Social Policy as Health Policy

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of the endocannabinoid system for the development of a novel class of antidepressants. As mentioned, agents that increase endocannabinoid neurotransmission produce antidepressant, antianxiety, and stress-reducing effects in preclinical models.[6-8] Conventional antidepressant treatments increase CB_1 receptor expression in limbic brain regions involved in depression, such as the hippocampus and amygdala.[13,14] Thus, if impairments in endocannabinoid/CB_1 receptor activity can promote symptoms of depression, it follows that augmentation of endocannabinoid/CB_1 receptor activity could reduce symptoms of depression.

Depressive illness is a devastating mental disorder for which the physical and financial burden is often underappreciated. The World Health Organization currently ranks depression as the fourth leading contributor to global morbidity, disability, and early mortality and predicts that it will become the second leading contributor by 2020.[15] Accordingly, the search for novel treatments for depressive illness is a high priority, particularly considering that conventional treatments for depression are often suboptimal. The clinical and preclinical evidence briefly reviewed herein demonstrates that endocannabinoid signaling is impaired in depressive illness, antidepressant treatments enhance endocannabinoid activity, and agents that pharmacologically potentiate endocannabinoid signaling may possess antidepressant properties. The fact that administration of CB_1 receptor antagonists evoked symptoms of depressive illness in a significant proportion of participants in clinical trials argues that the endocannabinoid system is a critical regulator of emotion, mood, and stress responsivity in humans and that dysregulation of this system may be integral to the pathogenesis of mood disorders.

On the basis of preclinical research and the adverse clinical responses to CB_1 receptor antagonists, it can be anticipated that inhibition of FAAH (or alternate pharmacological means to enhance endocannabinoid neurotransmission) will soon become a target for research and development on the treatment of depression. It will be interesting to see if drugs that augment endocannabinoid activity will eventually provide a new option for the treatment of depression.

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Social Policy as Health Policy

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What health professionals might call social issues—eg, the economy, jobs, education—now dominate the national agenda. Families, businesses, and government are confronting a recession, unstable financial markets, unemployment, a housing crisis, environmental challenges, and other global threats. Sweeping corrective measures are under way to restore economic stability, maintain public services, and promote student and workforce education. Rarely, however, do proponents of these efforts note their connection to health, a nexus that is rarely their first concern or within their expertise.

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The health professions, for their part, deal little with social policy, focusing instead on health care issues, for understandable reasons. Health care spending in the United States now exceeds $2 trillion per year,[1] surpassing the health care spending of any other country but producing inferior results.[2] Reforming health care to control costs and improve access and quality is the priority of health policy makers. This focus on health care comes naturally to physicians, who work largely in this area, and it resonates with the public and their leaders, who view medicine as the front line in the war on disease.

Health is much more than health care. Diseases are mediated by factors outside the clinical setting, such as personal behaviors (eg, smoking), obesity, and environmental exposures. Whereas health policy gives some attention to public health issues, it deals little with the social context of life, which exerts profound influence on health.

As is demonstrated by the current recession, socioeconomic pressures can affect health more deeply than anything physicians do. Along with restricting access to care (eg, making insurance and treatments unaffordable for patients, employers, and government), the economy introduces priorities in daily life that compete with the pursuit of good health. Portion size, the timing of medications, and scheduling a colonoscopy recede in priority when paychecks, homes, or savings are endangered. Many individuals will forego their daily workout to take a second job. Low incomes force other unhealthful choices: families replace fresh groceries with fast foods, seniors endure cold temperatures to lower heating bills, and students leave college to defray tuition. Stress, along with its physiological effects, can induce cigarette, alcohol, and drug use and foment abusive behaviors. Desperate persons commit violent injuries or homicide to steal what they need; they may even commit suicide. Perfecting health care is a half answer if the living conditions that cause disease prevail.

