

spaces and high-quality child care, simply because these necessities are unaffordable. Although a variety of public programs support and supplement low-income families' purchases for food, housing, child care and early childhood development services, families' needs often outstrip those subsidies or the availability of the services themselves. These shortfalls put the health and well-being of their children at risk.

There is compelling evidence that social disadvantages experienced in childhood can limit children's opportunities for health throughout life.[3] At the same time, intervening in early childhood can break the vicious cycle of social disadvantage and health disadvantage into adulthood and across generations.[4] Knowledge accumulated over the past 40 years supports the conclusion that children who participate in high-quality early childhood development (ECD) programs experience a range of immediate and long term health gains—in addition to cognitive gains and better academic achievement.[5] The impact is particularly great for economically disadvantaged children, for whom early child care, education and family support programs can act as buffers, providing stability and stimulation to the children and strengthening parents' abilities to meet their children's developmental needs at home.[6]

Of some 5.4 million American children under age 3 in low-income families (under 200% of the federal poverty level), just 91,000 are in Head Start programs, primarily Early Head Start. Another 490,000 low-income infants and toddlers receive federal subsidies for child care. That leaves 4.8 million infants and toddlers in economically disadvantaged families—eight out of every nine low-income children under age 3—without federal support for developmental and care services.[7]

Arranging and paying for high-quality child care to accommodate work schedules is a particular challenge for parents, and even more so for low-income working parents. In two-thirds of all families with children under age 6, every parent in the home works. Eleven million American children under age 5 spend time in a child-care setting, either home-based family day care or a center, each week.[8]

Child care is expensive. In 2008, the annual cost for center-based infant care ranged from $4,500 to $14,600 across the United States; the annual cost of center-based care for a 4-year-old ranged from $3,400 to $10,800.[9] In every region of the United States, the average cost of infant care is higher than average family food costs, and in every state the cost of child care for two children of any age is comparable to the average monthly mortgage payment. Although low-income families pay less for child care than do higher-income families, child-care expenses represent a higher proportion of their income (15% versus 7%, respectively).[10] Children in low-income families are more likely to receive poor-quality child care and less likely to receive excellent quality care—especially in the first three years—than are children in higher-income families.[11]

Despite the high costs of child care, too often oversight and quality standards for child-care centers and providers are insufficient for ensuring the safety, health and well-being of children in care. Most parents assume that child-care centers must be licensed, that staff undergo background checks and are trained to recognize and report signs of child abuse, but in some states standards are minimal or non-existent.[12] In 18 states, for example, child-care center staff are not required to provide a physician's statement or have a physical exam prior to working with children. Just 32 states explicitly forbid smoking within child-care facilities.[13] Twenty-four states do not regulate family child-care providers who care for three or fewer children.[14]

Child-care workers and early childhood educators are often inadequately trained and poorly compensated. In general, state requirements are more rigorous for workers at child-care centers than for family child-care providers. However, 11 states lack even minimum education requirements—not even a high-school diploma—for teachers in centers, and 15 states require less than two years of training for child-care center directors.[15] In 2006, the median annual earnings of wage-and-salary child-care workers were $17,630.[16] Very few workers receive employment benefits. As a result, turnover is high and well-trained staff is difficult to recruit.

Recommendation: Ensure that *all* children have high-quality early developmental support (child care, education and other services). This will require committing substantial additional resources to meet the early developmental needs particularly of children in low-income families.

Children who do not receive high-quality care, services and education begin life with a distinct disadvantage and a higher risk of becoming less healthy adults, and evidence is overwhelming that too many children are facing a lifetime of poorer health as a result. Helping every child reach full health potential requires strong support from parents and communities, and must be a top priority for the nation. New resources must be directed to this goal, even at the expense of other national priorities, and must be tied to greater measurement and accountability for impact of new and existing early childhood programs.

Rationale

Helping every child reach his or her full health potential must be a national priority, requiring commitment among governments, businesses, faith-based organizations and parents. Certain basic elements are key to healthy childhood development and must be present in the lives of all children:

- Good nutrition, including breastfeeding throughout the first six months to a year of life, if possible, and adequate physical activity (*see Chapters One and Two*)

- Safe and stimulating physical environments

- Supportive services and education for parents and other primary caregivers

- Skilled, trained caregivers and teachers

- Low child-to-caregiver ratios

- Interactive and developmentally appropriate activities

 In addition, every child should receive periodic health and developmental screenings and regular checkups, including immunizations, starting at birth.

 One important strategy for building a healthier America is to ensure that more children spend their earliest years in safe, nurturing and stimulating environments that allow their brains and bodies to develop as fully as possible, free from damaging trauma and deprivation. The need for parental support and developmentally sound child care outside of the home outstrips our current national investments in developing an early childhood workforce, service capacity, and in financing services for low-income families. As a nation, we must make the quality of early life developmental experiences for *all* children in the United States an urgent and high priority. The consequences for future health, as well as the economic, social and workforce implications of better starts in life, merit greater public and private investments in early childhood development.

Family supports

Providing parents with tools and resources to fulfill their parental responsibilities—from parenting information, family life classes and referrals to high-quality, affordable child-care services—is essential to ensure that children are in relationships and environments that foster healthy development. Although most communities offer parenting information and provide some form of supportive services to new families, these resources should be made more widely available and actively promoted to parents, and they should be linguistically and culturally appropriate. The following programs are noteworthy and illustrate the diversity of practical interventions:

- Washington State's Department of Early Learning builds public awareness about the importance of early learning and acts to strengthen the quality of existing services and programs. Washington conducts a statewide "Parents Needs and Desires Assessment;" raises public awareness about safety and health in the licensed child-care sites in the state; and facilitates parents' abilities to obtain quick and understandable information about available child-care settings.[17]

- Preparation for the responsibilities of parenthood can begin in high school. The Fairfax County (VA) Public Schools Family Life Education program, for example, offers comprehensive family life education to students in grades K through 12.[18] The high school curriculum includes lessons on family living, community relationships and parenting skills, among others. The Virginia Department of Education encouraged this program in response to a decade of rising teenage pregnancy rates, rising sexually transmitted disease rates and the growing HIV/AIDS epidemic.

- The Harlem Children's Zone Baby College is an intensive, community-based program that offers nine-week parenting workshops to expectant parents and those raising children up to age 3.[19] Free weekly classes familiarize new and expectant parents with the stages of infant and child development, and offers information and training in properly caring for and interacting with babies and toddlers. The Baby College offers parents meals, child care and incentives for attendance to make the classes manageable and rewarding.

Disadvantaged parents may benefit particularly from guidance in early development and care for infants and toddlers. The Nurse-Family Partnership, which provides home visits to low-income first-time mothers, beginning during pregnancy and continuing through the child's second birthday, is an excellent model.[20] The well-studied program has been found to improve health and other outcomes for both mothers and their children, including less likelihood of child abuse, neglect and injury.[21] On average, the net benefit to society for each child served exceeds $17,000.[22] The program serves more than 16,000 families a year through public and private program sites in 355 counties in 28 states. In some states and service areas, Nurse-Family Partnership programs are funded by multiple public and private sources. Recently, some state Medicaid programs have begun to cover the services of such programs.

Other programs that provide support and guidance to new parents in their homes rely less on health care professionals. The state of Indiana, for example, provides extensive home visiting services by trained family support workers to new families. The state's Department of Child Services—in partnership with hospitals, prenatal clinics, the state maternal and children's special health care services program, Early Head Start and other public and private agencies—serves almost 17,000 families with prenatal and infant assessments and periodic (up to weekly) home visits to model, educate and provide parenting information to families.[23]

The Early Head Start program offers another model for early childhood development services provided in the home.[24] Established in 1994, Early Head Start expanded the scope of the original Head Start program (serving 3- and 4-year-olds in very low-income families since 1965) to reach families with even younger children. In 2006, Early Head Start and Head Start programs served 91,000 infants and toddlers below age 3—fewer than 5 percent of all infants and toddlers who are eligible based on family income.

Child care and developmental programs

A report by the IOM in 2000 concluded that "the general question of whether early childhood programs can make a difference has been asked and answered in the affirmative innumerable times."[27] The questions that remain are about the most effective and efficient ways of intervening in early childhood, especially, among children and families with different opportunities and vulnerabilities.

There is wide consensus that key elements of early childhood programs include early education and stimulation for preschool children along with support for parents/caregivers to improve children's experiences at home and in the community. Some studies have concluded that programs need to be sustained over multiple years to have lasting effects. Highly trained and responsive caregivers, small class sizes with low child-teacher ratios, safe and adequate physical environments and age-appropriate activities focused on enhancing children's cognitive and socio-emotional development are often cited as hallmarks of high-quality child development and day-care centers.

Sometimes too sharp a distinction is made between developmental programs and child-care services, as if they serve mutually exclusive groups of children and families. In fact, the young children of working parents need both sufficient hours of out-of-home care and developmentally appropriate learning and social experiences wherever they are. Services for infants and young children must be of high quality regardless of the setting.

Well-designed interventions among low-income children are cost effective, when long-term outcomes, such as health, labor force participation, use of social service programs, involvement of the criminal justice system and childbearing are considered; $1 spent on early childhood services yields an estimated return ranging from $1.80 to $17.07.[28] The evidence overall—including consensus about early childhood development effects on educational attainment and the effects of educational attainment on health and employment—is so strong that major business groups have advocated universal high-quality preschool as an essential means of achieving a productive, healthy and educated future workforce.

Early Head Start

An evaluation of 17 local Early Head Start programs across the country found consistent positive effects on children's cognitive, language and social-emotional development; parenting and, specifically, fathering; and parents' participation in education or in job training.[25] Programs that provided a mix of home- and center-based services, parents who enrolled while pregnant, and black parents showed relatively larger impacts. A follow-up study of pre-kindergarten children shows that Early Head Start reduced maternal depression.[26] In addition, statewide assessments of program quality find that local Early Head Start programs are performing well.

> "You can make a very powerful argument for early enrichment solely on the basis of hard-boiled cost-benefit analyses. This is the rare public policy initiative that promotes productivity in the economy at the same time that it appeals to fairness."
>
> **JAMES HECKMAN**[29]

One notable, rigorously evaluated ongoing program is the Chicago Child-Parent Centers (CPCs), which provide comprehensive educational support and family support to economically disadvantaged children and their parents.[30] In addition to strategies to promote scholastic success (i.e., low student-to-teacher ratios, highly-qualified staff, increased parental involvement), the CPCs utilize school nurses and other auxiliary staff to provide health-related services. The program has demonstrated high economic returns through improvements in academic achievement, higher educational attainment, and reductions in rates of remedial education, child maltreatment, and juvenile and adult crime.[31]

Collaborations in early childhood services

Collaborations across sectors (public, commercial, voluntary) and among public agencies (i.e., across child-care, health, welfare, foster care and employment and education services) are essential if early childhood development services are to reach all American families that need and want them. The National Governors Association Task Force on School Readiness noted that "… children who are healthy and ready to learn when they enter kindergarten have a better chance for school and life success…. Achieving school readiness cannot be accomplished by any single agency or individual. It requires public-private partnerships and strong leadership from governors."[32]

Several states have started collaborative programs and partnerships that combine programmatic funding from a variety of sources to support integrated and coherent ECD and family support services. In North Carolina, former Governor Jim Hunt launched Smart Start in 1993 to strengthen service delivery by supporting early childhood systems at the local level. The North Carolina Partnership for Children, Inc. (NCPC) leads Smart Start to help shape public policies relating to children and conducts research to ensure that Smart Start effectively meets the state's needs.[33] The NCPC helps local partnerships strengthen the quality of child care, increase affordability and access, provide health-related services and offer family support. By linking community services focused on children up to age 5, Smart Start has helped establish a network of organizations with the common goal of ensuring that every child in the state arrives at school healthy and ready to succeed.

In Washington State Thrive By Five, a diverse group of public and private partners, leverages their combined assets to help achieve sustainable social change for the young children and families of Washington State.[34] The partnership is co-chaired by Governor Gregoire and Bill Gates, Sr., and is governed by a board of directors composed of funding partners and policymakers. The board and an advisory committee representing diverse communities and expertise work together to develop plans, establish operational capacities, and initiate the development of programs and funding.

North Carolina's STARS

In 2000, North Carolina launched the 5-Star Child Care License system (STARS) to raise awareness and help parents assess the quality of child-care programs.[39] Child-care centers and family child-care homes receive a rating of one to five stars based on staff education and experience and program standards for the child's social, physical and cognitive environment. All eligible facilities that meet minimum licensing standards receive one star and may apply for a voluntary rated license of two to five stars. The cost of the program is included in the state's overall licensing budget. North Carolina has linked child-care subsidy payments and grants and loans to programs' quality ratings. The private sector supports consumer awareness of the program. An independent evaluation of the five-star licensing system found that licensing levels were directly associated with facility quality.[40]

Thrive By Five offers services to parents in the home, early reading interventions, supports community-based child development programs, and offers information and educational materials about child development for parents and caregivers on its Web site.

