

# Seeking Enhanced Patient Care Outcomes

## Better evidence-based care from IT-driven population health management

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**P**opulation health may be defined as “...the health outcomes of individuals within a specified group based on geography and other characteristics, and the social distribution of those outcomes, their determinants and the interventions and policies that link the two.”<sup>1</sup> The origins of population health stem from the discovery over two centuries ago of the connection between sanitary conditions and the spread of disease, as well as the realization that the upper echelons of society were far less afflicted by epidemics than those in the lower socio-economic classes.<sup>2</sup> These determinations have driven the understanding that population health “depends heavily upon social, cultural and economic determinants and not solely upon the delivery of medical care.”<sup>3</sup>

The need for **population health management** has been well documented in the canon of professional literature, as evidenced by the fact that the United States spends more on health care per person than any country in the world, but ranks poorly on numerous health indicators, including infant mortality rates and life expectancy.<sup>4</sup> Health indicators are inconsistent across the U.S., with “healthy” counties experiencing “lower rates of poverty, unemployment and preventable hospital stays than unhealthy counties.” At a more delineated level, individuals with lower incomes have “shorter lives, poorer physical and

emotional health and more chronic disease.”<sup>4</sup> These differences in health indicators across geographic subdivisions and sub-populations cannot be explained solely by clinical indicators, e.g., “genes and biology...health behaviors (such as tobacco use and physical activity),” as they only account for 30% of an individual’s health status. The other 70% is determined “by social and physical environmental factors such as access to adequate housing, education, income, healthy food and safe places for social and physical activity.”<sup>5</sup>

Population health management efforts have occurred through various initiatives in both the public and private sectors, on national and local levels.



Numerous stakeholders have a significant interest in population health management as a means to improve the health of *all* Americans, including: individual patients and their families; the health providers who care for them; the communities in which these individuals live and work;<sup>6</sup> commercial entities; and, public policymakers.<sup>7</sup> An understanding of the current state of population health management from the perspectives of these stakeholders informs the discussion the potential evolution of these endeavors going forward.

Population health management efforts have occurred through various initiatives in both the public and private sectors, on national and local levels. The federal government has attempted to approach population health management through several different initiatives, including but not limited to:

- 1) Implementation of Emerging Healthcare Organizations (EHOs):** Through health care reform, the federal government has facilitated the creation and implementation of EHOs such as Accountable Care Organizations (ACOs) and bundled payment models to incentivize providers to provide better care to a defined population at a lower cost, and, consequently address other, nonmedical needs of patients in an effort to yield cost savings.<sup>8</sup>



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- 2) **The Partnership for Sustainable Communities:** An Obama Administration initiative, the Department of Housing and Urban Development, the Department of Transportation and the Environmental Protection Agency have partnered to “align cross-agency investments and policies to improve [200] communities [across the U.S.] ... through more efficient spending of taxpayer dollars,” to advance “economic opportunity and mobility through the support of transportation connections and promotion of fair housing, all through the lens of helping communities adapt to a changing climate.”<sup>5</sup>
- 3) **Healthy Food Financing Initiative (HFFI):** Created in 2010 and modeled after a public-private collaboration in Pennsylvania, HFFI works “...to bring grocery stores and other healthy food retailers to [‘food deserts,’ i.e.,] underserved urban and rural communities across America” that typically rely on fast food restaurants and/or convenience stores that only sell processed food. This effort seeks to utilize the expertise (and funding) of the Department of Health and Human Services, the Department of Agriculture and the Department of the Treasury, to “give stakeholders a full range of tools to increase access to healthy foods.”<sup>9</sup>

In the private arena, efforts to further population health management through cross-sector partnerships and collaborations have “grown in frequency and depth in recent years.”<sup>5</sup> While the need for these alliances has been well established, there is a dearth of studies regarding the success of these initiatives. Examples of these partnerships include:

- **Culture of Health Initiative:** This national initiative, developed by the Robert Wood Johnson Foundation (RWJF), consists of four action areas: making health a shared value; fostering cross-sector collaboration; creating healthier, more equitable communities and strengthening services and systems.<sup>10</sup> In the pursuit of building a “culture of health,” RWJF tracks three metrics in determining the effectiveness of their various action areas: increased individual and community well-being, managed chronic disease and, reduced health care costs. RWJF is monitoring efforts in these action areas across 30 “Sentinel Communities” throughout the U.S.<sup>11</sup>
- **The Communities That Care Coalition:** This local partnership in Franklin County, Mass., led by a community action group and a community group for teenagers, was formed to combat high rates of substance abuse by young people in the area. The partners engaged community stakeholders such as the local government, schools, churches and parents, as well as teenagers, to plan and participate in task forces and activities to educate and provide resources to teenagers and their families and, over a nine-year period, reduced alcohol use for the younger age segment by 37%, cigarette smoking by 45% and marijuana use by 31%.<sup>12</sup>