The degree to which social conditions affect health is illustrated by the association between education and mortality rates. In 2005, the mortality rate was 206.3 per 100 000 for adults aged 25 to 64 years with some education beyond high school but was twice as great (477.6 per 100 000) for those with only a high school education and 3 times as great (650.4 per 100 000) for those with less education.[3] An online calculator has been devised to allow users to estimate how death rates would change if states or counties experienced the health gains associated with higher education rates.[4] In New York, for example, the death rate in Bronx County would be 9.5% lower if the proportion of adults with some college education (43%) equaled that of Queens County (53%).[4]

Equally dramatic disparities affect poor and minority populations (eg, blacks, Hispanics), who endure worse health and die younger than affluent persons and non-Hispanic whites. The orders of magnitude are striking. More than 30% of those living in poverty report poor to fair health, almost 5 times the rate reported by the highest-income quintile.[5] Black newborns are twice as likely as white newborns to die by age 1 year; their life expectancies are shorter than those of newborns in Bosnia and Croatia.[3,6]

Social conditions such as education, income, and race/ethnicity are heavily interrelated but also exert independent health influences: for example, upper-income blacks are unhealthier than upper-income whites.[5] Examining disparities through the lens of any one variable without adjusting for others introduces confounding but may provide a better estimate of the benefits of correcting the package of social conditions for which these variables are proxies.[7] For example, it is possible to estimate the number of deaths that could be averted if blacks experienced the mortality rates of whites, a conceivable outcome if the diverse causes of the disparity were rectified. Social change on this scale could yield immense gains, exceeding the modest benefits from incremental advances in medical care. If blacks had the same mortality rates as whites, 5 lives would be saved for every life saved by biomedical advances.[8]

However, several caveats apply. First, social change improves health, but not directly and not without complementary efforts by clinicians, business, and government. Inadequate education and inadequate income are predisposing factors but not direct causes of disease, like obesity or carcinogens, which require mitigation by other means for social change to fully confer health benefits. A college education can impart the knowledge to make healthier choices but cannot bring supermarkets to a neighborhood or remove tobacco and alcohol advertising. Good jobs enable households to obtain health care and contribute taxes for public schools, but other factors influence the quality of patient care as well as education.

Second, evidence of an association does not constitute proof that social change will improve outcomes or to what degree. Although the inference makes sense, associations can have other explanations, such as reverse causality (eg, illness limiting educational and employment opportunities).[9] Longitudinal data suggest that exposure to socioeconomic disadvantage precedes higher morbidity and mortality rates later in life,[10] but prospective studies are needed to clarify the effect size and effect modifiers of social policies.

Third, social change is immensely difficult. The humanitarian impulse to help the needy does not always lend itself to effective policy. Policy makers have struggled for generations to identify effective models for improving education, incomes, and social justice. Some programs, such as Social Security and early childhood education, have produced measurable benefits,[11,12] but other initiatives have managed only to attenuate poverty, homelessness, and other social ills. Programs that could do more for the needy have often foundered because of inadequate resources and ideological objections.

Times have changed, however. The recession, having put financial markets and much of the population at risk, has

produced an economic emergency. The government has reacted boldly, mobilizing billions of dollars to rescue major industries and help the public cope with increasingly dire circumstances. The size of the rescue effort signals a willingness of society, at least temporarily, to invest in the common good: to help families meet expenses, remain employed, keep their homes, and attend school as well as to maintain the essential services and commerce on which communities depend.

This domestic reform initiative should not lose sight of health as a potential consequence and a selling point. At a time of tight budgets, aid programs are typically defended on economic grounds: the aid will increase consumer spending, mobilize revenue, counteract recessionary forces, spur technological innovation, and help workers compete against overseas economies. Health should be added to this list of benefits, not only for its intrinsic value to society but also for the economic leverage that health commands: if widespread socioeconomic distress persists, the resulting deterioration in population health could affect workforce productivity, disease burden, demands for health care, and costs—none of which employers and government can afford.

Household income and education are therefore important health levers, but the same is true for some transportation, housing, agriculture, and other nonhealth policies. Studies known as health impact assessments document the health consequences of nonhealth policies.[13] Programs with seemingly no health connection, such as roadwork, can be transformed into health policies, as when planners include bicycle lanes and sidewalks to promote exercise.

If health pertains to those who shape social policy, the obvious corollary for health leaders is to use social policy for health purposes. Although many physicians have limited interest in social issues, those who establish health policy should take the broad view. If the profession's mission is to optimize health, then all effective options should be considered, not just clinical tools (eg, drugs, diagnostic tests), especially when other tools work better. For example, no diabetes drug is associated with a 3-fold difference in mortality rates, as applies to education: among adults aged 40 to 64 years, diabetes mortality rates are 21.42 per 100 000 for college graduates and 67.30 per 100 000 for those with only a high school education.[14] Arguably, organizations and endocrinology societies devoted to optimizing diabetes outcomes should promote education reform as avidly as they emphasize disease management and health care reform.

