What The Federal Government Can Do About The Nonmedical Determinants Of Health

Taking a “systems” approach to structuring our government’s health investments is an important first step in addressing the many contributors to health and well-being.

by Nicole Lurie

ABSTRACT: Growing recognition that the acute health care delivery system contributes proportionally less to health when compared with environment and behavior has focused scholars and public health experts on the need to address nonmedical determinants of health. This paper outlines some steps that the U.S. government can take to address these factors and describes some of the challenges involved. Actions that can be undertaken now are increased education and leadership, development of mechanisms to further collaboration among sectors, expanded monitoring and reporting on nonmedical determinants, and developing new knowledge about how these factors affect health and successful interventions to address them.

Improving the health of the nation, particularly for poor populations, has been a vexing problem for the U.S. health care system. Even though we spend more and more for health care, the health of some populations has failed to improve. Growing recognition that the acute health care delivery system contributes proportionally less to health status when compared with environment and behavior has focused scholars and public health experts on the array of societal factors that affect health.1

The implications for population health are rarely considered in economic or social policy debates. George Kaplan argues that the two are so closely linked that economic policy is health policy and should be considered as such.2 The weight of evidence now suggests

Nicole Lurie, a physician and health services researcher, is the first recipient of RAND’s Alcoa Chair. From 1998 to 2002 she served as principal deputy assistant secretary for health in the U.S. Department of Health and Human Services. Prior to that she was professor of medicine and public health at the University of Minnesota and medical adviser to the commissioner, Minnesota Department of Health.
that such a consideration is essential if we are to narrow the gaps in health status.\(^3\) The purpose of this paper is to outline what government—in particular, the U.S. federal government—can do to address the nonmedical determinants of health and to describe some of the challenges involved.

Here I consider two interrelated groupings of nonmedical determinants. The first are the traditional social determinants, income and education, and their attendant consequences, such as low-wage jobs, poor-quality housing, environmental exposure to toxins and violence, poor nutrition, and high-risk behavior. Income inequality has received much attention as a related potential determinant, but because its role (independent of income per se) remains controversial, I do not address it directly here.\(^4\)

A second grouping of nonmedical determinants is the leading health indicators identified in *Healthy People 2010*.\(^5\) Although they are not purely “nonmedical,” they are a useful grouping for purposes of communication and are a point of focus for the public health community. These indicators include both individual behavior (tobacco and substance abuse, physical activity, overweight and obesity, and responsible sexual behavior) and community/systems indicators (mental health, environmental quality, injury and violence, immunization, and access to care). *Healthy People 2010* does not ignore the more traditional social determinants; rather, these indicators are highlighted within the context of income and education. Goal setting and regular reporting are intended to focus attention specifically on progress for different income, educational, and racial/ethnic groups.

The United States is not alone in examining the role of nonmedical determinants. In Britain, building on the landmark Black report, which examined the relationship between mortality and social class, the recent Acheson report, *An Independent Inquiry into Inequalities in Health*, identified thirty-nine evidence-based social policy recommendations that could alleviate inequalities in health that are associated with social class.\(^6\) The Canadian government has considered similar evidence and has begun to implement policy recommendations derived from it.\(^7\) Among several common themes in these reports is the view that government should consider the potential impact of social policies on health. Health impact assessment, like environmental impact assessment, considers a policy’s likely intended and unintended consequences for health and uses that information in the decision-making process.

Recognition of the role of nonmedical determinants of health is also beginning to occur in the United States at the state and local levels. For example, as part of a plan to address racial/ethnic health
disparities, the Minnesota Department of Health undertook a year-
long study to identify a broad range of actions necessary to address
them. The recently released report, *A Call to Action: Advancing Health for
All through Social and Economic Change*, highlights the need to use non-
medical interventions to improve health and recommends focusing
on housing and increasing civic engagement as ways to improve
population health.8

An important challenge to address early on is the scant recogni-
tion that public policies in seemingly unrelated areas (such as agri-
culture or housing) may have population health affects. In October
2000, for example, senior representatives from various Cabinet-level
departments met to examine what each department could contrib-
ute to addressing racial/ethnic health disparities.9 Perhaps not sur-
prisingly, most had not seriously considered the ways in which their
work might affect health and believed that simply expanding access
to health insurance (an issue for the Departments of Health and
Human Services and Labor) was the key ingredient in improving
health. This limited understanding occurs within state and local
governments as well.

