Population Health: What Should It Really Mean?

written by Robert McNutt, M.D. | February 25, 2015

A long time ago, on my first day of an Oncology fellowship, my soon-to-be-mentors asked me if I had a research interest. “Yes,” I said, “I want to cure breast cancer.” Their kind smiles belied their recognition of my naïveté. In retrospect, thinking too broadly leaves one adrift. To navigate to your goal, you need to chart a specific, systematic course.

Talking without specificity about “population health” can lead to thinking as murky as my claim to cure breast cancer. Population health is sometimes defined so broadly that it becomes meaningless.

Unfortunately, population health has also become synonymous, for some people, with technology and services that support analytics, performance measurement and patient outreach. While these are infrastructure solutions rather than models to improve health, it seems appropriate to include them.

Here are some of the specifics encompassed in several definition of population health, with varying usefulness. Let’s take a closer look at each one to better conceptualize how to use population health to improve medical care.

1) Population Health Means a General Model for Better Care With Focus on Patient Populations

Some use population health to denote an intention to increase quality, access and coordination of care. The term “Medical Home,” for example, means a set of processes that attempt to address patient health by identifying gaps in care. The concept seems “right” and warms the heart. But implementation varies widely. It may or may not include specific interventions, such as case management, and almost never includes testing of interventions and whether they produce results.

In fact, using this model, it is hard to prove what is really affecting outcomes and whether the results are simply a harvest of low hanging fruit. This general model is not a useful research paradigm; politically sensitive efforts to show that these broad, philosophic principles help us often prove elusive. We need to focus more attention—and research—on what actually works to improve outcomes, and avoid the philosophic paradigm.

2) Population Health Means Analytics About Populations That Are Intended to Inform Physicians

Analytics packages display differential outcomes by groups of patients and provider as a population health solution. The premise is that we can improve care in general by providing bar charts to health systems, and the relevant providers will self-correct.

Unfortunately, most of this data is not actionable. Analytics alone can only have limited results because little is known about the factors that prevent patients' status improvement. Bottom line: Analytics are important to paint a general picture, but cannot effect better medical care without additional effort to improve results through evaluating interventions.

3) Population Health Means Interventions That Help Me and Others

Population health can also be defined only as *interventions that help me AND others*. If I vaccinate my children, I not only reduce their chances of disease, but other people's chances, as well. This duality is a helpful clarification.

For example, I find that many get confused with the decision whether to vaccinate for measles. Some believe that this decision is a personal one and that parents have the right to refuse vaccination. However, given the above definition, they do not have the right to expose my children; hence, vaccination should be a required intervention, without fail. This idea is important and should be incorporated in efforts to improve health status.

4) Population Health Means Patient Outreach

Many population health programs are based on an underlying assumption that if the patients could just get on board, they would improve. But we almost always know nothing about the barriers present for individual patients and assume ignorance or lack of compliance. There is often little attention given to informing patients or discussing options, especially as much patient outreach is performed by intermediaries rather than physicians.
Case management, an idea from the '80s, falls into this definition. Yet, while patient outreach

may help fill gaps in care, such as annual screenings or more frequent lab tests, there must be more to create real improvement in outcomes.

5) Population Health Means a Model for Applying Interventions That Help a Range of Patients

Some population health programs focus only on reducing variation in care. An intervention that is found to benefit a proportion of a population can be applied uniformly beyond those patients and to the entire population. This definition is used to support guidelines for “population” care (for example, if your chance of heart disease is greater than 10 percent, take a cholesterol lowering agent) and may lead, coincidently, to lower population health.

Here’s the problem: When an intervention affects only an individual and not others via exposure (hard to imagine my high cholesterol becoming yours, for example), then only individuals should decide on interventions. Only individuals suffer the harms of treatments and therefore must decide if the probability of benefit is worth the probability of harm. Cookbook medicine at its best!

6) Population Health Means Population-based Research with Individualized Input That Benefits Both the Individual and the Population

This is my definition of what population health *should* be.

It’s time to separate how we might group patients to review outcomes, yet apply a more detailed and comprehensive process to decision-making that allows for sequencing and improvement of results. This will involve input from patients and reduce harm to those who know how to decide, thereby increasing the population’s health, person by person.

In any study, the average benefit is an amalgam of variable individual benefits. Unfortunately, we don’t actually know what the benefits are until we begin to test the interventions, and refine based upon those outcomes.

This is why real gains in outcomes can only come through a scientific approach of evaluating data for patients in population groups, but increasing the individualistic care. In my view, this carries certain tenets that incorporate some, but not all of the above definitions, and turn speculation into science. Here are the keys to achieving real improvement:

- We must gather data on all patients to begin determining the effect of different interventions on patient outcomes.
- All clinical data must be gathered with regularity and frequency; it is not enough to report outcomes based on an annual statistic.

Filling in the gaps to patient data gathered by providers is essential to understanding how patients respond to interventions.
Measurement of interventions, whether on a global study design or by individual practitioners, is essential to determining how such interventions affect patients and the overall population.
Patients must be included in the decision-making and goal setting process; this is an "intervention" that can and should be measured.

Making policy decisions without a clear, accurate and specific definition may keep us from the goals we all hope for: better medical science to support better medical care.

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