Linking Public Health With the Transformation of Primary Care

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This issue of the NCMJ highlights a variety of interventions aimed at improving the health of populations. The Institute of Medicine (IOM) of the National Academies has recommended that public health interventions be coordinated with the development of primary care [1]. How can we accomplish this goal?

Our overall goal should be to rapidly implement the Triple Aim Initiative proposed by the Institute for Healthcare Improvement: better population health, better patient experience, and lower cost [2], all at the same time. Experience in other countries suggests that robust primary care is essential to achieving this goal. In 1994 the IOM identified the following factors as key elements of primary care: accessibility, accountability, comprehensiveness, care coordination, and sustained partnerships with patients, in a context of family and community [3]. In the early 1990s Barbara Starfield found a strong relationship between primary care and key health outcomes such as life expectancy, cost, and patient satisfaction [4]. These findings have been echoed in studies that have looked at the drivers of cost and quality across the United States [5].

Primary care in the United States must become more robust. The structure of primary care has evolved rapidly in the past decade, triggered by 3 landmark studies: 2 IOM reports, *To Err Is Human* [6] and *Crossing the Quality Chasm* [7], and a report of The Future of Family Medicine project [8] that presented a strategy for transforming the discipline "to meet the needs of patients in a changing health care environment." The patient-centered medical home (PCMH) model [9] emphasizes improved access, better care for chronic diseases, and team-based care; early evaluations of PCMHs have shown positive outcomes, especially in terms of health care utilization and patient experience [10]. North Carolina has been a national leader in the PCMH movement as the result of collaboration between providers, insurers, the North Carolina Area Health Education Centers, and Community Care of North Carolina (CCNC) [11, 12].

Networks of transformed primary care practices can potentially have a significant public health impact. Chronic diseases such as diabetes and hypertension are important drivers of both health care costs and adverse health outcomes, and primary care offers the best available opportunity to improve outcomes relatively quickly on a population level. For instance, North Carolina has hundreds of thousands of residents who have diabetes, and improving their health could have a significant impact on public health. If primary care practices across the state were able to lower patients' glycosylated hemoglobin levels, improve control of blood pressure, improve lipid levels, increase daily use of low-dose aspirin, and reduce smoking, it would have a substantial impact on the number of amputations and on the incidence of renal, cardiac, and eye disease; even modest improvements would save thousands of lives. These practice-based interventions are synergistic with traditional public health interventions that educate the public, engage communities, alter environmental factors, and address social determinants of health.

How should we go about coordinating the efforts of primary care practices and public health departments? Within large integrated networks, primary care must continue to evolve by incorporating personal technology that promises better self-management of chronic disease and by adopting the rapidly evolving care management systems and information technology systems necessary to improve transitions, better manage the care of patients with multiple comorbidities, and reduce overall costs. We must also build more robust organizational linkages between primary care practices and public health departments.

One common goal of both primary care and public health could be for all North Carolina residents to enroll in the primary care practice of their choice, as insurance coverage spreads and primary care capacity grows. CCNC and the State Health Plan have demonstrated the feasibility of allowing patients to choose their primary care practice. The broader principle is that we should emphasize "denominators" of care—defined populations that allow us to measure the omission or effectiveness of medical care. Primary care practices with defined panels represent an organizational unit that can be accountable to the public and to insurers, yet is small enough to act on gaps in care and disparities.

Another common goal is to make clinical data easily available so that it can drive improvement of care at the level of the individual, the practice, the accountable care organization, and the population. This will require us to have measures of quality that are identical across payers; other states have achieved this standardization by including such measures as a component of insurance regulations. In addition, primary care practices and public health departments should support the development of a robust statewide electronic health information exchange, which will make it possible to share information across clinical networks and will drive quality improvement and real-time coordination of care for the state's entire population.

A third goal is patient engagement, both at the practice level and at the community level. As the North Carolina Institute of Medicine's Task Force on Patient and Family Engagement has noted, engaging patients means doing much more than routinely measuring patient satisfaction;

patients must also be involved as partners in clinical operations and eventually as members of community and regional advisory groups.

