



MASSACHUSETTS
GENERAL HOSPITAL



Massachusetts General Hospital Annual Report on Equity in Health Care Quality 2020

Massachusetts General Hospital Disparities Solutions Center

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A grayscale photograph of the Massachusetts General Hospital entrance. The building is a modern structure with a glass and stone facade. A large glass canopy covers the entrance area. The text "MASSACHUSETTS GENERAL HOSPITAL" is visible on the building's facade, and "ENTRANCE" is written on the canopy. An American flag is flying on a pole in the background. A car is partially visible in the foreground.

MASSACHUSETTS GENERAL HOSPITAL

ENTRANCE

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IMAGES: Page i, *We Can Do It Together!* © Antonio Reonegro; page 37: © Sarah Bastille; all other images courtesy MGH Photography.



Executive Summary

This eleventh edition of the *Massachusetts General Hospital Annual Report on Equity in Health Care Quality (AREHQ)* monitors quality of care by race, ethnicity, and language to identify disparities among people of color (POC) and patients with limited English proficiency (LEP).

It was developed in response to the Institute of Medicine (IOM)ⁱ Report, *Crossing the Quality Chasm*, which identifies equity—the principle that quality of care should not vary by race, ethnicity, or gender—as one of six pillars of quality.¹ A subsequent report, entitled *Unequal Treatment*, showed that racial and ethnic minorities, even those with health insurance, often receive lower quality care than their White counterparts. These two publications serve as the foundation for this annual exploration of disparities in the quality of care at Massachusetts General Hospital (Mass General).

Unequal Treatment defines disparities as “racial or ethnic differences in the quality of healthcare that are not due to access-related factors or clinical needs, preferences, and appropriateness of intervention.”² At Mass General, we have been stratifying our quality, safety and patient experience measures by race, ethnicity and language for over a decade, with the explicit goal of seeking out disparities and developing improvement strategies to ameliorate them. Now in the second decade of this work, the AREHQ is a foundational element of the institutional quality and safety goals, as well as the equity and inclusion strategy at Mass General. It represents a multidisciplinary and institution-wide approach to the identification and elimination of health care disparities.

Evidence of disparities at the national level motivates efforts to monitor equity of care at Mass General. The Agency for Healthcare Research and Quality’s annual *National Healthcare Quality and Disparities Report* assesses the performance of the U.S. healthcare system and identifies disparities in access to and quality of healthcare. The report examines several priority areas, including person-centered care, patient safety, healthy living, effective treatment, care coordination, and care affordability.³ The most recent report, published in 2018, revealed the following national trends:

- Quality of healthcare has improved overall, but the pace of improvement for measures related to effective treatment, care coordination, and care affordability has been slower compared to measures in other priority areas.
- Despite evidence of overall improvement in disparities from 2000–2017, differences persist across all priority areas for Black, Asian, American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, and Hispanic populations compared to Whites.
- Regardless of significant gains in the number of patients with health insurance coverage between 2000 and 2017, nearly 50% of the healthcare access measures stayed the same or worsened.³

The events of 2020, including the novel coronavirus pandemic and its associated impact on the health and economic security of vulnerable communities, and the rise of movements such as Black Lives Matter following the murders of George Floyd, Breonna Taylor, Tony McDade, Ahmaud Arbery and so many more, have raised the collective consciousness about racial justice and equity like no other time in history. Today, there is an awareness of the impact of persistent structural and interpersonal racism and the social determinants of health, and a national dialogue about how to eliminate both that includes policymakers, racial justice organizers, media, academia, business leaders and concerned citizens. Although many in the healthcare industry have been working on improving health equity for years, recent events have accelerated action and crystallized the response. In addition to eliminating disparities in the quality of care, organizations are tackling issues of provider and workforce diversity,⁴ improving the patient experience of care, and integrating health care and social services to better serve communities in need, bringing new resources and energy to the equity mission.

ⁱ Now the National Academy of Medicine.