- **The Healthy Library Initiative:** This partnership between the University of Pennsylvania and Philadelphia’s public library system aims to “integrate evidence-based health efforts” throughout the library system’s 54 branches and support a new Community Health and Literacy Center, which houses a “health-focused library branch, public and private health clinics and a recreation center,” and hosts numerous programs and job fairs.<sup>13</sup>

Going forward, future population health management initiatives will need to overcome current challenges.



In addition to these specific initiatives, a number of population health management initiatives are utilizing information technology (IT) to serve previously underserved populations. One such innovation is CommunityRx, an IT infrastructure that was integrated with EHR platforms and “enabled clinicians to e-prescribe community resources for basic, wellness and disease self-management needs” during the patient visit. Implemented at over 30 federally qualified health centers and other participating clinical sites in Chicago, the system, in contrast to many initiatives that target only one population or health factor, “was designed to serve people of all ages ... for the management of a wide range of social and medical conditions.”<sup>14</sup>

Going forward, future population health management initiatives will need to overcome current challenges, such as scalability, as well as the difficulty in determining a causal relationship among numerous nonmedical factors generating health outcomes, e.g., social determinants of health (e.g., race/ethnicity, household resources and familial structure).<sup>3</sup> To address these challenges, stakeholders will likely seek to leverage evidence-based care through the utilization of IT to analyze aggregated data from sources such as government-collected data and empirical research.

One potential application may be through the utilization of big data to analyze patient segments. Also known as population segmentation, this application divides a general patient population into distinct, more homogenous groups through data analysis, which can aid providers in developing targeted interventions and care models to effectively provide care to these sub-populations.<sup>15</sup> Another potential application is through the utilization of a computer simulation model, such as the ReThink Health Dynamics Model, which can represent the population of a U.S. subdivision and, through the analysis of over a dozen sources of empirical data, simulate “...changes in population health, health care delivery, health equity, workforce productivity and health care costs by quarter year increments from 2000 to 2040.”<sup>16</sup> Utilization of this model, or other similar models, may allow stakeholders to appropriately plan future

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population health management endeavors by determining the most effective interventions for a particular population, as well as the level of financing required to fund the initiative.

Although population health management has rapidly improved over the past several years through an increased number of federal government initiatives and private cross-sector partnerships, as well as with the advent of IT to support these endeavors, the health of the U.S. population is still significantly fragmented, with minorities and impoverished individuals experiencing lower life expectancies and poorer overall health. The increased use of IT algorithms and models to identify these populations and determine the most effective health interventions (both medical and nonmedical) will potentially serve to improve health indicators across the population and consequently lessen health costs on those highest utilizers of care. ←

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VALUE-BASED CARE: ADVICE FOR PHYSICIANS

What are some steps physicians can take to prepare for value-based care and population health management? Cora Butler, JD, RN, CHC, president and CEO of HealthCore Value Advisors, and consultant Kathleen McCarry, offer these suggestions:

- **Physicians should monitor their scores in the various Medicare quality measures.** "This data is going to be posted on websites available to the public. Whether you're part of a group or independent, data that produces actionable clinical and business intelligence is power," McCarry said.
- **Review your practice operations and workflow to identify opportunities to optimize performance and capture additional revenue.** "Practices that become more pro-active in preparation and follow-up of patient visits have an opportunity to transform those encounters from a single-issue visit to one focused on management of existing chronic conditions," Butler said. Much pre- and post-visit work including care coordination can and should be handled by members of the office workforce other than the physician.

- **Think about documentation.** "Continually evolving reimbursement models such as those used by ACOs and Medicare Advantage plans adjust patient care budgets on the basis of risk. If you are treating a chronic disease population, make sure to adequately document clinical status to support accurate and complete clinical coding so you can get the most appropriate risk adjustment," Butler added.
- **Consider the patient's social determinants of health.** "An emergency room visit may occur because the patient did not adhere to a medication. Maybe they can't afford it or don't have transportation to the pharmacy," Butler noted. Care navigators in the practice can help patients connect with community resources to assist with these needs.

Value-based care is not going away, Butler said. "It addresses the reality of the situation today. Baby boomers are growing older and have different expectations about their wellness and activity. We can't afford to keep doing things the way we are now." ←