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A Pay-for-Population Health Performance System

David A. Kindig, MD, PhD

The report Rewarding Provider Performance, recently released by the Institute of Medicine, concludes that early experience with pay-for-performance has been promising and recommends that Medicare begin to phase in this strategy to foster comprehensive and system-wide improvements in the quality of health care. Even though the effectiveness of pay-for-performance in medical care has been evaluated in fewer than 20 studies and the conclusions on its impact have been mixed, the need for reform is so great that beginning to move cautiously in this direction has been endorsed by the panel involved in the Institute of Medicine's report.

But improvements in the quality of health care alone will be inadequate to significantly improve population health. A decade ago I asserted that “population health improvement will not be achieved until appropriate financial incentives are designed for this outcome” and proposed a 20-year timetable, which would begin with pay-for-performance in medical care but then move on to develop such incentives for the nonmedical determinants of health. As pay-for-performance in medical care moves ahead, it is now time to take up the admittedly more difficult challenge of developing a “pay-for-population health performance system” that would go beyond medical care to include financial incentives for the equally essential nonmedical care determinants of population health. To lose several generations of greater overall health and diminished disparities is simply unacceptable when it is apparent that a more balanced health investment portfolio will produce greater returns from these investments.

Pay-for-Performance in Medical Care Alone Will Not Improve Population Health

The health of the US population is far from optimal, both in terms of mean outcomes compared with other nations and in the unacceptable disparities within the country. The United States currently ranks 25th in women’s life expectancy at birth among developed nations. Within the United States, the mortality rate for blacks (1098/100 000 persons) is 31% higher than the mortality rate for whites (836/100 000 persons). Adults with more than 13 years of education have a mortality rate of 211/100 000 persons while those with less than a high school education have a mortality rate of 575/100 000 persons. Minnesota has a mortality rate of 749/100 000 persons while Mississippi has a rate of 1035/100 000 persons. The percentage of persons reporting fair to poor health is 6% for persons above the poverty line and 20% for those in poverty.

Despite these relatively poor health outcomes, medical expenditures in the United States are significantly higher than those of healthier international counterparts. Even within the United States, Miami spends twice as much on medical services than Minneapolis, with no difference in health outcomes. There are 2 reasons higher medical care expenditures have not resulted in better health outcomes. First, medical care value purchasing has begun to create incentives only for medical care quality improvement and patient satisfaction but has not yet focused on broader population-level health outcomes like mortality and health-related quality of life. According to Woolf, “ensuring patient safety is essential for better health care, but preoccupation with niches of medicine, such as patient safety, can inadvertently compromise outcomes if it detracts from other problems that pose a greater threat to health. The greatest good for the health of population comes from a global perspective that views the system as a whole, judges its performance by its effect on population health rather than on parochial domains, and prioritizes interventions in a rational scheme to optimize outcomes.”

The second and probably more important reason is that broad population health outcomes are not the result of only medical care but of many other determinants. Population health is also determined by factors in the social environment (eg, education, income, occupation), the physical environment (eg, air and water quality), the built environment, individual behavior, and genetics. While pay-for-performance demonstrations have been under way in the medical care sector, population health and social epidemiology also have been emerging as companion new disciplines. Although research cannot yet precisely quantify the
contribution of each determinant, socioeconomic status and individual behavior may be at least as important as medical care in producing these outcomes. Therefore, the medical care sector cannot be held wholly accountable for broad health outcomes—it can only do what it is designed to do and has responsibility for.

**Promise of Pay-for-Population Health Performance**

This leads inexorably to the pay-for-population health performance challenge of how to apply financial incentives to health outcomes when those outcomes are the result of a diverse set of sectors and agents that work primarily in isolation from one another. No single agent in either the public or private sector is responsible for population health so accountability is diffuse. However, if the challenge is daunting, the promise is well worth the pursuit—to increase the average health of the US population and reduce disparities while controlling medical care costs.

However, there is even less experience with pay-for-population health performance than what the value purchasing pioneers had in the early 1990s when they launched value-based purchasing. Many healthy community projects have attempted to address the multiple determinants of health, usually with limited resources and voluntary efforts. Similarly, the Canadian province of Prince Edward Island experimented with putting all health-related resources into a consolidated regional budget and had mixed results. Size and colleagues have called on rural hospital boards to exert leadership: "Now is the time for balanced scorecard-driven strategic planning to incorporate population health measures." To begin this effort, Size and colleagues suggest that rural board members allocate time on a regular basis to review available population health indicators and perhaps recruit board members with specific interest or expertise in population health measurement and improvement. I have previously suggested the formation of health outcome trusts, which is a metaphor for local public-private partnerships with market-based incentives to integrate resources across determinants for better health outcomes. McGinnis has recently called for increased collaboration between public health and medicine stating that “pay-for-performance should include pay-for-better-community health.”