Massachusetts General Hospital Structural Equity 10-Point Plan



Initiative 1: Policy and Practice Review to Identify and Reconcile Structural Racism

 Mass General Brigham Launching an effort to review administrative, Human Resources, and clinical policies.	 Massachusetts General Hospital We will create a committee to support this effort – bringing forward issues to Mass General Brigham, and managing issues specific to MGH.
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Initiative 2: Reporting & Reconciliation Plan for Incidents of Discrimination/Racism

 Mass General Brigham Supporting the development of a system-wide Reporting System.	 Massachusetts General Hospital We will launch an effort focused on reconciliation, proposed model to include an office, ombudsperson, mediators, licensed independent clinical social worker (LICSW), and administrative support.
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Initiative 3: Developing a Training Pathway on Racism and Associated Factors

 Mass General Brigham Will develop and deploy training for top 500 leaders, and create a course on racism for the entire system.	 Massachusetts General Hospital We will create a mandatory, hospital-wide learning pathway to complement this work with courses on microaggressions, bystander training, and implicit bias, among other topics.
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Initiative 4: Assure Equity in Access to, and Delivery of Clinical Care

 Mass General Brigham Supporting multiple efforts, including social determinants of health screening, community health workers, disparities (data collection, virtual health, equity goals), and systemwide interpreter/translation service.	 Massachusetts General Hospital We will expand our disparities efforts, including our data analytics and developing grants for innovation; expand our community engagement in Mattapan, Roxbury, Dorchester; and launch two signature clinical initiatives focused on the treatment of sickle cell disease, and to promote equity in transplantation.
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Initiative 5: Eliminate Racialized Science and Medicine

 Mass General Brigham Launching an effort to review guidelines.	 Massachusetts General Hospital We will create a committee to support this effort – bringing forward issues to Mass General Brigham.
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Initiative 6: Assure a Living Wage, Educational Development, Access to Care

 Mass General Brigham Supporting a feasibility and planning study.	 Massachusetts General Hospital We will provide support as needed and develop strategies to facilitate educational development.
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Initiative 7: Commit to Diversity and Equal Representation

 Mass General Brigham Supporting diversity efforts focused on Governance and Leadership.	 Massachusetts General Hospital We will create goals/targets and fortify and expand our diversity efforts, including expanding our Center for Diversity and Inclusion and its programs, creating a Diversity Leadership Academy, and seeding an MGH Recruitment/Retention Fund and Research Fund.
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Initiative 8: Assure an Environment of Safety, Equity, and Trust in Security

 Mass General Brigham Will learn from efforts at the MGH.	 Massachusetts General Hospital We are working with MGH Police & Security to create new metrics, goals, and interventions.
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Initiative 9: Deploy an Equity, Anti-Racism, and Inclusion Campaign

 Mass General Brigham Supporting a communications campaign.	 Massachusetts General Hospital We will develop an MGH inclusion effort.
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Initiative 10: Engage and Invest in an Anti-Racism Advocacy Agenda

 Mass General Brigham Supporting an advocacy agenda.	 Massachusetts General Hospital We will provide support as needed.
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Mass General, along with our healthcare system Mass General Brigham (MGB), is at the forefront of this social change. In October 2020, MGB announced the United Against Racism plan—an enterprise-wide effort to eliminate structural racism within our system.ⁱⁱ In early November, Mass General announced the Structural Equity 10-Point Plan, a blueprint for addressing overt and structural racism within the institution,ⁱⁱⁱ building on many years of diversity, equity and inclusion work. These initiatives bring unprecedented resources to the cause of improving equity for our patients, employees and broader community, and establish the lines of accountability and timelines to ensure progress.

While we are proud of these efforts, we realize there is much work ahead. These institutional goals, combined with the social and political environment, bring great energy and focus to our endeavors to eliminate health care disparities at Mass General. We are proud to continue the work of identifying disparities in care and tackling them with the new resources and focus provided by the Structural Equity 10-Point Plan and the United Against Racism frameworks.

As we advance into our second decade of producing the AREHQ, we are shifting from monitoring measures to describing our progress on improving and eliminating disparities. This year's report focuses on the COVID-19 pandemic and its associated health equity impact, and describes the progress of disparities improvement initiatives at Mass General. Consistent with past reports, White and English-speaking populations are used as the comparison groups for statistical analyses.^{iv} In some cases, it can be challenging to tease out the root causes of differences identified in the data, often requiring further analysis and qualitative approaches to understand the nuanced factors driving disparities. While some differences may be due to variation in clinical appropriateness, disparities identified in the AREHQ are often based in structural inequities, lack of cultural competence, insufficient use of interpreter services, unconscious bias and a host of other factors that we aim to influence.