Although a comprehensive approach to nonmedical determinants
does not appear likely in the near future, the federal government
(specifically, the executive branch) could take several steps now to
address nonmedical determinants of health. These include the fol-
lowing: (1) Provide leadership and education; (2) develop a surgeon
general's report on nonmedical determinants of health; (3) develop
standing mechanisms for policy development among sectors; (4)
promote collaboration among departments; (5) enhance monitoring
and reporting; (6) strengthen the science base; (7) leverage govern-
ment as an employer; and (8) expand the scope of health policy. I
examine each of these in turn.

**Steps For The Federal Government To Take Now**

- **Leadership and education.** The federal government can and
  should play an important role in educating the general public and
  policymakers in states and communities about the role these deter-
  minants play. This need is particularly urgent given the general lack
  of understanding in this area. Such leadership could come from a
  variety of sources, including the surgeon general or the director of
  the Centers for Disease Control and Prevention (CDC). In addition,
  leadership in payer agencies (such as the Centers for Medicare and
  Medicaid Services, or CMS, and the Department of Veterans Affairs,
  or VA) could highlight the ways in which addressing nonmedical
determinants of health could improve the health of the populations
  that these agencies care for.
One critical component of leadership is education. In this area, the CDC could increase its efforts to educate state and local leadership about nonmedical determinants. This activity has begun with the development of the Guide to Community Preventive Services, an evidence-based review of interventions that have been shown to work at a community level.\textsuperscript{10} The guide is intended to address many of the leading health indicators. For example, guidance regarding vaccines against preventable illness is already available, and chapters relating to such factors as tobacco control, sexual behavior, injury, and violence are under way. The guide also examines sociocultural interventions and systematically reviews a number of nonmedical interventions that are likely to have important health consequences. It has already identified, as highly recommended, increasing center-based child care for low-income children from birth to age three and housing vouchers. The CDC also could make available, perhaps through additions to prevention block grants, resources to convene state and local leadership to understand and address nonmedical determinants of health. Such broad-based convening was essential for the development of Minnesota’s Call to Action, but the process took over a year and was dependent upon external funding.\textsuperscript{11} Helping state and local officials understand the implications will require substantial commitment.

\textbf{Surgeon general’s report.} Surgeon generals’ reports have served to educate the nation and stimulate action on key health issues. While the surgeon general’s report on smoking and health may be the best-known example, the recent report on mental health has already stimulated action throughout the country to address this important issue and has defined a new research agenda to address the issues raised.\textsuperscript{12} A surgeon general’s report on the nonmedical determinants of health could likewise be groundbreaking and serve as a catalyst for action on multiple levels.

\textbf{Policy development among sectors.} Standing mechanisms for policy development among sectors could be created to continuously help policymakers understand and take advantage of opportunities to address health through the nonmedical determinants. A potentially simple mechanism would be to detail senior public health officials to the offices of each Cabinet-level secretary and as staff on key committees in Congress with responsibilities for policies likely to have health impact. Although this has been done sporadically in the past (for example, public health experts have worked in the Department of Agriculture and at the National Security Council), it is not routine practice. Such persons could help to identify opportunities to improve health through the policies and programs of the respective agencies or committees, to create an
explicit awareness of the potential health impacts of those under consideration, and to stimulate further interdepartmental collaboration. To be fair, public health leadership does not always consider outcomes of interest to other sectors when promoting health policy, and this type of exchange would provide the opportunity for two-way learning and sharing of information. While the costs of this mechanism would be relatively modest, to be successful it would require the strong support of the secretaries of health and human services and other departments and of congressional committee chairs, and it would likely need relatively rapid payoff in order to be seen as adding value.

**Interdepartmental collaboration.** A related set of activities is to increase, and give priority to, interdepartmental collaborations that affect nonmedical determinants. As part of an interagency collaboration around Healthy People, the Office of Health Promotion and Disease Prevention examined whether other departments had programs that could affect the leading health indicators and their root determinants, income and education. Exhibit 1 provides examples of potential and existing areas of collaboration. One example is Safe Schools/Healthy Students, a collaboration between the Departments of Health and Human Services (HHS), Education, and Justice to use preventive approaches to problems of drug use and violence by promoting healthy child development and addressing mental health concerns. This program provides grants to local education authorities, which have formal partnerships with local mental health and law enforcement agencies.

Other examples include the following. The Department of Housing and Urban Development (HUD) and HHS and the Environmental Protection Agency (EPA) have set up a Child Environmental Health Task Force, through which they have addressed issues such as lead poisoning and asthma. HUD is also developing a mental health action plan, in collaboration with the Department of Labor and the HHS Substance Abuse and Mental Health Services Administration (SAMHSA), as called for in the Quality Housing and Work Responsibility Act of 1998. These sorts of collaborations should receive the highest level of support. The Domestic Policy Council is one point of interagency convening and coordination that could provide administrative leadership on this issue.