One of the constituents of Thrive by Five is a coalition of King County (Seattle) business leaders, the Business Partnership for Early Learning (BPEL). BPEL has focused on investing in home visitors who provide pre-literacy and parenting guidance over a two-year period to families with 2- to 3-year-olds most in need of help to achieve school readiness. BPEL's reasoning: "If they're not school ready, they won't be job ready. Helping them helps us all."[35]

In the private sector, the American Business Collaboration (ABC) is a group of U.S. companies that joined together to ensure that their employees have access to quality dependent care programs and services to help them manage their work and personal responsibilities.[36] Current ABC Champion companies are: Abbott Laboratories, Deloitte & Touche, Exxon Mobil Corporation, General Electric, IBM Corporation, Johnson & Johnson, PricewaterhouseCoopers and Texas Instruments. The ABC recognizes that child care has great relevance for business: "When access to affordable, quality child care is lacking in the community, it becomes difficult for employers to attract and retain qualified employees."[37]

Improving the quality of early childhood services

Evaluating, improving and communicating the level of program quality are vital activities for effective, accountable systems of early childhood services. Quality Rating and Improvement Systems (QRIS) are tools for ensuring accountability and building quality in services across communities.[38] Using state regulations and licensing as a foundation to establish benchmarks for program quality and award quality ratings based on defined standards, QRIS share five common elements: standards; accountability; program and provider outreach and support; financial incentives linked to compliance; and consumer education. Currently, 18 states have statewide QRIS and 27 states have systems in development. Regardless of whether quality ratings are mandatory and linked to child-care licensing or voluntary, as is the case in most states, they can be used as a standard for funding and in securing funds from philanthropy or government contracts. In some cases QRIS are linked with state's tiered reimbursement program and reward programs that attain higher quality levels with higher payments.

Retaining a skilled workforce and supporting stable, high-quality services for children and families are critical ways to promote the health and development of children in child-care settings. The skill and commitment of caregivers in early childhood programs have demonstrable effects on the quality of care and education given to children. National professional organizations and some states support the training and credentialing of early childhood caregivers and teachers, providing scholarships for low-income individuals who aspire to these careers. The T.E.A.C.H. Early Childhood Project (T.E.A.C.H.), an initiative of the national Child Care Services Association, operates in 21 states.[41] The model provides child-care staff with scholarships to cover part of the cost of tuition, books, release time and travel expenses. Scholarship funds come from a combination of public, employer and foundation support (including the federal Child Care Block Grant set-aside for quality improvement). T.E.A.C.H. scholarships help address the issues of under-education, poor compensation and high turnover within the early childhood workforce. An evaluation of the program showed that participants in the associate degree scholarship program improved their education levels and left their child-care centers at a rate of less than 9 percent per year, well below the national annual turnover rate of 30 percent.[42]

Photo: Tyrone Turner

In order to attract and keep qualified personnel in ECD and child care, compensation and benefits for early childhood caregivers/teachers will have to be increased from current levels. The national Child Care Services Association established the Child Care WAGE$ project, which offers a model and technical support for state or local agencies seeking to increase financial incentives for their child-care workforce.[44] WAGE$ is offered statewide in North Carolina as a funding collaboration between local Smart Start Partnerships (described above) and the State Division of Child Development and provides salary supplements directly to low-wage teachers, directors and family child-care providers working with children from birth to age 5 in participating counties. Graduated salary supplements are based on the teacher's education level, with different tiers for directors or teachers and family child-care providers. Lower turnover rates among North Carolina participants in the Child Care WAGE$ Project (18% annually compared with 32% among child care workers statewide) presumably reflect greater job satisfaction and higher compensation.[45]

Accountability

The efficacy of high-quality early childhood development programs has been established by well-controlled longitudinal studies that began more than 40 years ago. As the first cohorts of children enrolled in experimental studies of early childhood development interventions have become adults, evidence of some long-term impacts has emerged. Although health outcomes were not often included in the original studies designed to measure cognitive benefits and educational attainment, some health and health-related benefits, such as delayed childbearing, reduced likelihood of depressive symptoms in early adulthood and reduced

likelihood of arrest or incarceration have been documented.[46] Indirectly, the greater educational attainment and higher incomes of participants in high-quality early childhood development programs, as compared with similar groups of children who did not receive these services, are associated with better health outcomes throughout life.[47]

Rigorous evaluations of early childhood interventions that measure and emphasize the longer-term health benefits can increase awareness and appreciation among public funders and private-sector sponsors, including employers. The Early Childhood Research Collaborative (ECRC), sponsored by the University of Minnesota's Center for Early Education & Development and the Federal Reserve Bank of Minneapolis, showed foresight in building a comprehensive evaluation into its demonstrations of early childhood services.[48] Established in 2006, the ECRC explores links between early education and economic development, public health, and K-12 education.The interventions studied include evaluation and policy analysis of early learning programs, family, school, economic and community influences.

Measures to assess progress

We propose some feasible markers of progress toward achieving the goals laid out in our recommendations by identifying relevant health and health-related indicators in existing routine surveys and datasets that can be tracked for overall populations and (whenever possible) for socioeconomic and racial/ethnic groups. In cases where no current data sources provide relevant information, we suggest how performance information might be collected. The effectiveness of monitoring could be greatly increased by linking data from different sources. Potential linkages should be explored, as should strategies for monitoring at the local level.

To assess progress in improving the quality of early developmental experiences of children at the national and, in some cases, state levels the following indicators in existing data sources could be used:

- The percentage of young children who are read to daily by family members and the amount of daily TV watching, by child's racial or ethnic group and by household income or educational attainment, at national and state levels (National Survey of Children's Health).[49]

- The percentage of young children (ages 4 to 5) not yet enrolled in kindergarten who show three or more school readiness skills (such as the ability to recognize letters, count to 20 or higher, write their names and read or pretend to read) by income, parental educational attainment or mother's employment status, at the national level (National Household Education Survey's School Readiness and Early Childhood Program Participation Surveys).[50]

- Rates of child victims of abuse and neglect, by state, and by child's racial or ethnic group and living arrangements, from the National Child Abuse and Neglect Data System.[51]

- The number of states that have implemented early learning guidelines in literacy, language, pre-reading and numeracy for children ages 3 to 5 that align with state K-12 standards and are linked to the education and training of child-care providers. (Child Care and Development Fund Report of State Plans).[52]

- The number of regulated child-care centers and homes nationwide accredited by a recognized early childhood development professional organization. (National Association for the Education of Young Children, National Afterschool Association; National Association for Family Child Care)[53]

- The proportion of regulated centers and family child-care homes serving families who receive child-care subsidies. (ACF-800 administrative data; National Child Care Information Center)[54]

To assess progress in the level of support families receive to provide their children with a high-quality early developmental experience, the following indicators could be used:

- The percentage of young children whose parents report that someone in the family had to quit, not take or greatly change his/her job because of problems with child care, by child's racial or ethnic group and by household income or educational attainment, nationally and by state (National Survey of Children's Health).[55]

- The percentage of Temporary Assistance to Needy Families (TANF) families with children who are exempt from employment participation because child care is unavailable. (National TANF Database)[56]

As with other recommendations, indicators of population health, such as overweight/obesity, heart disease, diabetes and school/work absence, would be appropriate long-term measures of the impact of implementing this chapter's recommendations. Data are available on these indicators in existing data sources.

In addition to using existing indicators and sources, it will be important to invest in longitudinal studies that follow selected comparable samples of children from birth through adulthood, to examine health as well as social and economic outcomes throughout the life course in relation to receipt or non-receipt of quality early childhood intervention services. While not feasible at the population level, long-term longitudinal follow-up for a subsample of adequate size and diversity will provide essential information for monitoring progress.

Resources

Early Childhood Research Collaborative *www.earlychildhoodrc.org/*

Educare and the Bounce Learning Network *www.educarecenters.org/*

National Association of Child Care Resource & Referral Agencies *www.naccrra.org/* and its ChildCareAware service. ChildCareAware (CCA) is intended to help parents locate quality child care and child-care resources in their community. CCA works to raise visibility for local child-care resource and referral agencies nationwide and to connect parents with the local agencies best equipped to serve their needs. Resources include a five-step guide to choosing quality child care, an online Child Care Options Calculator and information to help parents and caregivers find child care for non-traditional work schedules. *www.childcareaware.org/en/tools/child_care_finder/index.php*

National Association for the Education of Young Children (NAEYC) *www.naeyc.org/*

National Institute for Early Education Research *http://nieer.org/*

National Scientific Council on the Developing Child *www.developingchild.net/*

Smart Start National Technical Assistance Center *www.smartstart-nc.org/ntac/*

USDA's Child and Adult Care Feeding Program supports meals for low-income children in child-care facilities (including home day-care sites) and offers nutrition education programming and technical support to care providers for reaching both parents and children at points in their lives when most receptive to new information and experiences about food and healthy eating. *www.fns.usda.gov/cnd/Care/*

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Chapter

Five

Create Healthy Homes and Communities

Recommendations From the Robert Wood Johnson Foundation
Commission to Build a Healthier America

Recommendation:

Develop a "health impact" rating for housing and infrastructure projects that reflects the projected effects on community health and provides incentives for projects that earn the rating.

All homes, workplaces and neighborhoods should be safe and free from health hazards. Communities should mobilize to correct severe physical deficiencies in housing, and health should be built into all efforts to improve housing, particularly in low-income neighborhoods. New federal housing investments should be held accountable to demonstrate health impact.

Recommendation:

Create "healthy community" demonstrations to evaluate the effects of a full complement of health-promoting policies and programs.

Demonstrations should integrate and develop successful models that can be widely implemented and that include multiple program approaches and sources of financial support. Each "healthy community" demonstration must bring together leaders and stakeholders from business, government, health care and nonprofit sectors to work together to plan, implement and show the impact of the project on the health of the community.

Where we live is at the core of our daily lives. For that reason, our homes and our communities have enormous impact on our health. Unsafe, substandard housing can expose us to toxins and put us at higher risk for illness and accidents. Deteriorating or crime-ridden neighborhoods where interactions among residents, businesses, children and adults are strained or openly antagonistic also imperil health. Unhealthy homes and communities can severely limit our choices and resources. For example, a person's ability—and motivation—to exercise and avoid excessive drinking and smoking can be constrained by living in a neighborhood that lacks safe areas for exercise, where intensive tobacco

and alcohol advertising targets poor and minority youth and liquor stores are plentiful and where healthy role models are scarce. By the same token, healthy environments—including safe, sanitary housing and neighborhoods with sidewalks, playgrounds and full-service supermarkets—encourage healthy behaviors and make it easier to adopt and maintain them. Neighborhoods where residents know and feel connected to each other also tend to promote better health.

Unfortunately, many Americans do not live in health-promoting housing and communities. In fact, many lower-income families and families of color have little or

no choice but to live in crumbling, substandard housing and communities that are actually harmful to their health. This chapter looks at how our homes and communities can support or impede good health and at policies and initiatives that support healthy environments.

The Problem

Healthy homes and communities are out of reach for many families. Substandard housing is much more of a risk for some families than others; housing quality varies dramatically by social and economic circumstances. Families with fewer financial resources are most likely to experience unhealthy and unsafe housing conditions and typically are least able to remedy them, contributing to disparities in health across economic groups. In addition, nearly one fifth of all Americans—about 52 million people—live in poor neighborhoods that lack the basic necessities to support healthy living.[1] People in minority racial or ethnic groups are more likely to live in such neighborhoods; nearly half of all blacks live in poor neighborhoods, compared with only one in 10 whites.[2]

Housing

More than 6-million occupied housing units in the United States have moderate or severe physical deficiencies.[3] Deficiencies in housing disproportionately affect rental properties, especially older buildings. Between 2004 and 2007, the number of renter households increased by 2 million. For lower-income renters, there are simply not enough affordable units; only a quarter of households that are eligible for federal rent subsidies receive them.[4]

Poor quality and inadequate housing contributes to health problems such as infection and chronic diseases, injuries and poor childhood development. Threats to health posed by conditions and hazards in the home include:

Lead hazards Lead poisoning irreversibly affects brain and nervous system development, resulting in lower intelligence and reading disabilities.[5] Lead levels below CDC's current definition of "elevated" have been associated with neuro-cognitive deficits in children; no "safe" level has yet been established.[6] Most lead exposures occur in the home, particularly in homes built before 1978 that often contain lead-based paint and the contaminated dust and soil it generates. Deteriorated paint in older homes is the primary source of lead exposure for children, who ingest lead-laden dust.[7] Between 1998 and 2000, a quarter of the nation's housing—24-million homes—was estimated to have significant lead-based paint hazards.[8] An estimated 250,000 American children ages 1 to 5 have elevated blood lead levels.[9] Millions more are exposed at levels that are likely to have an impact on IQ and learning.[10]

Allergens Substandard housing conditions such as water leaks, poor ventilation, dirty carpets and pest infestation that can lead to an increase in mold, mites and other allergens are associated with poor health. Indoor allergens and dampness play an important role in the development and exacerbation of respiratory conditions including asthma, which currently affects over 20 million Americans and is the most common

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NOTE: **What is a Healthy Community?**

A healthy community is safe. It safeguards the health of its residents by having:

- safe, high-quality, affordable housing for all residents;

- support services and adequate, affordable child care for families with infants and young children;

- safe streets, sidewalks and places for children to play and adults to exercise;

- effective, accessible public services needed to safeguard health, including police, fire, physical and mental health services;

- clean air, water and protection from exposure to chemical and structural hazards;

- limits on the exposure of residents, particularly children, to promotion and sale of hazardous substances including alcohol and tobacco; and

- an atmosphere of tolerance and rejection of discrimination, which can harm the health of individuals and communities in many ways.