As this report has evolved, so too have the language and graphics we use to communicate about the quality of care for diverse patient populations. We are committed to applying a racial equity lens to the terminology, as well as the visual presentation of data in this report. As such, we are using more current terminology throughout this year's report, e.g., “people of color” rather than “minority populations,” and “comparison group” rather than “reference group.” We recognize that there is continual room for improvement in this area and that terminology and data visualization practices are constantly changing,^v and we continuously evaluate our approaches to both.

We are proud of this report, and pleased that several hospitals around the country have followed Mass General's efforts in this arena and have gained expertise through Mass General's Disparities Leadership Program to develop similar reports and improvement initiatives for their organizations (mghdisparitiessolutions.org). Our hope is that all health care organizations routinely develop ways to identify disparities and aggressively address gaps. We are humbled that even after ten years, we have a long road ahead to achieve our goal.

Mass General is committed to sharing this important work and sharing data publicly. This report can be found on the Disparities Solutions Center and Mass General Quality and Safety websites:

- mghdisparitiessolutions.org/equity-in-health-care-quality
- massgeneral.org/quality-and-safety/about/care-equity

ⁱⁱ <https://www.massgeneralbrigham.org/newsroom/articles/mass-general-brigham-president-and-ceos-update-employees-racial-injustice>

ⁱⁱⁱ <https://www.massgeneral.org/news/article/plan-to-address-structural-equity>

^{iv} Significance testing is based on chi-square tests for discrete data and t-tests for continuous data, with a 95% confidence interval.

^v <https://osf.io/x8tbw>

What's New?

Due to the massive health equity-related challenges revealed by the COVID-19 pandemic, we are dedicating much of this report to describing the multifaceted and interdisciplinary response to serving our highest risk communities during the spring surge and throughout the remainder of 2020. The pandemic response required a tremendous amount of collaboration among Mass General Brigham and Mass General staff, the utilization of new technologies, and the initiation of new programs to meet the many needs of the communities hardest hit by the pandemic. We describe these efforts in detail and discuss how lessons learned from the emergency response will inform ongoing efforts to improve access to care and eliminate disparities.

The Demographic Profile section of the report contains new measures of ambulatory access, exploring differences by race/ethnicity and payer in ambulatory visits and virtual visits.

Last year, we identified disparities in patient-reported satisfaction with the discharge process. This year, we worked with an interdisciplinary team to launch a series of improvement interventions around understanding the unique needs of patients of color and promoting the utilization of interpreter services during the discharge process. Although some of our progress in improvement was delayed due to the pandemic and COVID-19 surge in the spring, we are beginning to see improvement in the Asian and limited English proficiency cohorts. There is more work to do and our focus in this area continues into 2021.

This year we are including a new series of primary care measures that are sourced from the electronic medical record. This new approach allows us to measure important health screenings and diabetic care measures for all Mass General patients, regardless of payer (past reports used datasets that included only patients with commercial insurance). These new measures are more representative of the care provided in our primary care practices and health centers, and they reveal several disparities in preventive screening rates and chronic disease care for people of color and LEP patients. Pilot interventions aimed at improving chronic disease care and increasing preventive screenings, as well as addressing social determinants of health among vulnerable patients are underway. We are working with our primary care colleagues to scale these interventions across the primary care network and this effort will continue into 2021.



