Population Health Management and the Science of Individuality

Anastasius Mountzoglou, Hellenic Society for Quality and Safety in Healthcare, Greece, & P. & A. Kyriakou Children’s Hospital, Ilion, Greece
Abraham Pouliaakis, 2nd Department of Pathology, National and Kapodistrian University of Athens, Athens, Greece

ABSTRACT

This article espouses that population health management (PHM) has been a discipline which studies and facilitates care delivery across a group of individuals or the general population. In the context of population health management, the life science industry has had no motivation to design drugs or devices that are only effective for a distinct segment of the population. The major outgrowth of the science of individuality, as well as the rising ‘wiki medicine’, fully recognizes the uniqueness of the individual. Cloud computing, Big Data and M-Health technologies offer the resources to deal with the shortcomings of the population health management approach, as they facilitate the propagation of the science of individuality.

KEYWORDS


INTRODUCTION

Public health’ connotes a relatively narrow field with activities carried out by agencies granted with official functions. ‘Population health’ a term with broader content, is related to a field relevant to the study of several important factors for health. As a result, it involves many terms, such as outcomes, disparities, determinants, and risk factors (Kindig, 2007).

Notwithstanding the term ‘population health’ combines the concepts of both health and population, every term has an essential meaning of its own. The population is related to a group of persons being organized into numerous different units of analysis. Similarly, the term health was defined negatively, i.e., the absence of disease. Nowadays, the modern understanding stresses the positive aspects as well, and health is considered to be related to all life issues. Summarizing, today it is debated whether population health and public health are different or identical. Nevertheless, population health is defined as health outcomes and their distribution in a population (Kindig, 2007).

Population health management (PHM) has been defined as ‘the technical field of endeavor which utilizes a variety of individual, organizational and cultural interventions to help improve the morbidity patterns (i.e., the illness and injury burden) and the health care use behavior of defined populations (Hillman, 2002). It is differentiated from disease management because it includes (Howe & Spence, 2004):

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• More chronic conditions and diseases.
• Uses a single point of contact and coordination and predictive modeling across multiple clinical conditions.

Moreover, PHM is considered a broader term than disease management, as it includes (Coughlin, Pope, & Leedle Jr., 2006):

• Intensive care management for individuals at the highest level of risk.
• Personal health management for those at lower levels of predicted health risk.

At the provider level, there are three highlighted components (Care Continuum Alliance, 2012):

• The leadership and the central care delivery role of the primary care physician.
• The critical importance of patient activation.
• The capacity expansion of care coordination.

In this context, to successfully achieve all of these requirements, an organization should provide proactive, preventive and chronic care services to all managed patients. Additionally, this should take place both during encounters of patients with the healthcare system and in between. Therefore, providers should maintain regular contact with their patients and support them in the management of their health. Additionally, providers must manage patients at high risk, to prevent the deterioration of their health and avoid the development of complications. Finally, evidence-based protocols for the diagnosis and treatment of patients, consistently and cost-effectively, are also required if for a provider-based PHM approach is followed.

The Federal Agency for Healthcare Research and Quality (AHRQ) developed the concept of ‘practice-based population health’ (PBPH) and defined it as “an approach to care that uses information on a group of patients within a primary care practice or group of practices to improve the care and clinical outcomes of patients within that practice.” (Cusack, Knudson, Kronstadt, Singer, & Brown, 2010).

Obviously, the implementation of health IT is among the essential components and requirements for planning and implementing PHM. The adoption of Electronic Health Records is just the first step toward the creation of the requisite infrastructure. However, a wide range of other IT applications to automate PHM, track results and engage the patients in their health care is required. Additionally, IT systems should be repeatedly evaluated because of rapid technological changes, new government regulations and new approaches to patient management (Moumtzoglou & Pouliakis, 2015).

AHRQ recommends health IT tools for the stratification and monitoring of populations, as follows:

• Target patients being in greatest need of health services by stratifying the patients and narrowing subpopulations.
• Make patient-related data actionable by generating alerts to the patients.
• Make data actionable by generating alerts towards health providers, about patient care needs.

Conclusively, population health management is designed around the collective. However, nowadays, to truly drive high-quality care at lower cost, these endeavors must work for the individual, align with their personal goals and intermix with their reality. In this context, the objective of the article is twofold. First, it will deal with the greatest misconception about population health, that is, population health is not about the population. Ultimately, it is about the individual. Secondly, it will show how to connect the dots from the science of individuality to improving health on a massive scale - a bottom-up approach that uses the technologies of cloud computing, Big Data and M-Health.
Toward Integrating Healthcare Data and Systems: A Study of Architectural Alternatives
www.igi-global.com/chapter/toward-integrating-healthcare-data-and-systems/137590?camid=4v1a

Motion Performance Measurement using the Microsoft Kinect Sensor
www.igi-global.com/article/motion-performance-measurement-using-the-microsoft-kinect-sensor/103830?camid=4v1a