Systems must change before social issues can be interwoven into health policy. The first hurdle is attitudinal: health officials, organized medicine, disease-related groups, care delivery systems, and academia must embrace the tenet that social change is a legitimate tool for improving health. That commitment would change the job description for health policy makers, practitioners, and researchers, who cannot meet expectations without new collaborative relationships, resources, and working conditions. Health policy makers need systems to monitor social policies with health implications and to pursue implementation with leaders in other fields. Many health agencies cannot take up social issues without broadening jurisdictional boundaries. For example, a senate health committee must be willing to examine the health consequences of a minimum-wage bill, not just refer it to a labor committee.

For practitioners, integrating social change into patient care requires more than a social work referral. It entails establishing social milestones (eg, getting a job, graduating) as explicit goals for patients and coordinating with other disciplines and community partners (eg, schools, social service agencies, employers) to find solutions. Although funding and infrastructure are essential for such collaboration, much can be accomplished by leveraging existing tools and resources. For example, electronic medical record templates can be redesigned to enable clinicians to monitor social conditions as another "vital sign." Health systems and safety-net agencies can work together to develop a streamlined, electronically linked system that enables clinicians to refer needy patients with the click of a button and to keep each other informed as patients reach health or social milestones.

For researchers, the opportunity to study ties between social policy and health and to engage coinvestigators from other disciplines is frustrated by limited funding and publication opportunities. No agency or foundation provides a home for studying the interconnections between social conditions and health. Most of the centers at the National Institutes of Health are organized by body systems. Of the many funders concerned with health or social policies, few entertain proposals about the interconnections, and only a handful of journals publish such results. Reviewers in academic medicine—eg, study sections, manuscript reviewers, tenure committees—include few experts on social policies, data sources, and the analytic methods such data require. More conducive conditions are necessary to foster robust scholarship in this field.

The health consequences of social policies warrant greater attention from the health policy community. At a moment of prominence for social policy, the nation is being reconfigured to overcome unprecedented challenges. Sweeping decisions are being made that will affect living conditions, and resulting health outcomes, for many years. This is the wrong time for the health professions to keep their distance from these issues. Not recognizing the imprint of social conditions on health is problematic at any time—but especially now.

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Action on Health Disparities in the United States

Commission on Social Determinants of Health

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HERE ARE 2 TRUISMS. RICH COUNTRIES HAVE BETTER health than poor countries, and medical care improves health. Consider, then, the case of the United States, which is among the richest countries in the world and spends more than any other country on medical care, US $6350 per person in 2005.[1] Does the United States then have the best health? Not quite. Life expectancy from birth to age 65 years is one useful measure of premature mortality: the United States ranks 36th in the world for men and 42nd for women.[2] If not by greater national income or more spending on medical care, how should the task of improving health in the United States be approached? Pay attention to the social determinants of health.

Commission on Social Determinants of Health

Because of concern with global health inequity the director-general of the World Health Organization established the Commission on Social Determinants of Health (CSDH) in 2005. The CSDH produced recommendations, based on evidence, about what could be done to further the cause of health equity.[3] The CSDH highlighted inequities between countries—life expectancy at birth in Zambia (41.2 years) is half that of Japan (82.4 years)[4]—but also health inequities within countries (such as the United States) that can be dramatic. Within the Scottish city of Glasgow, there is a 28-year gap in life expectancy between the richest and poorest areas; among the poorest, male life expectancy is 8 years less than the average life expectancy in India.[3] The gap in life expectancy between men in Washington, DC, and in suburban Maryland is 17 years.[3] Rich countries have no cause for complacency. The CSDH was oriented to countries at low, medium, and high income.[5]

The gap between top and bottom highlights the magnitude of the difference in health outcomes but the CSDH emphasized the graded relation between socioeconomic position and health, the social gradient that exists within countries.[6] A previous comparison of men and women aged 55 to 64 years demonstrated the social gradient in health and showed higher illness rates in the United States than in England,[7] consistent with shorter life expectancy to age 65 years in the United States. At every point along the scale of income or education, the health of Americans was worse than that of the English.

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