Building Capacity for Population Intervention Research in Primary Care

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Rising health care costs, increasing prevalence of chronic disease, persisting health care disparities and access issues, and the aging population underlie the urgent need for change in the U.S. health care system to simultaneously improve health and reduce costs.1-3 This imperative emerges during a time of increasing evidence documenting the impact of environmental and social factors on health, a time of expanding health data resources and health information technologies, and a time of significant opportunity for health care reform through the Affordable Care Act.4-7 These trends converge to create unprecedented potential for transforming health care delivery in the United States and effecting sustainable advances in population health.

Population health research examines a diverse set of determinants of the health of populations, including social, environmental, behavioral, and clinical factors.6 By adopting a population health perspective and engaging in relevant population health research, primary care practice, particularly through efforts outside of the traditional in-office encounter, has the potential to inform, modify, and deliver population-level interventions.8-10 Although many of these interventions may appear to belong to the domain of public health, health care delivery experts now recognize how primary care must engage with public health to achieve this potential.8 Primary care practices must abandon their passive approach to interacting with patients—waiting for patients to contact them and schedule traditional visits—and instead must re-engineer their workflow so that they first and foremost are caring for their panels (their populations) of patients proactively, anticipating their needs and reaching out to meet them—so that the patients’ health needs drive the work of the practice. The realization of this potential—to inform, modify, and deliver population-level interventions—will necessitate a fundamental shift in primary care practice to engender greater patient and community engagement around the shared goal of population health improvement.

Engaging communities and patients will require significant expansion of primary care efforts outside of the traditional patient–clinician office visit. Primary care practices must embrace caring for their patients in a way that provides patients with the care they need, when they need it and where they need it. Such care might involve an electronic patient portal, or when that is

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not available, it may rely on other communication means, including the telephone and U.S. mail as well as texting through mobile phones and social media. It may mean other nontraditional approaches for some hard-to-reach patients, including visits to the home, workplace, or school.

Clinicians must do more than just volunteer and advise community organizations. Instead, in embracing their responsibility to their panel of patients, clinicians must partner with community organizations (e.g., schools) to deliver preventive and remedial services. To further effect change outside of the traditional patient–clinician office visit, primary care efforts must be aligned, coordinated, and in some cases integrated with those of community organizations and institutions such as schools, public health agencies, and workplaces. Improving population health will require multisectoral engagement across communities. Primary care practices, as community-facing and trusted health care delivery entities, have a crucial role to play in catalyzing and informing said change. In fact, to provide the appropriate care to their entire population of patients, primary care practices have a responsibility to embrace this change.

To best serve the needs of patients and communities, changes in primary care practice must be evidence-based and embedded within a population health research process. Research efforts to evaluate the impact of non-encounter-based approaches in primary care, patient and community engagement in health improvement, and coordination of patient care with community organizations are needed to inform practice change and to monitor the health of the communities served. Effective interventions must be identified through careful study of the published literature, the extant data, prospective data collection, and, where appropriate, experimental intervention. Adopting a population health perspective and embedding population health science practices in primary care will give clinicians the tools and the processes they need to act as key informants and agents of change in their communities. Population health care interventions have the potential to span the range of preventive efforts from education and screening to intervention and maintenance (see the table below).

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<th>Categories of Research Questions in Population Health Research in Primary Care</th>
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<tr>
<td><strong>Education</strong></td>
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Addressing population science research questions requires development of expertise
and advocacy within primary care practices to nurture and support a robust program of research. The problems primary care practices face in the 21st century call for comparative-effectiveness studies to drive the evidence base and find what works most effectively to advance the science of health care delivery. In response to the growing need for embedded population health research expertise and efforts in primary care, Mayo Clinic has developed a Population Health Research Scholars training program for primary care providers who are committed to changing the practice of primary care through population health research–driven efforts. This effort represents a collaboration between the primary care clinical practices at Mayo Clinic and the Population Health Science Program in the Center for the Science of Health Care Delivery.

The Population Health Science Scholars Program provides protected time for clinicians to engage in mentored research and training in population health research. The Scholars Program is a cornerstone of the Population Health Science Program and of Mayo’s overall efforts to restructure primary care in an evidence-based and research-driven manner. Through integration with the Population Health Science Program, the primary care practice at Mayo Clinic is increasingly connected to the research enterprise and to community partners around a shared set of community health goals and data-sharing efforts that were launched under the Beacon Community Program funded by the U.S. Department of Health and Human Services Office of the National Coordinator for Health Information Technology.

Significant challenges to improving population health lie ahead that will require an all-hands-on-deck approach and multi-sectoral commitment to common community health goals. Primary care practices have an opportunity to serve as a catalyst for change in the communities they serve while building an evidence base for practice and working toward restructuring the health care system in the United States in a research-driven manner.

References