A healthy community promotes the health of its residents by having:

- full-service grocery stores located nearby that offer affordable, healthy foods;

- safe, attractive and accessible indoor and outdoor places for children to play and adults to exercise, including green spaces;

- places for people to gather and interact, including places of worship and activities bringing people together to promote the common good;

- high-quality early childhood development, K-12 and post-high-school education programs, because early development and education of children and youth lay the basis for health across our entire lives;

- employment opportunities in or accessible to the community, because employment and the income it generates are essential for the health of working-age individuals and their dependents; and

- convenient and affordable public transportation to access services and opportunities that are important for health but are not available within walking distance, reduce pollution and encourage walking.

Photo: David Burnett

chronic disease among children.[11] Approximately 40 percent of diagnosed asthma among children is believed to be attributable to residential exposures.[12] In 2004, the cost of preventable hospitalizations for asthma was $1.4 billion.[13]

Indoor air pollutants Radon, a natural radioactive gas released from the ground, has been associated with lung cancer; an estimated one in 15 homes has elevated radon levels.[14] Residential exposure to environmental tobacco smoke, pollutants from heating and cooking with gas, volatile organic compounds and asbestos have been linked with respiratory illness and some types of cancer.[15]

Injuries Each year, injuries occurring at home result in an estimated 4-million emergency department visits and 70,000 hospital admissions.[16] Contributing factors include structural features of the home such as steep staircases and balconies, lack of safety devices such as window guards and smoke detectors, and substandard heating systems.[17]

Extreme indoor temperatures Cold indoor conditions have been associated with poorer health, including an increased risk of cardiovascular disease.[18] Both extremely low and extremely high temperatures have been associated with increased mortality, especially among vulnerable groups such as the elderly.[19]

Crowding Residential crowding has been linked both with physical illness, including infectious diseases such as tuberculosis and respiratory infections, and with psychological distress among both adults and children.[21] Children who live in crowded housing are at risk of poorer cognitive and psychomotor development and may be more anxious, socially withdrawn, stressed or aggressive.[22]

Communities

Social and environmental factors are linked with health disparities across communities. Lower-income communities and communities of color are disproportionately burdened by a higher incidence of certain diseases and conditions such as heart disease, high blood pressure and infant mortality. In a study of health disparities among racial and ethnic groups, researchers estimated that neighborhood poverty accounted for half of excess risk observed among blacks and Hispanics (compared with non-Hispanic whites) for childhood lead poisoning, gonorrhea, tuberculosis, HIV/AIDS mortality and homicide.[24]

Most obviously, the physical characteristics of neighborhoods affect health. Health can be harmed by poor air or water quality or proximity to facilities that produce or store hazardous substances.[25] Lack of access to nutritious foods and safe places to exercise, combined with concentrated

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NOTE: Affordable Housing

"Affordable" housing is generally defined as housing that requires less than 30 percent of household income. High housing payments relative to income, along with rising utility costs, force some families to choose between heating, food and medications. For example, households with children in the lowest income quartile that spend more than 50 percent of income on housing have, on average, just $257 per month for food, $29 for clothing and $9 for health care.[20]

NOTE: Childhood Asthma and Housing Deficiencies

Children in particular are sensitive to environmental influences and exposures, with consequences not only for their immediate but their lifetime health. Childhood asthma is a leading cause of school absences and avoidable hospitalizations for children under age 14. Children in lower-income and minority families are at particular risk for developing the disease because of disproportionate environmental triggers such as mold, mildew and pests in old and substandard housing stock.[23]

exposure and ready access to fast-food outlets, appear to correlate with higher rates of obesity.[26] For example, proximity to supermarkets (which typically sell fresh produce) has been linked with less obesity, while proximity to small convenience stores has been linked with more obesity and smoking.[27] People are more likely to be active when they live in neighborhoods with better resources for exercise, such as parks and walking or jogging trails; with less litter, vandalism and graffiti; and with streets that are pedestrian-friendly.[28] Car-centric communities, the result of suburban sprawl and zoning that segregates residential and commercial areas, offer few opportunities for exercise and increase air pollution.

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"The connection between health and the dwelling of the population is one of the most important that exists."

FLORENCE NIGHTINGALE[29]

. . . .

Health can also be shaped by the social environments of neighborhoods—that is, by characteristics of the social relationships among their residents, including the degree of mutual trust and feelings of connectedness among neighbors. When those relationships are "closely knit"—when residents know and feel connected to each other—a health-promoting

dynamic may be produced. But when those relationships are strained and mutual trust is lacking, greater social disorder linked to anxiety and depression may result.

RECOMMENDATION: Develop a "health impact" rating for housing and infrastructure projects that reflects the projected effects on community health and provides incentives for projects that earn the rating.

All homes, workplaces and neighborhoods should be safe and free from health hazards. Communities should mobilize to correct severe physical deficiencies in housing, and health should be built into all efforts to improve housing, particularly in low-income neighborhoods. New federal housing investments should be held accountable to demonstrate health impact.

Rationale

On average, Americans spend almost half of our time at home. Some people—children, mothers with young children, elderly, chronically sick and disabled persons and others who do not work outside the home—spend even more time in their homes. These groups can be disproportionately affected by poor housing conditions and may have special health and housing needs.

BACKGROUND: Energy Costs

Poorly insulated housing and rising energy costs have imperiled the health of many and pose severe threats to those who are elderly, disabled or very young. High energy costs place a large economic burden on lower-income families, forcing them to make trade-offs between housing, heating, medical care and other basic needs. Lower-income families spend as much as 14 percent of their budget on home energy compared to 3 percent for families with higher incomes.[30] In a national survey of 1,100 people receiving Low Income Home Energy Assistance (LIHEAP) in 2005, almost half reported going without medical care due to unaffordable energy bills.[31] About one-fifth had a household member who used medical equipment requiring electricity such as a nebulizer or oxygen machine, and one-quarter reported becoming ill as a result of living in a home that was too cold.[32] Many low-income families respond to unaffordable energy sources by relying on alternative heating sources such as ovens and space heaters. An unintended but inevitable consequence of these make-do heat sources is a higher risk of fires. Injuries and deaths due to house fires have steep gradients related to socioeconomic status; those who are most disadvantaged are most likely to be harmed.[33]

BACKGROUND: Environmental Justice

Virtually all Americans are exposed to some extent to environmental health hazards such as particulates in the air; trace amounts of industrial chemicals in the water supply; and soil that has been contaminated with lead, pesticides or other toxic materials. Residentsof lower-income and minority neighborhoods, however, are disproportionately at risk of exposure and harm. Environmental justice is defined as:

> The fair treatment and meaningful involvement of all people regardless of race, ethnicity, income, national origin or educational level with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no population, due to policy or economic disempowerment, is forced to bear a disproportionate burden of the negative human health or environmental impacts of pollution or other environmental consequences resulting from industrial, municipal, and commercial operations…[34]

We have not yet achieved the fair treatment of communities in preventing and abating harmful environmental exposures.

As new housing and infrastructure—roads, parks, retail areas—are funded and designed, it is important to consider their future health implications. Safer and healthier housing design, more green spaces and safe streets, access to public transportation and services within walking distance are ways to promote better health. These elements should be prerequisites for public support of all housing and infrastructure construction, and incentives should be provided to private developers. Just as importantly, substandard and existing unhealthy housing units must be improved to support the health of children and families inhabiting them.

Housing

Integrated, crosscutting solutions are needed to remediate the health consequences of poor quality, unaffordable and unstable housing. The nation's current efforts to address lead-based paint, radon and asbestos hazards in homes reflect a scatter-shot and ineffective approach to the problem. Historically, housing code inspectors conducted more comprehensive assessments. Now, however, the system is largely responsive to single-issue complaints and narrow concerns for structural safety and property-value preservation. Housing code inspectors do not systematically address disease- and injury-causing conditions, which are considered the sole jurisdiction of health departments, and most health departments do not address structural hazards in homes.

The joint CDC/HUD Healthy Homes Initiative, begun in 1999, reconnects health objectives with housing.[37] This initiative strives both to identify housing deficiencies that affect health, safety and quality of life and to reduce or eliminate the health risks related to poor quality housing. The HUD Healthy Homes grant program has provided funding to over 42 communities to:

- remediate housing-related hazards that contribute to children's diseases;

- deliver education and outreach activities to protect children from housing-related hazards; and

- build capacity to assure Healthy Homes projects are sustained.

Establishing healthy homes standards, either legislatively through housing codes or by promoting and rewarding voluntary adherence to best practices, can prevent injuries, poisonings and related environmental health and safety hazards in housing.

The Community Environmental Health Resource Center (CEHRC), a project of the Alliance for Healthy Homes, helps communities perform health and environmental assessments in homes in high-risk communities.[38] The project provides community organizations with the tools they need to conduct home assessments, document poor living conditions and make policy changes to rectify those conditions. It also assists communities in remediating hazardous conditions in rental properties. Local communities can undertake integrated, multi-pronged approaches to addressing health hazards in housing through collaborations among public agencies and programs and engagement with private organizations.

BACKGROUND: What Is a Healthy Home?

Healthy housing is characterized by:

- sufficient space to reduce crowding and for personal privacy and normal household activities;

- adequate and reliable light, energy and sanitation to minimize the risk of accidents, contamination and transmission of disease and to promote mental health;

- protection from disease-transmitting insects and rodents;

- protection from accidental injury and adverse environmental conditions such as excessive cold, heat, dampness and noise; hazardous chemicals; molds; toxic and noxious odors, and other harmful air contaminants, allergens or pollutants; and

- affordability and accessibility for all, including those with extremely low incomes, without compromising their ability to meet all of the other basic needs for health.

BACKGROUND: The Divergence of Housing and Health over the Last Century

At the turn of the 20th century, the sanitation movement focused on substandard slum housing located near factories and inspectors dealt with both safety problems and health problems.[35] An essential element in the nation's efforts to control communicable diseases was, in fact, a housing-based solution: indoor plumbing. Since then, this coordinated response split into the publicly assisted housing movement and the public health movement. These two communities now have separate institutional bases, speak different languages and typically find collaboration challenging.[36]

Health care services, public health programs and housing rehabilitation projects often operate in a complex and fragmented system, despite their often overlapping interests. The Boston One Touch Program, an initiative developed by the National Center for Healthy Housing (NCHH), attempts to improve service delivery and promote efficiency through greater cross-agency interdisciplinary work.[39] The program seeks to leverage and coordinate the efforts of city and state government and community advocacy groups to improve the health of children from lower-income families. NCHH developed a three-prong strategy: target housing problems that are known to make children sick; focus on broad adoption of high-impact, low-cost housing interventions to maximize health and environmental benefits; and make every touch count by using existing programs and staff for greater impact through coordination. NCHH also trains public and nonprofit staffs and has worked with partners to develop and evaluate the costs and benefits of integrated housing interventions.

One CEHRC project, the Greensboro (NC) Housing Coalition, successfully advocated for changes in inspector attitudes about chipping and peeling paint.[40] The local agency has directed inspectors to cite properties for a code violation where such conditions exist, rather than considering them a minor ("cosmetic") violation. Greensboro's new Rental Unit Certificate of Occupancy includes language on lead hazard disclosure and lead-safe work practices (LSWP). When city inspectors issue repair orders, they now attach a statement to property owners about pre-renovation disclosure and lead-safe work practices. In addition, language on pre-renovation disclosure and LSWP is included in all orders to repair code violations.

Other examples of community-based initiatives to improve housing and reduce exposures to environmental hazards:

- The Cuyahoga County (OH) Department of Development Healthy Homes demonstration project addressed pulmonary hemorrhaging, asthma and lead poisoning by controlling environmental factors in the home—particularly moisture and mold problems—in high-risk areas of Cleveland.[41] The project provided outreach, environmental assessment of the units, clinical assessment of the families, home remediation of mold and lead hazards, follow-up environmental and clinical assessments and comprehensive education of resident families. The evaluation found a reduction of symptoms in children with asthma following these interventions.

In the same community, the Environmental Health Watch and Cleveland Tenants Organization worked closely with the city's Department of Health and Department of Building and Housing to enact a new Lead Ordinance that took effect in 2004.[42] Under the new ordinance, several policy changes should stimulate significant private sector investment in lead safety, including a Certificate of Lead-Safe Maintenance for a property where the owner has repaired all deteriorated paint, rendered all horizontal surfaces smooth and cleanable, and obtained a clearance test from a third party; requirement for a permit for exterior painting of pre-1978 units; enforcement of disclosure violations; unilateral repair of lead hazards in a lead-poisoned child's home; and a "nuisance declaration" that will require immediate landlord action on lead hazards in pre-1950 properties.

- The Seattle King County (WA) Healthy Homes Project collaborates with other public and private agencies to improve household conditions for families with asthmatic children.[43] The county health and housing departments work together to move families with serious asthma problems to the top of housing lists and into homes that meet healthy homes criteria. Healthy home features have been built into 1,600 new area homes.

