



USING PATIENT-REPORTED OUTCOMES MEASURES ACROSS A LARGE INTEGRATED HEALTH SYSTEM

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SUMMARY

Mass General Brigham (f.k.a., Partners HealthCare) is an integrated system comprised of two academic medical centers, six community hospitals and five community health centers, including inpatient, outpatient, psychiatric, and rehab facilities. It is the flagship training system for Harvard Medical School.

Mass General Brigham has been successfully utilizing PROMs since 2014 across the enterprise. Led by Dr. Rachel Sisodia, the PROMs program is the largest in the world, encompassing over 200 clinics, more than 100 different geographic locations, dozens of specialties, and a collection of more than 10 million PRO measures. This effort intends to ensure the patient's voice is heard throughout their medical care, generate improved health outcomes, achieve a greater sensitivity to individual patient needs and values, and reduce health disparities.

“PROMS are a way to bring the patient’s voice back to what happens in medicine and assess outcomes that matter to patients.”



GOVERNANCE

The Mass General Brigham PROMs initiative was initially led by a single steering committee but found that a centralized governance process was not nimble enough to customize the collection instruments and protocols for more than 100 disease specialties. Since then, the administration has worked to streamline and decentralize the governance structure, with enterprise coordination through a single Medical Director (Dr. Rachel Sisodia) who reports directly to the Chief Patient Experience and Equity Officer, who reports to the CEO of the enterprise. Each specialty area is led by a clinical collaborative that meets quarterly, with ad hoc meetings as needed, and determines the PROMs approach appropriate for the relevant conditions. For example, there is a collaborative and a physician leader for rheumatology who determine how PROMs will be collected across the enterprise for any patient with rheumatoid arthritis. This is balanced against other enterprise PRO administrations; for example, if the rheumatology group wishes to administer the GAD-7 (General Anxiety Disorder-7) to their patients, it must be administered at the same cadence and have the same “valid for” interval as other clinics that administer GAD-7 in the enterprise (e.g., psychiatry, surgery, internal medicine, etc). This ensures a consistent patient experience and data structure.



MEASURES USED

Currently, 375 validated questionnaires are in use, addressing over 100 health conditions. The program only uses validated questionnaires (i.e., have been published and reviewed within the medical literature) and prioritizes the use of instruments with high clinical consensus and value, believing that success depends on clinicians’ buy-in and recognition of its usefulness in patient care. The organization attempts to apply a single instrument to a condition, regardless where it presents in the care system. For instance, the PHQ-9 is used to assess depression symptoms in all appropriate clinical services

Where there are no established PROMs for a disease, the medical experts collaboratively decide what they will measure and the corresponding methods. Referencing the published data and clinical best practices, disease-based medical experts customize the design and implementation of PROMs questionnaires and their measurement cadence.



By early 2020, Mass General Brigham had over 10 million completed questionnaires, receiving approximately 100,000 a month from 220 active locations across 100 different specialties. Questionnaires are automatically assigned to patients who fulfill certain criteria (i.e., a patient who presents for a new patient visit in orthopedics to assess their knee pain will receive the “Ortho Knee Bundle” of PROMs). The questionnaires are pushed to the patient in the online portal which is tethered to the EHR 7 days prior to the appointment. If the PROMs are not completed within the portal, they are automatically flagged for the front desk staff and administered using a tablet in the waiting room. The results are immediately available for clinician use in the EHR. PROMs can also be assigned asynchronously from a clinic visit, based on the booking of a surgery. Surgical PROMs are then automatically generated prior to the operation, and later at defined intervals post operation (e.g., 3 months, 6 months, 12 months, etc) through the patient portal.

Prior to the COVID-19 pandemic, 85% of all questionnaires were completed in-person via electronic tablet in clinics. Following the onset of COVID-19, the tablets were removed for infection control, and the completion rate dropped to 10%. As Mass General Brigham migrated toward telemedicine, the EPIC system was modified to assign survey prompts to all of the new telemedicine and virtual visits. As a result, Mass General Brigham had reached a 30% completion rate on portal completion only as of June 2020 – about 30,000 surveys a month.



In addition to using PROMs for customizing a care plan and determining individual patient progress, Mass General Brigham often combines PROMs results with other data sources to inform care guidelines and best practices. For example, Mass General Brigham takes pride in the equitable treatment of patients, yet data on hip and knee replacements revealed black women typically needed to report pain scores that were two-fold higher than white men to receive a knee replacement or a hip replacement – with correspondingly less successful outcomes. The system is now better able to identify and address disparities in care.

Mass General Brigham has also used PROMs data to improve outcomes for the 20% of elective spine surgery patients who become opioid dependent after surgery. Preoperative anxiety and depression scores are used to target interventions that reduce the likelihood of post-operative drug dependency. The administration found that 20% of patients who underwent elective spine surgery with no previous experience with opioid dependence would become opioid dependent

after the operation. The analysis also revealed pre-operative predictors of high anxiety and depression scores. Now, treatment for anxiety or depression is typically undertaken, if necessary, before surgery to reduce the risk of post-operative dependence.

CHALLENGES AND BARRIERS

- Refining EHRs and patient portals to better capture PROMs in the virtual visit environment
- Moving from “collecting PROMs” to actually “using PROMs”
- Ensuring that appropriate PROMs can be accessed and understood by all patient groups, regardless of socioeconomic status, racial/ethnic background, primary language, or disability

STRATEGIES FOR SUCCESS

DECENTRALIZE DECISION-MAKING: Mass General Brigham recognized that as a hospital system that specializes in multiple diseases, no central authority should be able to determine the PROMs measurement protocol for individual disease specialties—those decisions should be left to disease experts. However, once these PROMs were selected, they were required to be used for that disease across the entire enterprise, i.e., depression is measured the same way irrespective of which hospital you are receiving care.

“The key to our success is that we use questionnaires which are clinically actionable, and we take guidance from the experts.”

SECURE CLINICIAN BUY-IN: Clinicians are more likely to adhere to the measurement protocol if the data being collected is clinically meaningful and actionable. Without that buy-in, the program will fail.

HAVE A MALLEABLE EHR: COVID-19 has forced a rapid change in the setting of care from in-clinic to virtual visits. This change has highlighted the inefficiencies and inadequacies of the EHR systems that facilitate PROMs programs. Mass General Brigham needs a more flexible and adaptive EHR platform that can support virtual visits and accommodate continually evolving data collection requirements. A more adaptive EHR platform will better serve patients who face

physician or technical access challenges, especially non-white, non-affluent, non-English speaking patients.



Widespread use of PROMs has allowed Mass General Brigham to design personalized healthcare plans for patients across multiple disease states. The large size and scope of the Mass General Brigham program has enabled them to experiment and identify the tangible benefits for patients individually, as well as show how aggregated data can be applied to improve care across the system.