**Challenges of Pay-for-Population Health Performance**

There are many significant challenges to moving forward with pay-for-population health performance. Some of the challenges are identical to those in medical care and others are even more complex. Issues that must be addressed include the following.

Population Health Measures. There is no consensus on how to measure population health and its improvement. Which mortality and health-related quality measures should be used, and if and how should they be combined? What about the balance between improvements in overall or average health vs reductions in disparities or variance across groups? Which domains of disparity (eg, race/ethnicity, socioeconomic status, geography) should be measured, and should the different domains be combined into some kind of a disparity index?

Financial Incentives and Unintended Consequences. What incentive structures or strategies could reward population health improvement across multiple agents? If financial incentives are difficult to devise in the more defined environment of pay-for-performance in medical care, how might they work in the broader population health framework?

Assuming that population health performance could be paid for, what kind of “gaming” would result? Similar to “DRG [diagnosis related group] creep,” what kind of creep will be created by pay-for-population health performance? Is it possible to learn from the efforts in other sectors (eg, the environment or education) to avoid such pitfalls?

Coordination Across Sectors. Efforts at vertical integration across medical care and other determinant sectors have proved difficult. How then will silos currently separated by dominant forces of culture, incentives, professionalism, and competition be linked?

Resistance to Reallocation of Resources. In a perfect world, resources would not be an issue and adequate funds could be allocated to each determinant sector (eg, medical care, socioeconomics, and human behavior). But if reallocation is required (such as from Medicare to early childhood initiatives), powerful forces within medical care will be unleashed, with predictable conflicts. The opening line of Paul Starr’s Social Transformation of American Medicine is “The dream of reason did not take power into account.” Could the elderly and their advocates ever consider intergenerational transfers, acknowledging that they may have had their “fair innings”? The Triage Trap. Beyond resistance to reallocation of resources, another potential problem is being drawn to meet today’s need over tomorrow’s, such as treating the injured before working to prevent the injury. More upstream determinants usually only get policy makers’ attention when a disaster occurs or seems likely to occur.

**Potential for Improving Population Health**

Many observers of public and social policy would say that these obstacles are too great to overcome. But what is the alternative? How can public and private policy makers afford not to work to fundamentally improve health and lower future demand for medical care? It certainly will not be easy. But just as pay-for-performance is not perfect, neither will pay-for-population health performance be.

Full potential for improving population health cannot be achieved without first developing appropriate financial...
mechanisms. However, not nearly enough academic and policy debate, time, and money are being devoted to this challenge. Voluntary efforts are not powerful enough to achieve this on a soft money basis. The pay-for-performance movement has accelerated to its current level through the 100 or more private-sector efforts like Bridges to Excellence and Rewarding Results as well as through federal major demonstration projects in hospitals and outpatient settings.

Now is the time to explore possibilities that go beyond medical care determinants and to fund promising demonstration programs that will help determine the way to overcome obstacles. Perhaps major foundations should begin a “rewarding population health results” program in which community leaders from a variety of sectors can experiment with promising ideas. The best places to test these mechanisms may be in rural areas and in smaller states, where the scale is more manageable and where leaders in different sectors may know each other better and perhaps can more easily address and overcome silo issues.

Many determinants, such as education, the built environment, and preventive medical care, take generations to achieve their effects. A decision not to move forward is a decision to waste potential years of good health that are achievable. What might be the result if market forces were aligned to produce health instead of primarily the medical care inputs into health? Can the next generation afford for the current generation not to start paying for population health performance?

Financial Disclosures: None reported.

Funding/Support: The research for this article was supported in part by the Robert Wood Johnson Foundation Health and Society Scholars program at the University of Wisconsin, Madison.


Acknowledgment: Helpful comments were provided by Tim Size, MHA (Rural Wisconsin Hospital Cooperative); Robert Stone-Newsom, PhD, Bridget Booske, PhD, and Judy Knutson (University of Wisconsin, Madison); Marge Kindig, JD; and Mary Darby, BA (Brennus Communications). Dr Booske and Ms Knutson received compensation for their work as full-time employees of the Population Health Institute using core funds from the School of Medicine and Public Health. None of the others listed in this acknowledgment was compensated for his or her contribution.

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