Communities

The overwhelming weight of evidence indicates that physical, social and service characteristics of neighborhoods influence health in important ways, including by shaping choices and behaviors. When it comes to health impact, characteristics of both people and places matter.

Home ownership Greater home ownership is associated with a better quality of community life because it can promote neighborhood stability, social ties and investment.[44] But first-time homebuyers often need education, guidance and support throughout the process of assuming and sustaining the responsibilities of ownership. Well-established local not-for-profit organizations can provide this support, which is particularly needed in economically disadvantaged communities.

Photo: Tyrone Turner

For nearly 40 years, a community-based organization in Philadelphia, Association of Puerto Ricans on the Move (Asociación Puertorriqueños en Marcha, Inc.–APM), has provided health and social services and promoted housing and community development throughout eastern North Philadelphia.[45] APM's multiethnic and multiracial revitalization and service area includes 47,560 residents, almost three quarters of whom live in households with annual incomes below $30,000. Since 1990, APM has developed more than 210 affordable neighborhood rental units (eligible for the low-income tax credit) and 103 single family dwellings for low- and moderate-income families. These subsidized housing units were created through a combination of city, state and private-sector grants and loans.

APM manages more than $50 million in development projects including a 44,000-square-foot retail center with a supermarket, laundromat and credit union, and has also built a day-care facility. With the Philadelphia Horticultural Society and the city, APM launched the Vacant Land Stabilization Program to address blighted lots. APM's Blockscape Program assists families with basic repairs to their homes.

APM has a Housing Counseling program for first-time, low-income homebuyers and tenants that serves more than 500 clients each year. Trained bilingual housing counseling professionals help families and individuals navigate the pre- and post-purchase process and offer counseling and training in money management and budgeting. Tenants are offered counseling to reduce rental delinquency, landlord/tenant disputes and prevent homelessness. For homebuyers with credit problems, APM offers delinquency counseling and help with credit repair and savings, and provides consumer education on predatory lending practices. The goal is to ensure that those who purchase homes learn how to maintain their properties and build wealth for their families.

Transportation Accessible public transportation lowers residents' transportation costs, reduces dependence on fossil fuels and improves air quality, encourages walking and eases traffic congestion. Developing communities convenient to regional public transit can also stimulate commercial development and connect residents to jobs and services locally and throughout the greater region.

There is a potential downside to public transit proximity for lower-income residents, however: Residential properties close to transit stations may sell for 20 to 25 percent more than comparable properties further away. Thus, lower-income residents may be subject to displacement, unless measures are explicitly taken early in planning and development to stabilize rents and occupancy for existing residents. These may include set-aside requirements for low- and moderate-income housing in new developments, property tax increase exemptions for lower-income home owners in neighborhoods where values are increasing rapidly and local jurisdiction purchases housing or undeveloped properties in development districts to preserve affordable housing opportunities.[46]

Social relationships How residents and businesses in neighborhoods interact with each other have health implications. Residents of "close-knit" neighborhoods may be more likely to:

• work together to achieve common goals such as cleaner and safer public spaces, healthy behaviors and good schools;

• exchange information about resources that affect health, such as child care and jobs; and

• maintain informal social controls that discourage crime and other undesirable behaviors such as smoking or alcohol use among youths, drunkenness, littering and graffiti.[47]

Children in more cohesive neighborhoods are more likely to receive guidance from adults and less likely to engage in health-damaging behaviors such as smoking, drinking, drug use or gang involvement. Neighborhoods in which residents express mutual trust and share a willingness to intervene for the public good have been linked with lower homicide rates.[49]

Public places both inside and outdoors where residents can gather informally and spontaneously are conducive to the creation of social relationships and networks that promote health. "Third places," as first characterized by Ray Oldenburg in his study of communities, *The Great Good Place* (1989), are social surroundings, such as libraries, recreation centers, playing fields, parks and coffee shops, separate from the home and the workplace that are the primary places for social interaction.[50] Having these "third places" reduce isolation and loneliness, foster the sharing of information and mutual assistance among neighbors and make neighborhoods safer by putting more people and eyes on the street. Adolescents and teenagers in particular need and often lack wholesome and supervised gathering places. Such neighborhood anchors create "social capital," a community asset that should be recognized by building third places into community development/redevelopment plans and even subsidizing small, low-profit businesses such as cafes and book stores through tax breaks or grants from corporate enterprises.

Recreation Designing and rehabilitating communities with public spaces that encourage pedestrian and bicycle transit and safe places for exercise and play can promote community health.[51] From substantial natural reservations such as New York's Central Park the District of Columbia's Rock Creek Park, to far smaller neighborhood and pocket parks, parks are venues for relaxation and restoration, socializing and physical activity. Living near a park is associated with lower stress and risk of obesity.[52] Parks also provide valuable unstructured play opportunities in natural, outdoor settings for children. Community gardens, another form of green space, offer participants the chance to learn new skills, grow fresh healthy food, save money and build community. Just as important as establishing green spaces is securing the funding and sponsorship—public or private—to maintain them.

RECOMMENDATION: Create "healthy community" demonstrations to evaluate the effects of a full complement of health-promoting policies and programs.

Demonstrations should integrate and develop successful models that can be widely implemented and that include multiple program approaches and sources of financial support. Each "healthy community" demonstration must bring together leaders and stakeholders from business, government, health care and nonprofit sectors to work together to plan, implement and show the impact of the project on the health of the community.

Rationale

Features of physical and social environments often overlap, but together they can create vastly different opportunities to be healthy. Every community has an ecology of health—a distinctive constellation comprising physical structures and spaces; social relationships; means of transit and patterns of

Arabia Mountain Trail

The Arabia Mountain Trail, built in a Black community east of Atlanta, has measurably increased physical activity for residents by connecting neighborhoods, downtown and commercial areas with large nature preserves and historic sites.[53] With more than 10 miles of the trail completed to date, thousands of residents are walking, biking and hiking safely between downtown Lithonia and Panola Mountain State Park. Especially important to the success of this "third place" is the proximity of the trail to elementary schools, mixed-income neighborhoods, commercial and downtown areas—allowing the trail to serve as a recreation area, community gathering location and transportation route for pedestrians and bikers. Expansions to the trail will connect even more destinations over 2,000 acres of trail and preserved green space in one of America's fastest growing counties.

travel; kinds of work, learning and play; goods and services for sale or exchange, and a particular distribution of economic resources. As we have repeatedly noted, a community's health profile and opportunities for improving it emerge from a local configuration of resources and assets, leadership and priorities. The demonstrations we propose here build on this understanding of health and community progress.

Thinking about health as something broader than the product of health care services and public health activities is still relatively novel. As shown in the previous chapters, our everyday circumstances and activities profoundly affect our health, and efforts to promote and sustain good health must address these environmental factors. We propose that a consortium of philanthropic and public funders support place-based initiatives that bring together community leaders from multiple sectors—neighborhood groups, businesses, schools and universities, local zoning boards, city and county housing, social services and health agencies, volunteer and faith-based organizations—to identify and address local health problems and goals.

It is important to recognize how difficult it can be for disadvantaged communities to alter health-damaging physical and social characteristics. Such neighborhoods typically lack resources, employment opportunities and services—including good schools—that can lead to upward social and economic mobility. There may also be fewer positive role models and fewer community members to provide a "leg up" to those who are most in need. Although current evidence is limited, we know enough to design and evaluate a range of promising experiments to help us learn how to ensure that all Americans live in neighborhoods that safeguard and promote their health. Many promising smaller-scale approaches could be tested on a scale large enough to guide both public- and private-sector policies.

This is not a minor or short-term endeavor; it will require sustained financial support, technical assistance, monitoring of progress and evaluation of outcomes over a number of years. Most important will be community initiative and leadership in assembling local stakeholders, reaching agreement on the priorities for a local collaboration to improve health, and specifying the roles and actions of various parties to the collaborative effort. Every community will have to consider its problems, priorities and unique resources and strengths as it begins to construct a plan for health-wise policies, programs and design.

Models for multi-sector, place-based approaches to improving health and well-being exist. The Harlem Children's Zone Project, for example, has taken a holistic approach to improving the well-being of children who live and go to school within a 100-block area of New York City.[54] Since its start as a single truancy-prevention program almost 40 years ago, the Zone's community-based children's advocates, social workers and educators expanded services through school-based community programs over time and, in the late 1990s, undertook a pilot project to provide a number of support services for low-income families who lived in a single block. The idea was to address multiple problems at once: deteriorating housing, failing schools, violent crime and chronic health problems.

Notably, The Harlem Children's Zone was one of the first community-based organizations to evaluate and track the results of its work. Twelve years ago the organization began a network of programs for a 24-block area: the Harlem Children's Zone Project.[55] In 2007, the Zone Project grew to almost 100 blocks and served 7,400 children and over 4,100 adults. By 2011, the Project hopes to serve 15,000 children and 7,000 adults. One of the Project's programs is the Baby College, an experiential education program for expecting and

new parents, described in the previous chapter.[56] Beginning with expectant parents, the Project provides children and their families with social and educational supports and services to foster constructive engagement with education and their community. For fiscal year 2009 the Project's budget is more than $40 million, averaging $3,500 per child.

Lessons for other communities passed along in The Harlem Children's Zone White Paper on the Zone's project model for children's social, health and educational development:[57]

- Expect that it will take at least seven years to create an effective project; without enough time, quality may suffer.

- A community-based organization, not government, should be the lead entity in a collaboration and fully accountable for the program, because politicians cannot wait a decade for outcomes.

- Funding should be secure and sustainable for building capacity, strategic planning and high-quality programs.

- Begin strategic planning at the outset and plan for the long term.

Other models and a source of support for local efforts to introduce health-promoting and health-sustaining policies and practices throughout a jurisdiction or neighborhood are offered by CDC's Healthy Communities Program.[58] This federal initiative works directly with communities, through partnering national organizations and through states, to create healthy, thriving communities by reducing chronic diseases and attaining health equity. CDC invests in communities to jump-start change locally and provides training, peer-to-peer mentorship and dissemination of effective models to activate and change policies, organizations and environments to encourage people to be more physically active, eat a healthy diet, not use tobacco and effectively manage and control

chronic disease. To date, more than 240 communities have been selected to participate in CDC's Healthy Communities Program, resulting in significant changes at the local level.[59] Over the next five years, an additional 260 communities will receive funding and technical support to activate change in their communities and serve as models for how to improve the health of communities across the nation.

Accountability

We propose illustrative, feasible markers of progress toward achieving the goals embedded in the recommendations by identifying relevant health and health-related indicators in existing routine surveys and datasets that can be tracked for overall populations and, when possible, for socioeconomic and racial/ethnic groups. In cases where no current data sources provide relevant information, we suggest how performance information might be collected. To assess progress toward healthier homes and communities at the national and possibly state and county levels the following indicators in existing data sources could be used:

- The number of home-based injuries or poisonings per year, reported in the National Health Interview Survey (NHIS) by age, income, education and race/ethnicity at the national level.[61]

- The prevalence of asthma and percent of sample reporting an asthma episode/attack in prior 12 months among children reported in the National Survey of Children's Health (NSCH) and adults reported in the Behavioral Risk Factor Surveillance System (BRFSS) by household income, educational attainment (parental for children) and race or ethnicity at the national, state and some county levels.[62]

The City of Richmond's General Plan

Richmond, Calif., recognized that it had a long way to go in creating a healthy environment for its residents. The city updated its general plan to incorporate consideration of the health impacts of development projects and environmental conservation. A diverse city with a substantial industrial base, Richmond engaged with community organizations including faith-based, environmental and labor groups to elicit residents' participation in the planning and development of activities guided by the general plan, including policies and decisions involving recreational and open space, access to healthy foods, health services, public transit and safe active transport options, environmental quality, public safety, affordable housing, economic opportunities and green and sustainable building practices.[67]

- A range of questions on home characteristics related to indoor allergens (National Health and Nutrition Examination Survey [NHANES]), by income, education and race/ethnicity at the national level.[63]

- The percentage of children and adults with elevated levels of environmental chemicals in their blood reflecting exposure to smoke, heavy metals, pesticides, volatile organic compounds (VOCs), by income, education and race/ethnicity at the national level (NHANES) (Note: The Environmental Protection Agency also tracks many exposures.)[64]

- Percentage of children living in neighborhoods with sidewalks, parks or playgrounds, recreation centers or library, by household income, parental educational attainment and race/ethnicity, at the national and state level (2007 NSCH).[65]

- Measures of transit access and service using data from local and regional transit service providers on the numbers of bus, rail or ferry lines, the numbers of vehicles on each, and the number of stops within walking distance of residents homes within a community.

- The prevalence of overweight or obesity among children (parental report in the NSCH) and adults (self-report in BRFSS), by household income, education (parental for children) and race or ethnicity at the national and state level.[66]

As with other recommendations, indicators of population health (such as overweight/obesity, heart disease, diabetes, school/work absence, etc.) would be appropriate long-term measures of the impact of implementing our recommendations.

Linkages of existing datasets could greatly expand the ability to measure and monitor progress toward healthier communities. Some of the indicators described in earlier chapters, such as availability of full-service grocery stores (Chapter One) and levels of physical activity (Chapter Two), are also relevant to healthy communities. Additional indicators that describe a communities' population, such as the population size, age, racial or ethnic composition and poverty level, provide a context for and have the potential to affect health, the amount and type of services being used, and the resources available in a community.