**Monitoring and reporting.** A major federal policy lever is management of the informational environment in which agendas and priorities are set. In this context, the federal government can play an explicit role in monitoring and reporting on the nonmedical determinants of health. Although this work has begun with regard to the leading health indicators from Healthy People, national health
objectives pertaining to numerous nonmedical determinants are buried within the 467 Healthy People objectives. These include improving substandard housing, increasing educational attainment, reducing exposure to environmental toxins, and improving job safety. The mere existence of an objective does not mean that it will be monitored and reported on, and to be meaningful, data collection and monitoring will need to be of sufficient power to be relevant at

### EXHIBIT 1

**Contributions Of Various Government Departments To Leading Health Indicators**

<table>
<thead>
<tr>
<th>Department</th>
<th>Agriculture</th>
<th>Transportation</th>
<th>Education</th>
<th>Labor</th>
<th>EPA</th>
<th>Justice</th>
<th>HUD</th>
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<tbody>
<tr>
<td>Physical activity</td>
<td>Physical education</td>
<td>It All Adds Up to Cleaner Air Campaign</td>
<td>5 Goals for Kids</td>
<td>Public housing revitalization</td>
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<tr>
<td>Overweight and obesity</td>
<td>Food stamps; school meals</td>
<td>Physical education</td>
<td>It All Adds Up to Cleaner Air Campaign</td>
<td>5 Goals for Kids</td>
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<td>Tobacco use</td>
<td>Safe/drug-free schools</td>
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<tr>
<td>Substance abuse</td>
<td>Safe/drug-free schools; Safe Schools/Healthy Students; Healthy Students; Operation Weed and Seed; COPS mental health grants; early diversion programs</td>
<td>5 Goals for Kids; Public housing revitalization</td>
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<td>Responsible sexual behavior</td>
<td>After-school activities</td>
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<tr>
<td>Mental health</td>
<td>After-school activities</td>
<td>Safe Schools/Healthy Students; Operation Weed and Seed; COPS mental health grants; early diversion programs</td>
<td>Public housing revitalization</td>
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<tr>
<td>Injury and violence</td>
<td>NHTSA seat belt campaign</td>
<td>Safe/drug-free schools; after-school activities</td>
<td>Worksite safety programs</td>
<td>5 Goals for Kids; Public housing revitalization</td>
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<tr>
<td>Environmental quality</td>
<td>Lead abatement; emissions standards</td>
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<tr>
<td>Immunization</td>
<td>School health programs</td>
<td>Worksite health programs</td>
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<tr>
<td>Access to health care</td>
<td>SCHIP enrollment (with WIC)</td>
<td>NHTSA seat belt campaign</td>
<td>SCHIP enrollment (targeting kids in schools)</td>
<td>Health benefits education program</td>
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</table>

**SOURCE:** Federal Interagency Task Force on the Elimination of Racial and Ethnic Disparities.

**NOTES:** COPS is Community-Oriented Policing Services. EPA is Environmental Protection Agency. HUD is Housing and Urban Development. NHTSA is National Highway Traffic Safety Administration. SCHIP is State Children’s Health Insurance Program. WIC is Women, Infants, and Children.
a state level and to have application to various groups, such as those of differing socioeconomic status or ethnicity. Data already exist to monitor some of the objectives, but there are insufficient resources to analyze them. For other objectives, there is not yet an identified data source or funding in place to collect information. Responsibility for this monitoring would most reasonably fall to the National Center for Health Statistics. Funding this effort at a level that can drive action is not now in place but could be assured if it became the ongoing, coordinated responsibility of all departments.

Development of communication tools around monitoring and reporting on nonmedical determinants is also crucial. To increase their educational value, these social indicators could be reported together using media strategies to maximize their impact. Both these and the leading health indicators should strive for the same level of public attention accorded the leading economic indicators.

**Strengthening the science base.** Little is known about the mechanisms through which nonmedical determinants, particularly those related to socioeconomic status and social conditions, affect health. Also, just because a factor is related to poor health, we cannot assume that interventions that ameliorate that condition alone will lead to immediate improvement in population health. Research is clearly needed to identify causal mechanisms, to understand how these factors influence health at different points in the life course, and to develop and rigorously test promising sociocultural interventions that affect health. Because populationwide interventions have far-reaching social and economic implications, it is particularly important that public policy be based on sound science. The current evidence suggests that high-quality research in this area would have far-reaching effects, probably comparable to those of the human genome project. The National Institutes of Health (NIH) is the most promising federal agency for this work, and it could greatly elevate the priority it gives to both basic and applied research in this area. The CDC and the Agency for Healthcare Research and Quality (AHRQ) are also important venues to support such work, as are research units in HUD, the Department of Agriculture, and the EPA. Together, they could make major contributions to strengthening the field of health impact assessment.