To support these goals, organizational links between primary care practices and public health departments need to grow. The IOM has recommended moving beyond awareness and coordination to collaboration and partnering [1], and such collaboration has already begun in North Carolina. CCNC has begun sharing the responsibility for immunizations with the community, and the Buncombe County Health Department has embedded staff members in a regional accountable care organization. In other communities, local health departments have provided small practices with key staff members such as nutritionists or community health workers, as many smaller practices are unable to hire such personnel on their own.

New kinds of health professionals will also be necessary for population management at the level of the practice or the community; for example, we will need community health workers, care managers trained for primary care, quality improvement consultants, and information technology specialists [13]. Our current health education system targets acute care in hospitals, but care is inevitably moving to primary care and community settings. Primary care practices and public health departments must work together to develop these new kinds of workers and to provide them with a solid understanding of population health.

In summary, the transformation of health care in North Carolina provides a great opportunity to improve the health of the people of our state. The foundation should be a partnership between public health departments and our rapidly evolving primary care system. NCMJ

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Acknowledgments

Potential conflicts of interest. W.P.N. has no relevant conflicts of interest.

References

1. Committee on Integrating Primary Care and Public Health; Board on Population Health and Public Health Practice; Institute of Medicine. Primary Care and Public Health: Exploring Integration to Improve Population Health. Washington, DC: National Academies Press; 2012.
2. Institute for Healthcare Improvement (IHI). IHI Triple Aim Initiative. IHI Web site. http://www.ihi.org/Engage/Initiatives/TripleAim/pages/default.aspx. Accessed September 10, 2014.
3. Committee on the Future of Primary Care; Institute of Medicine. Donaldson M, Yordy K, Vanselow N, eds. Defining Primary Care: An Interim Report. Washington, DC: National Academies Press; 1994.
4. Starfield B. Is primary care essential? Lancet. 1994;344(8930): 1129-1133.
5. Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. Health Aff (Millwood). April 2004; Datawatch Medicare Quality Web Exclusive. doi:10.1377/hlthaff.w4.184. http://content.healthaffairs.org/content/suppl/2004/04/07/hlthaff.w4.184v1.DC1. Accessed September 10, 2014.
6. Committee on Quality of Health Care in America; Institute of Medicine. Kohn LT, Corrigan J, Donaldson MS, eds. To Err Is Human: Building a Safer Health System. Washington, DC: National Academies Press; 2000.
7. Committee on Quality of Health Care in America; Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, DC: National Academies Press; 2001.
8. Martin JC, Avant RF, Bowman MA, et al. The Future of Family Medicine: a collaborative project of the family medicine community. Ann Fam Med. 2004 (2 suppl 1):S3-S32.
9. Stange KC, Miller WL, Nutting PA, Crabtree BF, Stewart EE, Jaén CR. Context for understanding the National Demonstration Project and the patient-centered medical home. Ann Fam Med. 2010;8(suppl 1):S2-S8.
10. Nielsen M, Langner B, Zema C, Hacker T, Grundy P. Benefits of Implementing the Primary Care Patient-Centered Medical Home: A Review of Cost and Quality Results, 2012. Washington, DC: Patient-Centered Primary Care Collaborative; 2012. http://www.pcpcc.org/sites/default/files/media/benefits_of_implementing_the_primary_care_pcmh.pdf. Accessed September 10, 2014.
11. Steiner BD, Denham AC, Ashkin E, Newton WP, Wroth T, Dobson LA Jr. Community Care of North Carolina: improving care through community health networks. Ann Fam Med. 2008;6(4):361-367.
12. Newton WP, Lefebvre A, Donahue KE, Bacon T, Dobson A. Infrastructure for large-scale quality-improvement projects: early lessons from North Carolina Improving Performance in Practice. J Contin Educ Health Prof. 2010;30(2):106-113.
13. Fraher EP, Ricketts TC, Lefebvre A, Newton WP. The role of academic health centers and their partners in reconfiguring and retooling the existing workforce to practice in a transformed health system. Acad Med. 2013;88(12):1812-1816.

Electronically published November 7, 2014.

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N C Med J. 2014;75(6):418-419.
0029-2559/2014/75620