Community members should be involved in the ongoing planning, implementation and evaluation of demonstration projects to identify opportunities for improvement and assessment and to report emerging problems and difficulties. Not all indicators and measures are appropriate for every community. Collaboration with those living and working in a community is necessary to determine what data should be measured, reported and used for action in furthering community goals.

Resources

The **Healthy Communities Program** at the Centers for Disease Control and Prevention offers tools for community action, training for community "action teams" on how to change policies and systems, and environments to prevent and control chronic diseases and risk factors, and how to promote health equity. See *www.cdc.gov/ healthycommunitiesprogram/tools/index.htm*, which includes a web-based searchable database of tools for community practitioners and Action Guides guides to help community health practitioners implement specific community-level health promotion strategies (for example, related to diabetes self-management, physical activity, tobacco-use cessation, and social determinants of health.)

Other links describe monitoring and evaluation methods and highlights successes of CDC's Healthy Communities Program investments so that successful interventions can be replicated across the U.S. *www.cdc.gov/healthycommunitiesprogram/evaluation-innovation/index.htm*. National organizations engaged with CDC to mobilize local members, within and outside of traditional health networks, to focus local community action on community changes to improve health and reduce chronic disease are listed at *www.cdc.gov/healthycommunitiesprogram/nationalnetworks/index.htm*. Also see the CDC resource document: *Promoting Health Equity www.cdc.gov/nccdphp/dach/chaps/pdf/SDOHworkbook.pdf*.

The **National Center for Healthy Housing** (NCHH), *www.nchh.org/ Home.aspx*, operates the **National Healthy Homes Training Center and Network**, *www.nchh.org/Training/National-Healthy-Homes-Training-Center.aspx*, through a cooperative agreement with the U.S. Centers for Disease Control and Prevention (CDC), and support from the U.S. Department of Housing and Urban Development (HUD), *www.hud.gov/offices/lead/*, and the U.S. Environmental Protection Agency, *www.epa.gov/*. The Training Center provides training through its network of partners around the country. The target audiences for the training are environmental health practitioners, public health nurses, housing professionals, community outreach workers, tribal environmental health officials, and leaders of community-based organizations. Since 2005 the Training Center has trained over 3,000 individuals; expanded from seven to more than 30 partners; developed a healthy homes awareness video; launched a Healthy Homes Clearinghouse for online information about healthy homes; launched a new Healthy Homes Specialist Credential with the National Environmental Health Association (NEHA).[68]

Low Income Home Energy Assistance Program (LIHEAP). Public assistance programs that support weatherization and spending for home energy needs help protect against the health risks of inadequate home heating and cooling. Improving the affordability of heating or cooling the homes of low-income families can realize substantial health benefits.[69] LIHEAP assists low income households in meeting their immediate home energy needs. Current funding has increased to $5.1 billion in fiscal year 2009; however it is only enough to assist 16 percent of eligible households. Local and state governments can increase the number of families served by leveraging funds from federal programs such as LIHEAP with utility-sponsored assistance programs. Local agencies can link eligible families with other housing improvement and weatherization programs once they are enrolled in LIHEAP, making it easier for families to heat or cool their homes properly and help them gain independence from assistance programs.

The **Medical-Legal Partnership for Children** (MLPC), founded at Boston Medical Center's Department of Pediatrics, enlists the legal profession to ensure that basic family needs—food, housing, safety and access to health and educational services—are met.[70] Using a three-prong model of direct service, training and systemic advocacy, front-line health care staff are taught to identify, screen and triage unmet basic needs, working closely with legal aid and *pro bono* lawyers to assist families and, ultimately, reduce the health disparities caused by social and economic conditions both in non-chronically ill and chronically ill children. In 2006, MLPC received support from the Kellogg Foundation and the Robert Wood Johnson Foundation to promote the growth of the medical-legal partnership model, provide technical assistance and disseminate best practices among the emerging programs. Medical-legal partnerships are now active in more than 120 hospital and health centers.

Project HEALTH, a philanthropically supported consortium of student volunteers, connects lower-income families with the resources they need to build healthier lives.[71] Located in the clinic waiting room of urban hospitals and health centers, Project HEALTH's Family Help Desk programs connect patients with community resources such as food assistance, housing, job training, fuel assistance, health insurance or other resources. Physicians prescribe these resources for their patients just as they do medication, so that clients' unmet resource needs are systematically addressed as a standard element of patient care. Currently, Project HEALTH's corps of 500 volunteers staffs 22 Family Help Desks serving more than 4,400 families in Chicago, Boston, Providence, New York City, Washington, D.C. and Baltimore.

Alliance for Healthy Homes, *www.afhh.org/*. See the Community Environmental Health Resource Center (CEHRC), an Alliance project that provides technical assistance to assess health hazards in homes and communities.

Association of Community Organizations for Reform Now (ACORN) *www.acorn.org/*

Joint Center for Housing Studies *www.jchs.harvard.edu/*

Living Cities *www.livingcities.org*

National Association of City and County Health Officials, Mobilizing for Action through Planning and Partnerships (MAPP) *www.naccho.org/topics/infrastructure/mapp/index.cfm*

National Fair Housing Alliance (NFHA) *www.nationalfairhousing.org/*

National Housing Conference (NHC) and Center for Housing Policy *www.nhc.org/housing/*

PolicyLink *www.policylink.org/*

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Six

Be Accountable for Success

Recommendations From the Robert Wood Johnson Foundation
Commission to Build a Healthier America

Recommendation:

Ensure that decision-makers in all sectors have the evidence they need to build health into public and private policies and practices.

Decision-makers at national, state and local levels must have reliable data on health status, disparities and the effects of social determinants of health. Approaches to monitor these data at the local level must be developed by, for example, adapting ongoing tracking systems. Funding must be available to promote research to understand these health effects and to promote the application of findings to decision-makers.

The Problem

Despite several decades of experience with a wide range of interventions such as those described in this report, we do not know enough about how to improve health and reduce health disparities using strategies outside of public health and health care. In most cases, health indicators have not been included as measured outcomes of non-health-sector programs. We now know that interventions such as efforts to reduce occupational exposure to diesel exhaust or early childhood development programs, which were originally intended to address social and economic goals, have strong and enduring effects on *health* as well. Substantial health effects of many interventions are unlikely to be measurable in the short term—often manifesting several years and even one or more generations following an intervention—yet long-term health outcomes have rarely been tracked. To guide private and public efforts aimed at improving health overall while closing the gaps in health among socioeconomic and racial or ethnic groups, we need better information about which interventions—regardless of whether their central goal is health improvement—are most effective and at what cost.

Rationale

Because programs far beyond the reach of the health sector can have powerful health effects, decision-makers in every sector must consider the health effects of all policies and programs, not only those with obvious direct links with health. Health effects have been linked with child care, education, housing, community planning, nutrition and agriculture, transportation, and policies affecting taxation, wages and employment benefits, for example. Wherever there is significant public—and civic-minded private—investment in actions with potentially significant health consequences, the effects on health should be measured systematically. If policy decisions and public and private investments are to promote health and if decision-makers are to be held accountable for the health consequences of their decisions, better information must be developed.

Research is needed on the effects of non-medical factors on health and health disparities, with follow-up over an adequate length of time to explore long-term health outcomes. And strong evaluations are needed of promising interventions at local, state and national levels; weak evaluation designs may provide misleading information and can limit the weight given to their results by policy-makers.

Since the beginning of the Chicago Child-Parent Center Program—a federally funded, center-based program that provided preschool and K-3 education to children living in high-poverty neighborhoods—data have been collected continuously on health and well-being from school records, participant and family surveys, and administrative records. A 19-year follow-up of the study, to age 24, collected data on health outcomes and behaviors such as health status, substance use, tobacco use, disability status measured as receipt of disability assistance, and teenage parenthood. A cost–savings study found that when participants were followed to the age of 21, $7.10 were saved for every $1 invested in preschool.[1]

Setting targets for improved health and reduced health disparities, and publicly monitoring progress toward those targets over time as related to specific policies, can be effective tools to garner and sustain policy-maker and public attention at the national, state and local levels. For several decades, the U.S. Department of Health and Human Services has set national objectives for population health and monitored progress towards their achievement using a public process—*Healthy People 2000, 2010,* and now *2020*. Targets for improvement within a specified time frame help to attract and maintain public and policy-maker interest, stimulate public debates and innovation about how best to attain the targets, place these issues higher on policy agendas, and build consensus about action. Setting targets will be limited by the availability of data for monitoring both inputs—factors such as education, occupation and income, as well as receipt of medical care—and health outcomes over time.

Just as we have recognized the need for evidence-based medical care, we must insist on results-oriented interventions across all efforts to improve health and reduce disparities. Funding should be continued only for effective programs, keeping in mind that a range of types of evidence must be considered. Randomized trials will not be feasible for many social programs and certain questions cannot be answered with purely quantitative approaches; alternative designs, however, can yield results that are as rigorous as possible so that policy can be guided by the best available knowledge.

Action Steps

To address the issues noted above, we recommend the following:

- Tracking child and adult health status and health disparities and their relationships with non-medical factors, at local as well as state and national levels, to identify progress or deterioration over time; and make key information available to leaders at local, state and national levels.

  o Conducting a comprehensive assessment of existing data sources and their limitations for monitoring health effects of non-medical factors over time. Some routine data sources include data on health outcomes but little or no data on the factors, particularly social factors/inputs, which may have led to those outcomes and/or which may be important for monitoring health disparities. Other sources have information on economic factors with little information on health outcomes or mediating paths. Few routine sources have adequate information on social factors.

  o Setting targets and publicly monitoring progress toward them. An overarching target for the nation over the next decade (corresponding to *Healthy People 2020*) should be to bring the health of Americans in all socioeconomic and racial or ethnic groups to benchmark levels experienced by Americans in the most-advantaged groups. Because such a goal-setting and monitoring process is built into *Healthy People 2020*, we recommend exploring ways to strengthen and support that process, rather than create a parallel one.

- Funding research to guide policy-making across all sectors that affect health. To advance a research agenda, the Robert Wood Johnson Foundation and other funders should work

with The National Academies/Institute of Medicine, the National Institutes of Health (NIH), The Centers for Disease Control and Prevention (CDC) and private funders of relevant research to, first, review existing knowledge regarding social interventions likely to improve health and reduce health gaps and second, develop a strategic research agenda designed to produce high-priority, action-oriented knowledge in the short, intermediate and long terms. Public health and social policy experts should be involved—along with community residents, where appropriate—in the process of setting the research agenda. Translation and dissemination of research findings to decision-makers and the public should be a high priority.

- Involving the National Academies, including the Institute of Medicine, CDC and NIH to develop consensus on methodological standards (such as the inclusion of uniform indicators) for studies of the health effects of non-medical interventions, to strengthen the knowledge base in the future.

- Designing and promoting the use in routinely collected data of better and more standardized measures of the non-medical factors that can shape health and health disparities, and exploring the use of innovative methods and data sources, particularly at the local level where measurement is most challenging.

- Ensuring that all interventions with likely health effects have evaluations that are strong enough to answer key questions for decision-makers, such as:

    o What are the intervention's likely effects on health and health disparities? (Use intermediate outcomes when necessary but strive to assess health outcomes themselves whenever possible.)

    o Is the intervention replicable, and under what circumstances, in which populations and settings?

    o Is the intervention effective and efficient?

Funders should require—and allocate adequate funding for—strong evaluations, set criteria and guidelines, and provide technical assistance to grantees when needed.

The recently enacted American Recovery and Reinvestment Act included funds for studies comparing the effectiveness of different medical treatments. Significant progress could be made on the recommendations above if, similarly, federal funds were devoted to testing the effectiveness of promising, knowledge-based *non*-medical interventions for improving health and reducing health disparities. Some of the action steps described above could be funded by directing existing resources to achieve a more appropriate balance in research agencies' priorities between research on medical and non-medical interventions.

Resources

See the "Recommendations for the Framework and Format of Healthy People 2020" by the Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020. *www.healthypeople.gov/HP2020/advisory/PhaseI/default.htm* Other data resources and information about how to participate in the development of Healthy People 2020 goals and indicators are available at *www.healthypeople.gov/Contact/default.htm#listserv*.

See *2008 Wisconsin County Health Rankings* for an example of one state's approach to using publicly available data on health outcomes and health determinants to increase attention to local health outcomes, highlight the broad range of factors that influence health, and motivate community health improvement efforts. *www.pophealth.wisc.edu/UWPHI/pha/wchr/2008.htm*

Additional resources are listed on the Commission Web site: *www.commissiononhealth.org*

Footnotes

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Chapter

Seven

Chapter Seven

Moving Forward

This Commission focused on barriers that prevent people from leading healthy lives and proposed ways to overcome them. We also identified ways to measure progress towards achieving better health through our recommendations.

In this concluding chapter, we:

- emphasize that broad, societal engagement is required to overcome barriers to healthier living;

- propose specific actions all of us can take—at every level— to improve health; and

- organize actions into those that can be taken immediately and those that will take time and preparation to bring to fruition.

