

Population Health Management in Radiology Through Community Health Initiatives

- Population health management seeks to improve the health outcomes for the diversity of populations served by a hospital or other institution.
- The approach takes into consideration socioeconomic, cultural and other factors that can affect patients' health and their access to care.
- A number of radiology-driven initiatives have been introduced at Massachusetts General Hospital community health centers to help overcome these obstacles.

Population health management is an emerging approach to medicine that looks at the social determinants of health and at other factors that impact the ways in which patients access care. By working together with providers from across the healthcare spectrum, providers are finding effective new ways to address these issues. At the same time, they are shifting their focus in providing care to achieving better overall outcomes for the many populations for which they are responsible—and generally ensuring that those populations stay healthy.

Meeting the Needs of a Diverse Population

In developing a population health management program, a hospital or other institution needs to consider the diversity of the populations it serves—including socioeconomic, cultural and educational diversity—as the varying conditions of patients' lives can affect the ways in which they access care. Patients who experience socioeconomic stress or have child care responsibilities, for example, might face competing priorities when it comes to medical care, such as being unable to take time off from work or childcare responsibilities to visit a healthcare provider during regular business hours. As a result, these patients may defer preventive care visits and delay seeking evaluation for medical concerns. Also, patients with limited English proficiency may face language-based barriers to medical care. For instance, forms written in English may not be fully comprehensible even with the help of interpreter services. Furthermore, these patients may be hesitant to visit healthcare providers due to cultural differences in approaching health services that go beyond language. The question healthcare organizations face, then, is how to identify and overcome the myriad barriers to providing necessary, equitable medical care to diverse populations.

A growing body of literature is seeking to understand these barriers to care, probing the role of non-medical considerations ranging from socioeconomic stress to degree of acculturation, as well as the often complex interplay of these factors. A [2017 paper](#) in the journal *Cancer* noted, for example, that, because of their patterns of immigration and acculturation, Vietnamese-Americans are more likely than other Asian ethnic groups in the US to have lower socioeconomic status and lower English proficiency and that both can contribute to a delay in seeking care after an abnormal mammogram. At the same time, many hospitals are working to identify crisis points that impact the populations they serve to understand the barriers to care they may encounter. As detailed below, such efforts are already bearing fruit in helping to develop meaningful programs that deliver the level of care that institutions envision for their patients.

In the Department of Radiology at Massachusetts General Hospital, the development of population health management programs is accompanied by a shift in the language used to describe some of the difficulties encountered in providing care. Whereas clinicians might once have discussed "missed appointments" or even "no-shows," they now talk about "[missed care opportunities](#)." It may seem like a subtle shift, but it is an important one, as it recognizes the shared responsibility in meeting the needs of the many populations in the Boston area.

Integration and Collaboration at the Mass General HealthCare Centers

Adequately addressing population health requires integration of and collaboration among different domains, including radiology. It calls for a new perspective on providing care. The practice of medicine has become so specialized and subspecialized that it can be easy to lose sight of the big picture: In any given case, physicians aren't just treating breast cancer or lung cancer, for example; they are treating a whole patient with a range of healthcare needs and barriers to care. The best way to do so is to work together to ensure the best outcomes for the patient.



Figure 1. The Mass General healthcare centers in Revere and Chelsea host breast cancer screening "scheduling depots" in their lobbies. Women visiting the centers can schedule a mammogram while patient navigators and mammographers are available to answer questions. In this photo, an employee of Mass General Imaging at Revere learns more about breast cancer screening and wellness.

The Mass General healthcare centers, community-based facilities located in Charlestown, Chelsea and Revere, MA, offer a model for what such integrated care and population health management can look like. Here, a multidisciplinary team of healthcare providers—including PCPs, population health managers, and patient navigators—cooperate to ensure patients get the care they need in a way that works for them.

Examples of their efforts include initiatives aimed at increasing breast cancer screening rates. Such initiatives are particularly important for these healthcare centers since they serve low-income, ethnic and racial minority communities which face disparities in access to cancer screening. The MGH Revere HealthCare Center has implemented a "pink card" program introduced last year by the Breast Imaging Division at Mass General. This program facilitates women getting breast screening on the same day as PCP appointments. When a patient arrives at a physician's office and is found to be overdue for screening, she is given a "pink card," which allows her to receive a mammogram on a walk-in basis. This makes it easier for women to stay up to date on screening by helping them avoid making a separate trip to breast imaging. Similarly, Mass General Imaging at Revere HealthCare Center has established a monthly "scheduling depot" in the lobby where women can schedule a mammogram.

Mass General Imaging at Revere has also launched an initiative to further population health management goals by leveraging mammography screening appointments as an opportunity to facilitate smoking cessation and lung cancer screening. At the health center, mammography patients receive a brief questionnaire designed to obtain a detailed smoking history and, for current smokers, to gauge interest in tobacco cessation. The questionnaire is available in both English and Spanish. Those patients who indicate an interest in smoking cessation receive referrals to the community health center tobacco cessation program: Living TOBACCO-FREE. Depending on their responses, patients are offered information on tobacco cessation in the mail, over-the-phone coaching, and/or an appointment for in-person counseling. The smoking history provided by the patients can also assist health center PCPs in identifying those who may benefit from lung cancer screening.

These contributions to population health management reflect the goals of "Imaging 3.0" as set out by the American College of Radiology: Value-based care that is collaborative and integrated to better serve patients. This shift in both the practice and culture of radiology is intended as a response to the increasing need to provide patient-centered care that is equitable and culturally competent to meet the needs of the diverse patient populations Mass General serves.

Further Information

For further information about community health initiatives in radiology, please contact [Patricia Daunais \(R\) RTR](#), Operations Manager at Mass General Imaging in the Chelsea and Revere HealthCare Centers, and [Efren Flores, MD](#), Director of Radiology Community Health Improvement, Massachusetts General Hospital. For further information about breast cancer screening, please contact [Connie Lehman, MD, PhD](#), Breast Imaging Division Chief, Massachusetts General Hospital, and [Brian Dontchos, MD](#), Breast Imaging Service Chief, Massachusetts General Hospital. For further information about the smoking cessation and lung cancer screening efforts described here, please contact [Gary Wang, MD, PhD](#), Department of Radiology, Massachusetts General Hospital. We would like to thank Dr. Flores and Ms. Daunais; Drs. Lehman and Dontchos; Dr. Wang; and Dana Jessup, MS, Senior Manager of Content Development, Department of Radiology, for their advice and assistance in preparing this article.

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Gary Boas, Author
Raul N. Uppot, M.D., Editor