Sound, practical models in a few priority areas should be developed and tested prior to widespread use. Initial work in health impact assessment might focus on a specific segment of the population, such as children, women of childbearing age, or people of middle age and preretirement, because of the potential impact on Medicare expenditures. Such investigation could begin with examining, for example, health impacts of an economic policy such as minimum
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...wage or Earned Income Tax Credit, investments that improve high school graduation rates in low-income communities, or food programs such as school breakfast and lunch programs.  

- **Leveraging government as an employer.** The federal government is the nation’s largest employer, and more than 80 percent of federal employees work outside of the Washington, D.C., metropolitan area.\(^7\) Just as the Federal Employees Health Benefits Program (FEHBP) is a benchmark against which many other employer-based health insurance plans are measured, opportunities abound for federal leadership to affect nonmedical determinants and to showcase such programs in communities throughout the country. Examples range from assuring safe workplaces to programs that provide opportunities for additional education and job-skill enhancement for low-wage employees. The Air Force has led the nation in the development of a systemwide intervention to reduce suicide, and its model is being emulated throughout the country.\(^8\) The built environment is another area that has received increased attention as the epidemic of obesity continues to rise and as indoor air quality is recognized as an important contributor to respiratory health. The federal government can provide needed leadership in communities by assuring that new federal worksites (and renovation of existing ones) are structured to promote physical activity and assure high indoor air quality.  

- **Expanding the scope of health policy.** Expanding the scope and definition of health policy would facilitate consideration of health-promoting interventions.\(^9\) Several high-priority policies or interventions, such as center-based child care and housing vouchers, are supported by strong evidence and are considered by some proponents to be health policies as well as economic or education policies. Broadening the definition of “health policy” also could stimulate health services researchers and others to expand their traditional scope of inquiry and to work across multiple disciplines. Many general policy-making tools, including regulation, standard setting, and taxing and spending authorities, could be viewed through a lens of health implications and be leveraged to support health improvements. Most departments, including the EPA, HUD, and the Department of Transportation, play a role here. Examples range from cleaning up brownfields in urban areas to improving standards for quality of school lunches or highway safety.
Challenges To Implementation

Many challenges to addressing nonmedical determinants from a federal perspective are apparent. The federal government and the public in general have never defined an overarching strategy for investing in the health of the nation. Like other kinds of investments, those in health will yield returns in different time frames. Much of acute care yields a fairly immediate return, albeit often short-lived. Investments in smoking cessation for those with chronic illness and investments in chronic disease management overall are examples of interventions that are likely to yield relatively short-term returns (within a few years) in avoided complications, improved quality of life, and increased life expectancy. It may take somewhat longer to realize the return from changing other types of health behavior. While some progress can often be noted in five to ten years, an even greater return will likely be realized in a time horizon of twenty years or more. One example is the prevention of heart disease and diabetes through lifestyle changes in young adulthood. Investments in nonmedical determinants, especially education, may take a generation or more to yield much return. In other areas of resource management, a balanced portfolio, with both short- and long-term returns on investment, is standard practice. Our nation’s investment portfolio with regard to health is weighted far toward short-term returns.

The challenges are numerous. First, there is divided public opinion about the role of government overall, as well as the role (if any) that government should play in health. Embedded in that debate is strong concern about federal interference and considerable desire for state and local autonomy. Achieving universal health insurance is but one small part of such debate.

Second, the federal budget development process does not facilitate cross-sector budget consideration. Budgets for different sectors (such as education, housing, and health) are considered as separate bills in different congressional committees and are passed independently of one another. A hallmark of leadership success for many committee members and department and agency heads is to maximize their budgets. Public expectations bring pressure for investments that reap a short-term, tangible return on investment, and special interests or sectors that benefit from current budget allocations often create resistance to change.

Furthermore, calculating the savings that might accrue from spending in one program (such as education) to another (such as health) is at best an imperfect science, open to both error and political challenge, and making budgeting decisions based on such calcu-
lations is extremely difficult. The natural desires for autonomy by most departments and agencies further impedes intersectoral thinking and planning. Finally, because most expected savings occur at a future point (often well beyond the life of a budget, an election cycle, or public expectations), it is difficult to invest in anticipation of improving the health of our children without shortchanging a generation of people with current needs.