Aligning Forces to Build a Healthier America

The research and investigation phase leading toward our recommendations was intense and critical; but it was only the beginning. Now the hard work begins, to:

- spread the central messages that: *Health is more than health care. Achieving better health for all Americans requires making positive changes in how and where we live, learn, work and play—particularly for those who face great obstacles to making healthy choices and leading healthy lives;*

- engage partners to refine, adapt and execute our recommendations;

- collaborate with private and public sector leaders to improve health and reduce health disparities; and

- measure progress towards goals and hold programs and actors accountable for success.

The Commission has not been alone in our journey to change the national conversation on health. Success will require that we build on the many efforts underway and engage new partners—many of whom may not have considered their role in health before—in developing an agenda and action plan.

Our mandate has been to find ways to improve health that do not rely on an already over-burdened health care system. However, we also need to solicit the support and insights of health care professionals, institutions and public health agencies and enlist those delivering health care and operating public health programs in the broader agenda and hard work of keeping Americans healthy in the first place.

The following sections outline action steps that support the Commission's recommendations and that reflect promising practices highlighted in the previous chapters by each set of actors: community groups, schools, employers and businesses, health care providers, local, state and federal governments and philanthropies. The action steps are further grouped by those that support good nutrition, physical activity, healthy behaviors and places, and early childhood development. The chapter concludes by reviewing recommended actions from the standpoint of timing, identifying those that can be taken immediately and those that may require longer planning or lead time.

Action Steps for Community Groups, Including Faith-Based Organizations, Clubs and Other Civic Groups

Neighborhood groups and community-based organizations should adopt a "health lens" through which they view their own priorities and activities.

For example, very different priorities may emerge in a community when the health consequences of various initiatives—such as whether or not to put sidewalks into a new residential development or the kinds of retail activities permitted by zoning—are considered. Identifying the health-promoting implications of a decision or design alternative can also raise the visibility of the project and garner more support.

Food and Nutrition

- Advocate for local supermarkets where none exist.

- Sponsor a weekly farmers' market on your organization's premises.

- Identify, offer a site for, and/or sponsor a community garden and involve school children and other community residents in growing food plants.

- Patronize local snack bars, carry outs and restaurants that offer healthier options.

- Set a community example by preparing and serving nutritionally sound meals and refreshments at dinners, meetings and fundraising and other community events.

- Organize entertaining lectures, classes or other occasions for learning about nutrition and healthy food preparation.

- Advocate for healthy meals and no junk food sales in public and private schools.

Physical Activity

- Make sure streets are pedestrian- and bike-safe; advocate for cross walks, bike paths, sidewalks and security lighting in neighborhoods.

- Start a neighborhood (or church, club or other organization-based) walking group or regular soccer or softball game; organize an aerobics, dance or yoga class in a local school gym or church hall.

- Host and sponsor active fundraising events and ongoing member activities, such as walk-a-thons, child and adult sports teams and active recreation.

- Train and recruit members as coaches for after-school sports programs.

- Organize civic groups to pick up trash and discourage littering in local parks and playgrounds, and insist that the responsible local agency maintains equipment and safe and inviting grounds.

Healthy Behaviors and Places

- Help parents and community leaders ensure that consistent messages about good nutrition and physical activity are provided and reinforced at home and at school by participating in school health councils, parent-teacher organizations or local board of education meetings.[1]

- Campaign for smoke-free public spaces; register complaints about liquor and tobacco sales and advertising in areas frequented by children and adolescents.

Photo: Tyrone Turner

- Make sure children have safe, supervised and enriching places to spend time after school—connect boys and girls clubs, "Y"s, organizations like Communities in Schools with local elementary and middle schools to offer after-school services. This is particularly important for children whose families cannot afford to pay activity fees or drive their children to after-school activities, and when parents are working long or irregular hours.

- Mobilize your community to help assess and remediate hazardous conditions in local housing. The Community Environmental Health Resource Center helps communities perform health and environmental assessments in homes in high-risk communities, through advice on conducting home assessments, documenting poor living conditions, and helping remediate hazardous conditions in rental property.[2]

- Pursue public-private partnerships, including initiatives to increase home ownership among individuals and families with adequate and stable incomes, to create and sustain healthier, more affordable homes. Organizations such as Association of Puerto Ricans on the Move (APM) in Philadelphia have demonstrated how to build stable communities with a mix of rental and owner-occupied homes.[3]

Early Childhood Development

- Create play groups and offer classes for prospective and new parents.

- Provide experienced parent "buddies" or mentors for new parents.

- Work with your public library to create an outreach program for families with toddlers so that parents develop the habit of reading to their children early and daily.

- Learn about the requirements for child-care facilities and providers in your community, and advocate for strong quality standards and staff on-the-job training opportunities.

- Enlist retirees to volunteer as "grandparents in residence" at child-care centers and preschools.

- Create parent cooperative preschools so that young children have increased opportunities for social, physical and cognitive growth.

- Consider providing a site for a preschool program or child-care center if your organization's facilities are appropriate.

- Sponsor a book distribution program to promote reading in families with toddlers and with kids in preschools.

- Make sure child-care settings are aware of the nutritional advice and support available through the USDA Child and Adult Care Food Program (CACFP), which daily provides meals and snacks to 2.9 million low-income children in child care and Head Start programs. Even if the child-care provider is not eligible for food subsidies through the program, the USDA Web site offers specific advice about menus, recipes and nutrition for young children.[4]

Action Steps for Schools and School Authorities

The impact of a school's conditions and activities on children's physical and mental well-being are second only to family and home life.

For children who arrive at school early for breakfast and child care, and those who stay late for extracurricular activities, the school day can stretch up to 11 hours. The expanded day provides schools a great opportunity to promote healthy development in many ways: most centrally, by providing a quality education, but also through healthy meals, physical activity and exercise. Schools can instill healthy personal practices and provide a safe and healthy physical and social environment. Of course, our schools already carry a heavy load. So it is important to distinguish between the educational responsibilities and the additional opportunities for improving health that evolve from viewing schools as a community resource.

Food and Nutrition

- Ensure all school lunch and breakfast offerings meet current U.S. dietary guidelines and have abundant fruits, vegetables, lean proteins and whole grains.[5]

- Decrease or remove foods that have saturated and *trans* fats, sodium and added sugars.

- Remove all junk food for sale in school cafeterias, vending machines and canteens; Replace vending machine contents with healthy alternatives, such as fresh fruit, low-fat milk, 100 percent juices and trail mix.

- Ban junk-food advertising in schools and school events.

- Combine the sale of healthy foods with health-promoting fundraisers such as walk-a-thons.

- Incorporate nutrition education in lesson plans wherever possible; in health or physical education (PE) classes or woven into math or reading instruction. Host family/community nights on nutrition education and healthy food preparation.

- Create school gardens where students can learn how to grow fruits and vegetables, or work with local farms to provide fresh, local fruits and vegetables for school meals.[6]

- Strengthen and build on school wellness policies to promote better food offerings, exercise programs and health-related curricula.

Physical Activity

- Individual schools and school systems can make daily physical activity for students a **highest priority** in their programming and scheduling, making use of before- and after-school times, recess and lunch periods whenever possible.

- Ensure that a sufficient amount of time in the school day is allotted to recess, PE and offer after-school sports and active recreation.

- Make sure all students participate in PE and have opportunities to play on teams or participate in extracurricular sports: Make physical activities and programs inclusive of all students and adopt policies that limit reasons students are exempted from PE.

Photo: Tyrone Turner

- Assess students' physical activity and fitness on a regular basis, using appropriate criteria. Body Mass Index (BMI) measurement has been used by some states and school systems to raise awareness of overweight and motivate families to address the problem.[7]

- Train elementary- and middle-school teachers to use active learning techniques.

- Hold "Walk or Bike to School Days" to encourage students and staff to leave the car or bus behind and provide permanent areas for students to lock their bikes on school property.

- Use school renovation and reconstruction funds to expand or improve indoor and outdoor facilities for physical education and activities.

Healthy Behaviors and Places

- Set strict rules for smoke-free school grounds. Teachers, administration and parents should be prohibited from smoking on school property.

- Ensure schools are free of asbestos, lead, mold, pests and other possible environmental hazards.

- Work with local government to request sidewalks, bike paths, street lamps, crosswalks and similar safety features around schools.

Early Childhood Development

- Require family life classes as part of high-school curriculum.

- Provide stimulating and developmentally appropriate surroundings for young children to play and learn.

- Strengthen interactions between parents and teachers for a consistent, holistic approach to educating young children.

- Host parenting classes emphasizing the importance of early childhood education, providing family life assistance and other referrals to new parents in the school community.

- Provide information on early education rankings or evaluations to community members.

Action Steps for Employers and Businesses

American businesses are uniquely positioned to exercise leadership in their communities and to promote better health for workers and their families.

Businesses that have adopted an integrated approach to occupational health and safety, leave policies and benefits design, and workplace wellness initiatives make a strong business case for investing in employees' health. Returns on employers' investments in integrated wellness programs have been found to be higher than $5 per $1 spent, from improved employee health, reduced medical benefit expenses and reduced absenteeism.[8] The most promising initiatives feature a strong commitment from the organization's leadership and are responsive to employees' priorities. Employees have reported that workplace support groups help them stay on course in achieving their personal health goals.

The following actions steps capitalize on the workplace as a health-promoting environment and highlight the interconnectedness of employee health and the health of business.

Food and Nutrition

- Places of employment with cafeterias, snack bars, lunch rooms and vending machines should promote and support healthier eating by offering healthy meal options and pricing healthier alternatives favorably.

- Invest in healthy eating options by supporting farmers' markets and other initiatives; advocate for state and local government to do the same and to support nutrition-friendly policies.

- Provide cool storage areas for lunchboxes, snacks and breast milk and provide a clean, comfortable place for women to express breast milk so they can continue to breastfeed their infants after returning to work.

- Provide information on healthy eating and local weight management groups. Provide employee discounts for participation.

- Restaurants should publish nutrition information in their menus.

- Food retailers should promote healthy foods with product placement and consumer-friendly nutrition information/labeling.

Physical Activity

- Make a visible company commitment (e.g., establish a workplace wellness committee, conduct needs assessment) to increase physical activity at work.

- Provide on-site exercise facilities, subsidize gym memberships and/or provide other incentives for employees to be physically active (e.g., making stairways attractive and well-lit).

- Promote active commuting by providing bike racks and showers.

- Create opportunities for activity breaks throughout the work day.

- Select health plans that incorporate wellness benefits such as subsidized gym memberships and health risk assessments.

- Band together to negotiate group discounts at local fitness facilities.

- Sponsor a team for a local fitness event (e.g., a 5K fundraiser).

Healthy Behaviors and Places

- Implement a comprehensive smoke-free workplace policy that includes offering proven tobacco-use treatment benefits through your health plan and connects tobacco users with community resources and support.

- Integrate smoking cessation initiatives with employee health or assistance programs.

- Select health plans with smoking cessation treatment programs and benefits or harness collective buying power to access smoking cessation benefits coverage through employer purchasing coalitions.

- Allow employees' family members to take advantage of workplace wellness programs such as exercise facilities.

- Adopt workplace wellness initiatives such as health education programs, preventive screening and health risk assessments.

- Increase worker participation in ensuring workplace safety by involving employees in identifying and correcting hazards.

- Participate in the Occupational Health and Safety Administration's Voluntary Protection Program (VPP), through which employers develop and implement systems to evaluate, prevent and control workplace hazards; the rate of workdays lost to occupational injuries in the average VPP worksite is at least 50 percent lower than its industry average.[9]

- Provide paid time off for personal illness, to care for dependents when they are ill, and to address unanticipated urgent personal and family issues.

- Provide paid parental leave for mothers and fathers for events including birth, newborn care, adoption and settlement of a foster child into a family.

Early Childhood Development

- Offer child-care benefits and/or services.

- Offer child-care resource and referral programs for routine and emergency, "drop-in" child care.

- Sponsor parenting classes and provide information on parenting in the workplace.

Action Steps for Health Care Providers

Health care providers, particularly those whose patients and families are low-income or live in disadvantaged rural or urban communities, are on the front lines in addressing health problems related to inadequate food and nutrition, exposures and hazards in the home, and substance abuse.

Many low-income families seeking medical care have multiple resource needs. While they may enter a clinic or physician's office for treatment of an urgent problem such as respiratory illness, conditions in their home often exacerbate their illness or prevent recovery.

Clinicians are in a unique position to identify vulnerable families. In partnership with programs and agencies that offer legal or social services counseling and advocacy, health care providers can help families address homelessness, help paying for groceries and school meals, utility bills, and landlord remediation of safety and health problems in the home. Examples of programs that connect patients with services and resources in the greater community are the Medical-Legal Partnership for Children and Project Health. See Chapter Five "Resources" for more information about these programs.[10]

Action Steps for Philanthropy

Both national and local philanthropies have been responsible for nurturing some of the most innovative and crosscutting interventions to address the health problems of disadvantaged Americans.

Where government programs are often bound by rules defining narrower missions and methods, private funders are not so tightly constrained and can be nimbler in responding to new ideas and approaches. The support, vision and catalytic role of America's philanthropic community is of the utmost importance to a multi-sector collaboration to change the nation's usual practices in promoting better health and reducing gaps in health among groups of Americans.

