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Why Adopt Population Health Management Software

We all wish to be equal when it comes to health. Yet, people's residence, socio-economic status, and demographics significantly influence their health. How do we take all of the above into account to improve healthcare services for different groups of people?

INGA SHUGALO

Healthcare Industry Analyst
Itransition
Colorado, USA

key points

- The term "population health" was coined in 2003 to determine the influence of different factors on the state of health in a particular group.
- Population health comprises the health outcomes of a certain population while public health is the approach used to make the health of a particular population better.
- Health outcomes build upon five factors: genetic predisposition, environmental factors, socio-economic conditions, lifestyle and access to healthcare services.
- Three elements make up the core of any population health management solution: it should be designed to analyse big data, report on individual and group outcomes, and manage targeted care delivery by enhancing coordination between providers, payers, and patients.

The term "population health" was coined in 2003 as part of an effort to determine the influence of different factors on the state of health in a particular group. Almost seven years later, the medical community has turned to medical app development in order to facilitate these efforts, and its popularity has grown significantly since then. Let's explore what the population health management (PHM) tech does and why medical organisations are adopting it.

Public Health vs Population Health

Before we discuss population health management solutions, let's first look at what population health is all about, as it is often confused with public health. Population health comprises the health outcomes of some group of patients — a certain population. The group can come from just one clinic, a city district, a county, a state, or the entire country. Public health is the approach we use to make the health of a particular population better. Now the terminological fog is dispelled, so let's clarify what population health depends on and how it relates to software.

Population Health Factors

The outcomes of diverse populations' health do not emerge from nowhere. Health outcomes build upon five factors, namely:

- Genetic predisposition to specific health conditions
- Environmental factors, including housing, availability of healthy foods, clean air and water, and exposure to toxins
- Socio-economic conditions like income, education, employment, and culture
- Lifestyle: alcohol consumption, tobacco use in any form, diet, and exercising
- Access to healthcare services and their quality

But how do experts determine their influence on populations? Checking and analysing all available parameters manually would be exhausting and error prone. This is where automated tools step in to speed up the process and make it less costly.

Three Pillars of Population Health Management Solutions

Three essential elements make up the core of any population health management solution: it should be designed to analyse big data in order to classify patients into certain populations by the risks of experiencing some events, report on individual and group outcomes, and manage targeted care delivery by enhancing coordination between providers, payers, and patients.

1. Data analytics and reporting
It's not enough just to store relevant data. A detailed analysis is needed to stratify patients into cohorts. However, running it without machine assistance is time- and cost-intensive.

Fortunately, several analytical tools can speed up these tasks. For example, predictive modelling, in which algorithms comb through a multitude of historical healthcare data to create models for forecasting potential results.

This analytical approach found its use at Mass Gen Brigham (Boston, MA). The clinic provided their congestive heart failure patients with remote monitoring devices to upload real-time updates on their weight, blood pressure, and other metrics aggregated in the hospital's intelligent system. The system relied on these data sets to single out at-risk patients in need of specific intervention. As a result, the tool helped lower the readmission rate and the number of nurses necessary to cover patients' needs, which led to cost reduction.

2. Care coordination
In a clinical setting, treating a patient is rarely a single doctor's responsibility. As a rule, the process involves 2-3 professionals in different medical fields, lab analysts, and nurses. Their efforts need to be coordinated, especially when dealing with chronic disease patients. Unfortunately, according to the 2019 Commonwealth Fund research, this lack of coordination is a major problem in the U.S. healthcare system.

Population health management software allows creating clinical pathways for mapping diverse patient journeys. PHM tools don't automatically transfer paper-based documents to a digital environment and let them be. Powered by machine learning technologies, these tools rely on the uploaded clinical documents to set and coordinate tasks all across teams in the care continuum. This way, they help clinicians accelerate the care cycle and refine its quality, which also ensures a better patient experience.

3. Engagement and collaboration
When it comes to PHM, patients, providers, and payers are on the same page.

Patients want to control their health. According to Statista, 65% of Parkinson's disease patients took some steps to study the disease and/or actively engaged in their health. At the same time, contacting a doctor or a clinic whenever they detect some missing lab analysis is exhausting. The majority of patients let go of their health management until the next hospitalisation.

Population health management software allows creating clinical pathways for mapping diverse patient journeys

Insurers are also interested in improving their clients' health. The World Health Organization reports that cardiovascular diseases (CVDs) are the most frequent cause of death worldwide. The American Heart Association adds that roughly every 40 seconds someone falls victim to a CVD. Naturally, for insurers, this potentially leads to increased reimbursements to the families of insured individuals. Finally, CVD deaths are preventable, and prevention is in the payers' interest as well.

This is where providers join the game. For example, they may introduce a mobile healthcare app to let patients connect to their EHRs and make informed decisions about their health from anywhere. Such an app can also become a part of the clinic's digital environment, allowing teams to access EHRs, supervise patients' efforts in managing their health, and intervene when necessary. At the same time, providers can pilot population health management and break patients into several cohorts regarding their conditions and associated risks. This can help streamline inventory management and workload to deliver better care, simultaneously cutting costs.

PHM: Is it Worth the Investment?

Now, as we've looked at PHM and the software required to facilitate it, it's time to answer the key question: is it worth going for? Absolutely. Population health management assists with delivering personalised care to high-risk individuals, timely preventing relapses, and improving care outcomes. It also allows caregivers to fine-tune their resource management and lower costs. As for the software, it significantly speeds up analytics and care administration.

Conflict of Interest

None. ■

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