Even if the federal government were to make strides in shifting budget priorities, development and implementation of policy is often not within its control; rather, it is under state or local jurisdiction. For example, federal housing, transportation, and environmental standards may promote environments that are more conducive to physical activity, but ultimate decisions about land use, such as whether housing developments are built with safe places to walk, are left to local zoning boards. Such local bodies often lack an awareness that their decisions could have health consequences. Similarly, federal budgets contribute roughly 9 percent to the costs of primary and secondary education. The remainder of the funding, and development and implementation of much of education policy, is a state and local responsibility.

Unfortunately, the accountability for failing to align investments and policies is muddled. Even within the federal health care arena, improving the health of the Medicaid population is not usually viewed as a way to assure a healthier risk pool for the Medicare program. If increased investment in Medicaid did succeed in reducing the burden of chronic disease, failure of states to make sufficient investment would be borne disproportionately by the federal government, through Medicare, rather than by states themselves. Similarly, educational attainment is a major factor in the ultimate health status of the Medicare population, yet the federal government, not state and local government, is the ultimate payer for health consequences of a failed educational system.20

Lack of a mature scientific base for addressing nonmedical determinants is also an impediment to progress. Many of the basic biological pathways through which poverty affects health have yet to be elucidated. Major unanswered questions also exist regarding the application of research findings. For example, once we accept the strong relationship between educational attainment and health status, the knowledge base provides little guidance about where in
the educational process to focus first. Is it most important to focus on children from birth to age three, or later on, to maximize the possibility of high school graduation? How long do such interventions need to be in place? How multifaceted do they need to be? Will addressing one determinant without addressing others directly still yield benefits? Such questions remain unanswered.

**Emerging Opportunities**

Several recent events may present new opportunities to rethink government’s role in addressing nonmedical determinants of health. Last year’s terrorist attacks on the United States have precipitated new discussion about the role of government overall. Homeland defense, including defense against the health consequences of terrorism, is now a federal responsibility. Terrorism, and our place in the world more generally, can now be thought of as emerging nonmedical determinants of both physical and mental health. In this context, there are serious new efforts at interdepartmental collaboration through the Office of Homeland Security. Such a model may promote more openness to intersectoral work and interdepartmental collaboration and spark a broader public discussion of the role of government overall.

The focus of the recently enacted education bill has important parallels to the health agenda. First, the emphasis on “leaving no child behind” is akin to focusing health interventions on some of our most vulnerable populations. The legislation emphasizes monitoring and reporting educational outcomes, including for certain population groups such as those defined by socioeconomic position and ethnicity. The need for similar reporting on key health indicators and nonmedical determinants has been discussed earlier. Agreement about the monitoring aspect of the education bill may serve to lessen resistance to monitoring and reporting in the health arena.

The current recession may present another set of opportunities to address nonmedical determinants. With state budgets more constrained and such a high proportion of state spending allocated to Medicaid, one of the ways in which the federal government can assist states is through Medicaid. It may be possible to expand the scope of what is covered to address the nonmedical determinants more directly. Some models for doing so already exist. For example, Medicaid now has authority to address a housing problem—paying for environmental lead testing. Medicaid-covered case management methods are being used to improve educational outcomes by preventing repeat teen pregnancies and keeping young mothers in school. Such programs could be expanded to a broader population.

Although it is easy to envision increased services provided on an
individual basis, such services would need to be applied to whole populations to improve population health. Such population-based approaches are being used to encourage families to enroll children in publicly subsidized insurance. Schools with high proportions of children who qualify for free and reduced-price lunches are identified so that parents can receive information about health insurance. By extension, it may be feasible to focus on such schools to provide more nutritious meals or daily physical activity as ways to reduce obesity and ultimately a host of chronic diseases ranging from diabetes to osteoarthritis.

Finally, the quality agenda in health care has highlighted the need for a systems approach to health. If we are to address nonmedical determinants successfully, it may be time to take a systems approach to the way government is structured with regard to health. Donald Berwick’s often-quoted adage, “The system is perfectly designed to achieve exactly the results it gets. If you don’t like the results, change the system,” applies not only to health systems, but also to the “stovepiped” way in which policy and budget development often occurs.21

Some of the challenges outlined in this paper seem overwhelming to overcome in the short term; however, others could begin now, with appropriate leadership and commitment. As a nation, we cannot afford inaction. Educational efforts such as the production of this volume of Health Affairs should serve to stimulate further public discussion and federal leadership.

The author appreciates the helpful comments of Carolyn Clancy.

NOTES
11. Minnesota Department of Health, A Call to Action. The project was funded by Turning Point, an initiative of the Robert Wood Johnson Foundation.