• Support local, place-based initiatives in disadvantaged communities that create opportunities for healthy choices and living, such as establishing grocery stores, safe areas to exercise and play, and collaborative efforts to improve housing stock, weatherization and home maintenance.

• Identify, support and champion innovative models of community building and design, and support evaluations of innovative programs from the very beginning of engagement with the programs.

• Encourage federal and state agencies and businesses to join as partners in supporting and rigorously evaluating place-based, multi-sector demonstrations to promote health through community design, introducing outlets for fresh and nutritious foods, increasing levels of and opportunities for physical activity, and creating high-quality early childhood interventions for low-income families.

Action Steps for Local and State Governments

Because the physical structure of any community—the location and condition of its buildings, roads, schools and transportation services—and the public health and social services available are the purview of local and/or state governments, almost any endeavor to improve health must involve local or state agencies.

As we have reported here, many of the most creative and effective strategies for removing obstacles to achieving better health, especially for disadvantaged families and communities, have been initiated by local and/or state governments.

Food and Nutrition

- Ensure that cafeterias and snack bars in public buildings serve healthy food.

- Offer bonus coupons for the purchase of fresh or minimally processed fruits and vegetables through SNAP and WIC programs.

- Expand the ability of rural and urban Farmers' Markets to serve SNAP participants by helping them process Electronic Benefit Transfers (EBT).

- Offer financial incentives for grocery stores to locate in underserved neighborhoods through capital grants, matching funds, low-cost loans and/or tax breaks. Local government can provide additional police and public safety services in the vicinity of essential businesses such as grocery stores to protect customers, property and reduce the liability risk of violence for business owners.

- Allow, as employers, adequate flexibility for breastfeeding breaks and provide adequate accommodations for breastfeeding employees.

Physical Activity

- Support health-conscious designs, such as compact, mixed-use building with nearby public transit and pedestrian-friendly public spaces. Building codes and zoning should incorporate these criteria.

- Maintain playgrounds, parks, reservations and playing fields in *all* communities so that residents feel safe and find them attractive for exercise, recreation and relaxation.

- Convene multi-sector collaborations to address physical inactivity among young people and call for increased public and private funds to support effective programs and policies (see Colorado on the Move).[11]

- As large employers, state and local governments are also uniquely positioned to set examples of best practices for on-site exercise and physical activity promotion for other employers and businesses.

Healthy Behaviors and Places

- Limit the promotion and availability of tobacco and alcohol within neighborhoods. Black and Hispanic populations are more likely to live in areas with high concentration of tobacco and alcohol outlets and are more likely to be targeted by advertising and marketing of these products.

- Increase, in conjunction with private utilities and community organizations, the availability and take-up of home energy assistance, including the federal Low Income Home Energy Assistance Program (LIHEAP), state and utility-sponsored subsidies for low-income households, and weatherization services.[12]

Photo: Tyrone Turner

- Support the training and certification of Healthy Homes Specialists among inspectors, realtors, energy auditors, pest management professionals and community members.[13]

- Adopt a state-wide smoke-free workplace and public spaces law to protect employees and others from the health risks of secondhand smoke.

- Lead by example through creating a "culture of wellness," a holistic and integrated approach to employee health and safety.

- Create a state-level workplace wellness committee and recognize and disseminate exemplary workplace wellness innovations and best practices.

- Create an interagency taskforce that promotes health and wellness across all levels of government.

Early Childhood Development

- Make early child development one of the **highest state priorities**; convene agencies and organizations across health, child and social services, business, labor and education to set joint objectives for healthy child development and support programs in high-need areas. Following the example of North Carolina's Smart Start program, make additional state funding available through local community councils focused on the well-being of children early in life, which then have the role and incentives to align categorical program activities (e.g., Head Start and public child-care subsidies), identify needs and gaps in services, establish quality and performance criteria, and serve children in need.[14]

- Coordinate between multiple early childhood programs to reduce duplication and ensure widest reach of services to families most in need.

- As part of licensing both family- and center-based child-care providers, establish appropriate training requirements for directors, teachers and staff, adequate staffing ratios, and physical environment standards that are conducive to safe movement and active play.

- Use the recommendations of the National Association for the Education of Young Children (NAEYC) to develop training requirements, staffing ratios and physical standards for state licensure and quality rating.[15]

- Institute quality rating systems and link public reimbursements for child care to quality improvement ratings for child-care providers.

- Recognize and disseminate best practices in organization and delivery of early childhood development services.

- Create and support training programs and tuition benefits for early childhood teachers and aides in community colleges and four-year institutions.

- Offer wage supplements as incentives for early childhood care workers serving low-income children to earn additional educational credentials.[16]

Action Steps for the Federal Government

While health is often considered individual and thus local, there is much that the federal government can do to assist disadvantaged communities and help remove the substantial barriers that some Americans face to leading healthy lives.

In addition, we look to the federal government for leadership in:

- setting national goals for improvements in health (through the *Healthy People 2020* process);
- setting priorities for and funding research and evaluation of effective, interventions outside the health care system; and
- holding programs that receive federal support accountable for achieving results.

Food and Nutrition

- Increase funding for healthy school meals and update nutrition standards for all school meal programs.
- Link elimination of the sale of junk food in schools and progress in reducing obesity rates among students to federal funding for school meals.
- Increase funding and technical assistance for school wellness policies and programs, including Team Nutrition support for school programs, child-care providers and adult day-care programs.
- Engage the Department of Education fully in school nutrition policies, so that the quality of and participation in school meals are integral to local school decision-making.
- Provide adequate funding for all eligible families to receive WIC food packages and services and for WIC offices to maintain accessible hours of service and sufficient staffing to meet clients' needs.
- Offer incentives, such as bonus value, to participants in the Supplemental Nutrition Assistance Program.

Physical Activity

- Support public transit, bike paths and sidewalks to decrease reliance on cars and increase safety.
- Sustain a highly visible President's Council on Physical Fitness, to communicate to youth and their parents that fitness is a national priority and that will provide national leadership and practical technical assistance available to school systems and communities.
- Within the Department of Education, support and disseminate innovative school-based activity programs that can be adopted by schools with limited resources for formal physical education programs.

Healthy Behaviors and Places

- Support demonstration projects that take an integrated approach to health and safety.
- Build capacity to fund and sustain joint CDC/HUD Healthy Homes projects, which reconnect health objectives with housing. Healthy Homes Demonstration Grants should require and include evaluation funds to measure projects' impact on health outcomes.[18]
- Develop and promote a national Healthy Homes standard for voluntary adoption by states, localities and national and international building code organizations.
- Pilot and evaluate innovative health promotion programs at federal departments and agencies.

Photo: Tyrone Turner

- Enforce existing health and safety regulations and expand programs of research into job-related health hazards and effective interventions.

- Create an inter-agency taskforce that promotes health and wellness across all levels of government.

Early Childhood Development

- Provide funds to make high-quality early childhood development and care services available to all low-income families.

- Support education and training of early childhood teachers and caregivers through the child-care funds available for quality improvement.

- Link funding of early childhood programs to performance standards including child outcomes.

Immediate Steps and Sustained Efforts

In this final section, we sketch out the Commission's views on the first steps to take in addressing the recommendations and note that in some cases sustained efforts over several years will be required.

Certainly, we recognize the stark realities of the current global recession and what it means for major new investments. At the same time, the recession has revealed critical circumstances and unmet needs that demand immediate response and that, similarly, cannot be ignored.

The recently enacted American Recovery and Reinvestment Act of 2009 (Recovery Act), for example, has made additional federal funding available over the next two years for some programs and projects that address many of the very real and urgent needs communities and people across America face. And because many of the investments are known to, or hold great promise for, removing barriers on the path to good health, they also dovetail with Commission recommendations.

Examples of Recovery Act elements that relate to the Commission's recommendations include:[19]

- increased Supplemental Nutrition Assistance benefits (SNAP, formerly Food Stamps) to account for past and projected inflation in food prices;

- Supplemental Nutrition Assistance for Women and Children, the WIC program;

- grants for kitchen equipment purchases by schools participating in the National School Lunch Program;

- mass transit programs;

- improved drinking water quality and waste water treatment through EPA and USDA project grants and capital funds;

- renovation, weatherization and "greening" of low-income housing;

- lead hazard reduction in housing;

- homelessness prevention and re-housing activities, ranging from rent subsidies to case management;

- community development block grants;

- expanded enrollment in Early Head Start and Head Start programs;

- child-care subsidies for low-income families and state quality improvement efforts;

- community-based prevention and wellness interventions to reduce chronic disease and for evaluation of these interventions; and

- community service employment for older Americans.

The influx of short-term funding is a solid down-payment on many health-promoting initiatives and expansions of needed services; however, a longer-term vision and sustained efforts is needed. We suggest very briefly below what can and should be done immediately—particularly in view of new monies that must be applied within the next few years; what should be accomplished in the near-term, and what can be realized over a longer time.

Immediate Steps

Communities should identify opportunities and priorities for improving members' and residents' health (See Community Assessment Guide in the Appendix.) In particular, communities, aided by local or state agencies, can:

- assess the availability of retail outlets for fresh and minimally processed foods in low-income neighborhoods and jurisdictions;
- learn about public-private models such as Pennsylvania's Fresh Food Financing Initiative;[20] and
- approach retailers in under-resourced communities to plan jointly for new grocery stores.

Schools can assess time allotted for physical activity and, if deficient, allocate more time for informal and structured activity and exercise. Schools should plan to invest in serving school meals that meet current nutritional standards.[21] Parents must be engaged in consensus-building around eliminating junk foods sold and served on school premises.

Employers can take immediate action to make their workplaces smoke-free and subsidize smoking cessation assistance for employees. Also, they should engage with unions and other groups of employees to determine priorities for creating a healthier work environment, considering policies and services such as cafeteria offerings, on-site exercise facilities, leave benefits and flextime, incentives for identifying and eliminating workplace hazards and unsafe practices.

States can use the Recovery Act provision for child-care quality improvement to strengthen licensure requirements and oversight of family- and center-based child-care providers, including increasing training opportunities for child-care staff. Following the example discussed in Chapter Five of the Boston OneTouch program, states can apply for new weatherization and other low-income housing improvement funds to remediate safety and health hazards.[22]

The federal government should establish an interagency task force to align federal programs in addressing the social determinants of health. Building on the additional funding made available for child care and early child development programs in the Recovery Act, Health and Human Services (HHS) should immediately plan for sustained support for high-quality programs to reach more low-income children in the 2010 federal budget and for years going forward. Federal programs should institute strengthened accountability standards for states and other federal grantees that receive child-care and early childhood development funds and, as does the Recovery Act, support states in new quality improvement activities, such as providing in-service training, tightening licensure requirements and inspections for child-care facilities, and offering incentives for educational advancement.

The federal government should also:

- provide support for Nurse-Family Partnership services to first-time, low-income pregnant women and families (HHS);
- provide increased funding for school meals, linked to improvements in the nutritional quality of meals served (USDA);
- establish a "Blue Ribbon School" recognition program for schools that reach the goal: all students active for at least 30 minutes every day (Department of Education); and
- use new prevention and wellness funding to support multi-pronged community-based initiatives to address barriers to healthier diets, increased physical activity, and health-sustaining environments in homes and neighborhoods, building in measurement and accountability for achieving results (HHS).

Philanthropies, both those traditionally involved with health and those with a focus on children, housing, the environment or nutrition should immediately begin to work across sectors—and with their public agency counterparts—to develop an integrated agenda that capitalizes on new investments in community programs to produce health benefits.

Sustained Efforts

"Healthy Community" coalitions will require several years to build a constituency, identify leaders and supporters, gather information, and structure a new decision-making process to build health into the plans and activities of multiple sectors at the local level. Philanthropies, along with local, state and federal agencies and the corporate sector, can support community organizations in this undertaking by providing technical assistance, small convening and planning grants, and ultimately structuring challenge and matching grants that condition longer-term support on performance and broad community participation.

Over the next few years, schools should have improved nutritional and food sales policies in place, and be serving students meals that reflect the 2005 Dietary Standards for Americans.[23] Best practices among school systems that adopted more rigorous physical activity regimens earlier in this decade should become widespread. State and federal education authorities and funders should use their leverage to make sure that all schools adopt programs and policies effective in keeping students fit and at healthy weight.

The current state of the economy means that employers must invest in employee health, safety and wellness more wisely than ever. As employee benefit packages are revised and renegotiated, employers should look at cost-effective wellness interventions. They also should establish and track progress towards targets for improving on-the-job safety and reducing job-related injuries.

The Commission strongly supports a realignment of existing and new private and public resources to achieve improved health for all Americans. This will require a concerted focus on achieving the most rapid progress for those who are farthest behind on the road to optimal health. We must begin immediately. Working together, we can achieve a healthy America for all.

Footnotes

1. School Health Councils *www.cancer.org/docroot/PED/content/ PED_13_2x_School_Health_Councils.asp*; School Wellness Policies *www.cancer.org/docroot/PED/content/PED_13_2x_School_Health_ Councils.asp*.

