

VIEWPOINT

Resolving the Tension Between Population Health and Individual Health Care

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Health care in the United States is far costlier than in any other country, yet its outcomes, while improving, are worsening relative to other countries in the Organisation for Economic Co-operation and Development (OECD).¹ Perhaps the de facto organizing principle for US health care—approaching each patient strictly as an individual—is obsolete. The population health approach is an alternative. It aims to improve and maintain health across a defined population.^{2,3} A “defined population” can mean a clinician’s patients or a health plan’s enrollees, but the defined population for the population health approach includes everyone in the community.

This Viewpoint addresses 3 related questions. First, **can the population health approach improve the outcomes of US health care?** Second, **for the population health approach to succeed, must it reconcile the needs of the individual and the community?** Third, how might these needs become reconcilable?

The population health approach includes both the health care system and the public health system. It intervenes on the determinants of the health of the population and on the needs of individual sick people.

Perhaps the de facto organizing principle for US health care—approaching each patient strictly as an individual—is obsolete. The population health approach is an alternative.

It targets everyone, not just those enrolled in a health care system. The research informing the population health approach examines the interactions among determinants of health, the pathways linking these determinants to population health outcomes, and their influence at different points in a lifetime.⁴

Planning to optimize population health will mean determining the frequency, causes, and consequences of the common medical conditions in a population⁴ and devising strategies for dealing with them over the life span. Heart disease is a prototype strategy, beginning with community and school-based programs to prevent obesity and cigarette addiction and promote exercise. In mid-life, the strategy might consist of screening for hypertension and hypercholesterolemia, counseling about weight loss and smoking cessation, and a daily aspirin. The later years would require cost-effective approaches to managing

vascular disease, heart failure and its comorbidities, and end-of-life care. The substantial decline in US cardiovascular disease mortality is due to both treatment of risk factors and better treatments for heart disease. It shows that prevention and better treatment can be a successful strategy that should eventually lead to fewer costly diagnostic procedures and treatments for heart disease. It suggests that the population health approach could improve US health outcomes.

Social factors, especially poverty, education, and social networks, are stronger determinants of the health of a population than health care.⁵ Health care systems typically do not address these social determinants, but health care is part of a larger system that is trying to address them. The US Veterans Administration is a good example; it provides veterans with health care and underwrites costs of their education. For low-income families, the Medicaid program and federally qualified health centers provide health care while the US education system can be a pathway to improved economic status. These complementary public programs developed in parallel, but they do suggest what could be achieved by collaboration between the public health system, the medical care system, and community resources.

What will be required to stimulate the health care system, the public health system, and community leaders to plan together? **The Affordable Care Act contains many provisions to stimulate the health care system to cooperate with the public health system.**⁶ Global spending limits for health care would be an even stronger motivator because limited resources would force a community to cooperate in deciding how to maximize the health of the public.

Difficult Questions Raised by Allocating Resources to Improve Population Health

Under the population health approach, **resources must be allocated across programs to prevent, detect, and treat disease and its risk factors.** For example, the optimal distribution of resources between early and mid-life prevention and late-life treatment will vary depending on the relative frequency of common diseases, the effectiveness of different interventions, the characteristics of different populations, and the age distribution of the population. One consequence of planning for a population is that the optimal distribution of resources to address the needs of a population is not necessarily the best allocation of resources for many individuals in that population. Programs to reduce the incidence of

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heart disease may draw resources away from treating patients with heart disease.

Throughout history, codes of professional conduct have called on clinicians to make each patient's interests their highest priority. If resources become limited, clinicians will find themselves unable to adhere to this standard of practice for all patients. In 2002, a new code of conduct, the Charter for Professionalism, addressed this conflict by calling on physicians to consider the needs of all when treating the individual: "While meeting the needs of individual patients, physicians are required to provide health care that is based on the wise and cost-effective management of limited clinical resources. The provision of unnecessary services not only exposes patients to avoidable harm and expense but also diminishes the resources available for others."⁷

This remarkable passage indicates that the physician has an ethical imperative to balance the needs of the individual patient with the needs of society. With this foundational principle of the population health approach, the Charter, in effect, calls on clinicians to allocate resources. However, it does not provide specific advice. Recent programs, such as the American Board of Internal Medicine Foundation's Choosing Wisely campaign, are beginning to fill this knowledge gap, as do some practice guidelines.

Solutions to the Problem of Resource Allocation Across Patients and Programs

An approach to the problem of fairly allocating health care resources across a population should begin by enumerating a set of principles to apply to each allocation decision, such as screening tests. A decision-making principle at the individual patient level would be to choose the option that maximizes the individual's welfare: ie, screen only if the likely result is a benefit for the patient, such as a gain of quality-adjusted life-years (QALYs).⁸ Similar reasoning can apply to allocating resources to screening in a defined population. Here, the principle might be to screen only those persons who are most likely to gain QALYs. The resources needed to screen would depend on the number of individuals who would gain QALYs and should be screened. The challenge will be to develop models for the principal high-stakes decisions of clinical medicine, perhaps starting by identifying these decisions and developing the evidence needed to inform them.

To allocate resources between disease-specific programs is more difficult. One reasonable principle is to move resources from groups of patients less likely to benefit to groups more likely

to benefit. Thus, funds to pay for screening patients at low risk for disease might be redirected to treating patients with severe forms of other diseases (who might stand to gain more QALYs from treatment than others would gain from screening). Two principles that apply to decision making for patients and populations with a disease and across diseases are to use a common metric of value (eg, the QALY) and then intervene on those most likely to benefit. The United States has always struggled with applying these principles to health care.

Conclusions

Can the Population Health Approach Improve the Outcomes of US Health Care?

The population health approach, in conjunction with the Charter for Professionalism, provides a framework for improving the health of the public in the approaching era of limited resources for health care. The example of heart disease shows that **promoting population health through prevention programs and disease treatment can improve health outcomes.**

Must the Population Health Approach Compromise the Needs of the Individual to Benefit the Community?

It will take **several generations to realize the full benefit** of investments in disease prevention. In the short run, these investments may draw resources away from tests and treatment for some sick people. In the long run, disease prevention and better low-cost technology could reduce the outlay for treatment. In the interim, skillful clinical decision making can make the most of limited resources.

Are the Needs of the Individual and the Population Reconcilable?

Using the same metric of value and the same decision-making principles for patients and for populations would be an important step toward a system that fairly allocated resources between the healthy many and the sick few.

As health systems strive for high-value care, resource allocation and modeling to inform it will become increasingly important in health care. Nonetheless, the main challenge of day-to-day patient care is dealing with the idiosyncratic needs of individual patients. Coping with these needs requires skillful improvisation coupled with mastery of a few decision-making principles. Much of medical practice has changed but not the basics of patient-centered care.

ARTICLE INFORMATION

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