Shoring Up Missed Care Opportunities

By employing population health surveillance and reducing missed care opportunities, radiologists can help anticipate suboptimal patient outcomes before they happen.

According to the authors of a 2012 paper, the term "population health surveillance" describes "the health surveillance of a given population as measured by health or disease indicators while 'individual health surveillance' refers to the description of the health or disease status of a person."[1] Tracking health patterns of discrete patient populations is one aspect of population health management (PHM). Radiology has an opportunity to utilize this PHM strategy in shoring up missed care opportunities among imaging patients to ensure optimal health outcomes.

For the most part, up until now radiology's approach to patient care has tracked alongside the rest of the U.S. health system, where care delivery is built around providing reactive care to patients who present with health issues. But as radiologists, we should challenge ourselves to think about care delivery in a more forward-looking way. If we adopt a PHM mindset, we can work toward proactively detecting and treating health problems before they seriously degrade a patient's health. In a similar vein, we can expand the concept of missed care opportunities from patients not receiving a scheduled intervention to populations not obtaining the best possible health promotion efforts.

This kind of innovative mentality to patient care puts a premium on identifying and eliminating missed care opportunities, while at the same time endeavoring to prevent serious illnesses from developing. For example, fat quantification algorithms could be deployed to ensure that patients within certain at-risk sub-populations see their primary care physicians before their health deteriorates. Similarly, for those patients at risk for heart disease, information related to coronary artery plaque burden can be used to proactively generate a consultation for preventative health management. Bone mineral density information reported on routine CT exams can also be used in a like manner. This additional information may flag a patient as osteopenic or osteoporotic so that therapy can be administered to mitigate chances of a fracture.

Evaluating data in the manner presented above can be characterized as predictive analytics. This approach to mining data can act as another arrow in the quiver of proactive imaging care delivery. According to certain AI experts, "Predictive analytics aims to alert clinicians and caregivers of the likelihood of events and outcomes before they occur, helping them to prevent as much as cure health issues."[2] Radiologists can combine imaging diagnoses with historical and real-time data to produce helpful predictions through the use of AI algorithms. On a population level, such predictions can facilitate medical interventions that lead to an enhanced quality of life for patients.

Using data to survey and triage distinct patient populations can connect patients with needed care, but making use of data for this purpose won't happen all on its own. To incentivize this approach, radiologists can work as part of coordinated care teams that are rewarded for taking better, more comprehensive care of patients. Quality metrics more specifically tailored to radiologists is in line with CMS' upcoming Merit-Based Incentive Payment System Value Pathways.[3] This approach would be a powerful alignment strategy to convince both radiologists and their referring providers to work as a cohesive unit.

To this end, CMS and the U.S. Department of Health and Human Services have promulgated electronic clinical quality measures for capturing population-level health indicators and quality reporting discretely from EHRs. In many ways, radiologists are at the center of a robust population health strategy, given the fundamental patient information they are able to provide.

As such, radiology should be at the forefront of exploring advanced alternative payment models given its important role in proactive health management for patient risk stratification and surveillance. We call on all radiologists to actively pursue PHM strategies with their local health systems and help improve the health of their communities while providing affordable, high-quality care to all who seek it. Ⓑ

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ENDNOTES

1. El Allaki F, Bigras-Poulin M, Michel P, Ravel A. A population health surveillance theory. *Epidemiol Health*. 2012; 34. Available at bit.ly/PHSurveillance.

2. Philips.com. Predictive analytics in healthcare: three real-world examples. June 12, 2020. Available at bit.ly/philips.to/3uDvS1e.

3. Quality Payment Program. MIPS Value Pathways (MVPs). Available at bit.ly/RadMVPs.

For more information about how imaging surveillance and predictive analytics can contribute to the health of distinct patient populations, watch a webinar produced by the PHM Committee of ACR's Patient- and Family-Centered Care Commission at acr.org/PHM.

The ACR National Radiology Data Registry (available at bit.ly/NRDRRegistry) captures population-level data as well, in particular the three cancer screening databases for lung, breast, and colorectal cancer.