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Population Health NEWS

Developments in Data Science and Population Health

by Michael McCabe

The ability to deliver against the goals of value based care is a function of the ability to understand patient populations and develop effective care plans for those populations. While seemingly simple, these are among the two hardest challenges in healthcare - having vexed the industry for the better part of a decade.

Over that decade, however, new analytical techniques have emerged and evolved - namely machine intelligence. Using these techniques, healthcare can fulfill the promise of value based care by first understanding population risk and then creating multi-factorial care process models for those populations.

More importantly, this is already occurring in practice by innovative players on both the payer and provider side (or both in the case of an IDS).

Let's turn our focus to the challenge of population risk stratification. For too long, payers and providers have viewed their populations through the lens of monolithic disease states. One reason is that traditional analytical techniques are not able to present a clear, justifiable picture of the multifactorial nature of a system's highest utilizers. Because we think of healthcare in terms of the most chronic presenting disease state, we tend to treat and view healthcare through that same lens — missing the fact that these high utilizers are that way precisely because they have multiple comorbidities.

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In This Issue

The 'Patient-to-Consumer Loop'

by John G. Singer

We have effectively killed off the independent sphere. Nature was once a "separate and wild province" from human civilization, as Bill McKibben wrote in his famous 1989 call-to-arms, *The End of Nature*: It was "a world apart from man to which he adapted and under whose rules he was born and died."

McKibben's argument was this: the world as we used to know it and define it has morphed into something completely different, one global system where everything is connected to everything else in one complex, interactive whole. He called for a fundamental, philosophical shift in the way we relate to nature. A whole new taxonomy was needed to shape thinking, creativity, solutions.

"There's still something out there," he said, "but in the place of the old nature rears up a new 'nature' of our own devising" — a construct where "each cubic yard of air, each square foot of soil is stamped indelibly with our crude imprint, our X."

In predicting the structural shift Apple's Health Records will cause in population health management strategies and precision medicine efforts, Shez Partovi, chief digital officer and senior vice president of digital health at Dignity Health, frames things this way:

> *"When you think of personalized medicine, you can think about caring for yourself in two dimensions. There's care management, where a health system or physician or team is managing your care, and there's self management."*

Said differently, "patient engagement" is an under-conceptualized view of how health happens. It implies someone in a clinical setting, reinforces the perception of disease, excludes the role of family and caregivers, and doesn't integrate the social determinants of health as one experience.

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