2. Community Environmental Health Resource Center *www.afhh.org/res/res_cehrc.htm*.

3. Association of Puerto Ricans on the Move *www.apmphila.org*.

4. U.S. Department of Agriculture Child and Adult Care Food Program *www.fns.usda.gov/cnd/Care/*.

5. U.S. Departments of Health and Human Services, and Agriculture. *Dietary Guidelines for Americans 2005*. Available at *www.health.gov/DietaryGuidelines/*.

6. National Farm to School Network *www.farmtoschool.org/*.

7. Arkansas' School BMI Assessment *http://nasbe.org/index.php/ shs/80-he-project-news/132-arkansas-school-bmi-assessment*.

8. Goetzel RZ, Juday TR and Ozminkowski RJ. "What's the ROI? A Systematic Review of Return on Investment (ROI) Studies of Corporate Health and Productivity Management Initiatives." *Worksite Health*, 12-21: 1999.

9. Occupational Health and Safety Administration's Voluntary Protection Program *www.osha.gov/dcsp/vpp/index.html*.

10. Medical-Legal Partnership for Children *www.medical-legalpartnership.org/; Project Health www.projecthealth.org/*.

11. Colorado on the Move *www.uchsc.edu/nutrition/Coloradoonthemove/com.htm*.

12. Low Income Home Energy Assistance Program *www.acf.hhs.gov/programs/ocs/liheap/*.

13. National Center for Healthy Housing *www.nchh.org/Home.aspx*.

14. North Carolina's Smart Start Program *www.smartstart-nc.org/*.

15. National Association for the Education of Young Children *www.naeyc.org/*.

16. Child Care Wage$ Project *www.childcareservices.org/ps/wage.html*.

17. President's Council on Physical Fitness *www.fitness.gov/*.

18. CDC/HUD Healthy Homes Initiative *www.cdc.gov/healthyplaces/healthyhomes.htm*.

19. American Recovery and Reinvestment Act of 2009. Available at *http://appropriations.house.gov/pdf/RecoveryBill01-15-09.pdf*.

20. Pennsylvania Fresh Food Financing Initiative *www.thefoodtrust.org/php/programs/fffi.php*.

21. Dietary Guidelines for Americans 2005. Available at *www.health.gov/DietaryGuidelines/*.

22. Boston One Touch Program *www.nchh.org/Policy/Policy-Projects/Boston-OneTouch.aspx*.

23. Dietary Guidelines for Americans 2005.

Appendix

Community Health Assessment Guide

The following indicators of health, personal practices, environmental risks and local resources can help a community set priorities and develop strategies for improving the health of residents while reducing disparities in health status. At the end of the Appendix are some resources and examples for communities interested in conducting health assessments as part of community planning and decision-making.

How long do people live?

Life expectancy is often used as a measure of overall health. A difference in life expectancy seen between neighboring communities can be a reflection of the many factors listed below, such as education, income, diet, environmental exposures and risky behaviors.

How do individuals rate their own health?

Self-reported health status is an accessible and reliable method of assessing the health of a community. Measures of health status may include factors such as general health status and limitation in mobility caused by chronic conditions. Self-reported health status and rates of chronic diseases are associated with income and education. Individuals with lower incomes and less education are more likely to report fair or poor health than are those with higher incomes and more years of schooling.

What are the chances of a baby's survival?

Infant mortality, defined as the number of infants less than 1 year of age that die per 1,000 live births, is an important indicator of health, and differences in the infant mortality rate among racial, ethnic or socioeconomic subgroups are particularly informative in identifying needs for intervention. The number of premature births, low birthweight births and percentage of women receiving early prenatal care are associated with elevated risk of death and disability in infants.

Prenatal care, vitally important for both mothers and infants, encompasses education and counseling on different aspects of pregnancy, such as nutrition and physical activity, what to expect from giving birth, and basic skills for caring for an infant. Early and adequate prenatal care starting during the first trimester of pregnancy is associated with reduced morbidity and mortality for both mothers and infants. Pregnant teens are less likely to receive early prenatal care and are more likely to drop out of school and live in poverty than are other parents; the teen pregnancy rate is a powerful indicator of community health.

What are the leading causes of premature mortality?

Many of the causes of premature death mirror those of the national population, while others may be unique or excessive in individual communities. They include, but are not limited to: ischemic heart disease, lung cancer, stroke, hypertensive heart disease, other cancers, infections, accidents, drug and alcohol related diseases (including overdoses) and violence. While not all causes of premature mortality are directly related to a person's immediate environment, many are. Often these factors can be mitigated by individual and public health efforts within a community.

Rates of overweight and obese adults and children are also significant health indicators. Obesity is associated with increased risk for cardiovascular disease and diabetes and increased severity of chronic diseases such as arthritis and hypertension.

Mental illness, especially depression, is a significant factor in people's ability to function in the household, at work and in a community. The magnitude of the effects of mental illness and depression on a population is comparable to other chronic diseases such as cardiovascular disease.

What kinds of risky behaviors are prevalent in the community?

Cigarette smoking is the single most preventable cause of disease and death in the United States. While overall rates of smoking have declined nationally, some populations have not decreased their rates of tobacco use. Smoking is a risk factor for chronic lung disease, heart disease, stroke, lung and other cancers. The risks of secondhand smoke exposure both in the home and in the community pose risks especially for infants and children, including increased risk for asthma exacerbations, lower respiratory tract infections and ear infections. Third-hand smoke, exposure to the hair, clothing, furniture and other objects of smokers, also poses particular risks to infants and children.

Alcohol and drug use pose both a direct and an indirect risk to the health of a community across all age groups. Substance use and abuse is associated with risk for domestic violence, car accidents, school failure, teen pregnancy, sexually transmitted diseases and homelessness. In addition, alcohol abuse can increase risk for heart disease and cancer and can cause fetal alcohol syndrome in babies of mothers who drink during pregnancy.

America's youth participate in a number of behaviors that pose a risk to their health. Accidents, self-harm and assaults are among the top five leading causes of death among people aged 10 to 24 in the United States. In addition to death, these behaviors leads to risk of violence, injury, unintended pregnancy, sexually transmitted diseases, and drug, alcohol and tobacco use. While this indicator may overlap somewhat with other categories, it provides a more thorough look this particular age group.

What kind of worksite programs are available in the community?

Work can affect health for better or for worse; workplaces offer a variety of opportunities to improve employees' health. Depending on the nature of the job, the worksite can be a risk for accidents and injury, exposure to toxins, or it can promote inactivity and contribute to a sedentary lifestyle. A community's employers, both private and public, can promote health through a number of activities, including injury prevention, making the workplace smoke-free, employee benefits such as health insurance and paid leave, and wellness initiatives such as exercise promotion and supports for smoking cessation and weight loss. Communities can inventory and assess the policies and programs that employers offer, and highlight those with successful programs.

What is the extent of health promotion in schools?

Schools are an important place for young people to learn about healthy eating, being physically active and avoiding risky behaviors. Schools can be assessed based on the nutritional quality of school meals, policies regarding junk foods, and the extent to which students are active during (and before and after) the school day.

What are the developmental and educational opportunities for infants, children, youth and adults in the community?

Educational attainment not only has social and economic implications but affects individuals' prospects for health and longevity. Communities should assess the quality and availability of early childhood programs, primary and secondary school performance and high-school completion rates, and opportunities for high-school graduates to pursue higher education and transition to the workforce with marketable skills. Adult literacy levels and programs are also important indicators of a community's vitality and opportunities for improving well-being.

What is the local food environment?

The type of food that is available within a community can have a direct effect on an individual's ability to make healthy food choices. Proximity to grocery stores that offer fresh fruits and vegetables can be a positive predictor of health, while proximity to and the number of fast food and convenience stores can be a negative predictor of health. Meals prepared outside the home tend to be oversized and nutrient poor, with more fat and calories. Communities can assess the local food environment with inventories of full-service grocery stores, produce vendors, fast-food outlets and convenience stores. They can also identify economic barriers to greater investments by grocery retailers.

What is the income distribution in the community?

Adults and children with low incomes (defined as having incomes less than 200% of the federal poverty level) face considerable challenges in meeting basic needs for nutritious food, adequate housing and medical care.

Is there an adequate amount of high-quality and affordable housing?

Substandard living conditions, including dangerous structural features, poor temperature control, pest infestations, lead exposure and poor ventilation pose a range of health hazards, and communities should assess the quality of their housing stock in order to remediate problems. The affordability of housing can also predict the likelihood that families live in substandard housing and experience overcrowding.

What kinds of environmental exposures are in the area?

Measures of air quality and toxins or pollutants in homes, schools and workplaces are key health indicators because many adults and children spend the majority of their day indoors. Specific indicators to consider: percentage of homes built prior to the 1950s that have been tested for lead-based paint; percentage of homes tested for radon; number of office buildings that make indoor air quality a priority; and percentage of schools that have air quality and environmental standards.

Outdoor air quality and water quality are also important indicators of community health. Motor vehicles, of course, substantially contribute to air pollution; factories, refineries and power plants are the source of toxic emissions that include but are not limited to benzene, methylene chloride, asbestos, mercury and lead. Air quality can be directly measured or indirectly measured based on vehicle use and proximity to toxic sources. All sources of water—drinking water, surface waters and beaches—are important to public health. Drinking water quality can be directly assessed and compared to standards from the Clean Water Act. Surface waters (e.g., lakes, rivers, estuaries) and beaches can be assessed by their safety for recreation and fishing.

What types of transportation systems and green spaces are present in the community?

Vehicle use, pedestrian-oriented streets and proximity to public transit, parks and green spaces are all associated with better health. Proximity to public transit is associated with reduced vehicle trips and improved access to social, medical, employment-related and recreational activities. Use of public transportation creates opportunities for increased physical activity. Pedestrian-oriented neighborhoods promote more outdoor activities and make streets more amenable to walking. Sidewalk cleanliness and width, street design for pedestrian safety and speed control, and street lighting influence levels of pedestrian usability and neighborhood crime and safety.

Both the number of parks in proximity to homes and the types of amenities at the parks predict the duration of physical activity in children. Living in proximity to green space is associated with reduced self-reported health symptoms, and better self-reported health. Communities can assess types of transportation used by residents, open space acreage per 1,000 residents (per guidelines from the National Recreation and Parks Association), and the percentage of residents who live within walking distance of a park.

Resources

San Francisco Department of Health: Healthy Development Measurement Tool

"The Healthy Development Measurement Tool is a comprehensive evaluation metric to consider health needs in urban development plans and projects. The HDMT explicitly connects public health to urban development planning in efforts to achieve a higher quality social and physical environment that advances health." *www.thehdmt.org/*

Healthy People in Healthy Communities: A Community Planning Guide Using Healthy People 2010

"A guide for building community coalitions, creating a vision, measuring results, and creating partnerships dedicated to improving the health of a community. Includes 'Strategies for Success' to help in starting community activities." *www.healthypeople.gov/ Publications/HealthyCommunities2001/default.htm*

Promoting Health Equity: A Resource to Help Communities Address Social Determinants of Health

"This workbook was created to encourage and support the development of new and the expansion of existing, initiatives and partnerships to address the social determinants of health inequities. Readers are provided with information and tools from these efforts to develop, implement, and evaluate interventions that address social determinants of health equity." *www.cdc.gov/nccdphp/dach/chaps*

National Association of County and City Health Officials (NACCHO)

"NACCHO is the national organization representing local health departments. NACCHO supports efforts that protect and improve the health of all people and all communities by promoting national policy, developing resources and programs, seeking health equity, and supporting effective local public health practice and systems." NACCHO provides a variety of toolkits for local public health activities. *www.naccho.org/toolbox/index.cfm?v=3*. Examples include:

- Protocol for Assessing Community Excellence in Environmental Health (PACE EH)—This guidebook is designed to help communities systematically conduct and act on an assessment of environmental health status in their localities. *www.naccho.org/topics/ environmental/CEHA/resources/onlinemodule/whatis/index.cfm*

- Healthy Community Design Toolkit—This section contains tools and resources, including the Land Use Planning Healthy Community Design Toolkit, to help public health practitioners learn about or further their work on the connection between public health and the built environment. *www.naccho.org/toolbox/program.cfm?id=14&display_ name=Healthy%20Community%20Design%20Toolkit*

Community Health Status Indicators

"The goal of Community Health Status Indicators (CHSI) is to provide an overview of key health indicators for local communities and to encourage dialogue about actions that can be taken to improve a community's health. The CHSI report was designed not only for public health professionals but also for members of the community who are interested in the health of their community." *www.communityhealth.hhs.gov/HomePage.aspx*

Policy Link: Equitable Development Toolkit

"The tools in the Equitable Development Toolkit have been crafted to help community builders achieve diverse, mixed-income neighborhoods that provide access to opportunities for employment, educations, and safe, affordable housing. The tools help reduce social and economic disparities among individuals, social groups, neighborhoods, and local jurisdictions across metropolitan regions." *www.policylink.org/EDTK/default.html*

ROBERT WOOD JOHNSON FOUNDATION
Commission to Build a Healthier America

The *Robert Wood Johnson Foundation Commission to Build a Healthier America* is a national, independent, non-partisan group of leaders tasked with seeking ways to improve the health of all Americans. Launched in February 2008, the Commission was charged with investigating how factors outside the health care system—such as income, education and environment—shape and affect opportunities to live healthy lives. For more information about the Commission and its activities, please visit:

www.commissiononhealth.org

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