Background: Demographic Profile of Mass General Patients

- In calendar year 2019, as in previous years, the racial and ethnic composition of Mass General's patient population roughly mirrored the catchment area of eastern Massachusetts, although Mass General inpatients were slightly more likely to be White and English-speaking.
- The population in eastern Massachusetts is steadily becoming more racially and ethnically diverse, while the diversity of Mass General's inpatient and outpatient populations has for the most part remained unchanged.
- A greater proportion of Black, Hispanic, Asian, Multiracial, and other patients of color are seen in the Emergency Department compared to inpatient services.
- There is also variation in the distribution among patients of color within inpatient (hospitalized) services. Pediatrics, Burns, OMFS, Obstetrics/Gynecology and Psychiatry Departments see a larger proportion of people of color than other inpatient services. Neurosurgery, Oncology, Orthopedics, and Surgery see a larger proportion of White patients.
- Mass General's health centers (Charlestown, Chelsea, Everett, North End, and Revere) and primary care locations see a relatively larger proportion of people of color, compared to outpatient specialty care practices. Hispanic representation in the health centers is higher than any other area of the hospital system (28% in health centers vs. 7% at Mass General's main campus and 5% at satellite practices). Nearly one quarter of health center patients speak a language other than English, with 18% speaking Spanish as their primary language, compared to just 6% of ambulatory patients on the main campus.
- Regarding payer, about half of the White inpatient population are Medicare patients, compared to 37% of Blacks, 28% of Asians, and 21% of Hispanics. Medicaid is the primary payer for roughly half the Hispanic population, a third of the Black population, and a tenth of the White population. Over half of the Asian inpatient population has commercial insurance as their primary payer.
- The racial composition of primary care patients across the Mass General Primary Care Division is primarily White (67%), followed by Hispanic (13%), Asian (8%) Black (7%), Other (3%) and Multiracial 2%). The primary care practices located within our health centers serve a more diverse patient population, with 46% identifying as White, one third of patients identifying as Hispanic (33%), followed by Black (7%) Asian (6%), Other (6%) and Multiracial (2%). Primary Care patients seen at the main campus are predominantly White (76%), followed by Asian (8%), Black (7%), Hispanic (5%), Multiracial (2%) and Other (2%).
- Similar patterns exist among ambulatory specialty care practices. Overall, patients seen in specialty practices across Mass General locations are predominantly White (80%), followed by Hispanic (7%), Asian (5%), Black (4%), Multiracial (2%) and Other (2%). The specialty care practices located within Mass General health centers have a more diverse patient profile, but are still predominantly White (64%), followed by Hispanic (20%), Black (5%) Asian (5%), Other (4%) and Multiracial (2%). Specialty care patients seen at the main campus practices are predominantly White (80%), followed by Hispanic (7%), Asian (5%), Black (5%), Other (2%) and Multiracial (1%).
- Access to ambulatory care continues to be challenging as Mass General providers are in high demand. On average, patients waited 35 days for a new patient visit in CY2019 and wait times did not differ much by race/ethnicity. Wait times were longest for new primary care visits (40 days on average), followed by specialty care (35 days). Health centers had the shortest waiting time at 28 days, on average.
- More study is needed to understand why people of color are underrepresented in both ambulatory and inpatient specialty care.

Highlights of Findings

COVID-19 Pandemic Response

Race/Ethnicity. Similar to national trends, the COVID-19 inpatient population at Mass General was disproportionately composed of people of color. Over the 3-month COVID-19 surge in the spring (March through May) 37% of the COVID-19 positive patients were Hispanic and another 10% were Black, in contrast to just 8% and 6%, respectively, among inpatients in 2019.

Language and Interpreter Needs. There was an immense need for interpreters during the spring surge. During those months, over 21,000 interpreter sessions were provided to inpatients. This represented a 65% increase over the same months in the prior year. Forty-one percent (41%) of the COVID-19 positive inpatients had a primary language other than English, compared to just 9% of the inpatients in 2019. More than a third (35%) required an interpreter, compared to only 8% of inpatients in 2019. Most of these patients spoke Spanish. Of all the inpatient interpretations during the surge, two-thirds were with Spanish-speaking interpreters.

- Many COVID-positive patients were treated in the ambulatory setting, and interpreters were required in those visits as well. Over 28,000 interpretations were provided in the outpatient setting during the surge months, again with two-thirds in Spanish. This represented a 15% increase over the same months in the prior year.
- The steep rise in demand for interpreter services required Mass General Medical Interpreter Services to quickly implement new delivery models and scale interpreter capacity to meet the needs of our inpatient and ambulatory patients.
- Typically, in non-pandemic times, 75% of interpreter sessions at Mass General occur by phone or video and 25% occur as face-to-face interactions. In the 3-month COVID-19 surge, phone/video sessions comprised 94% of the interpretation sessions, necessitating a concerted effort to ensure those resources were available when they were needed.

Virtual Visits. The rapid shift toward virtual visits highlighted disparities in digital access in vulnerable communities. In 2019, less than 1% of ambulatory visits at Mass General were conducted virtually. In the first nine months of 2020, the proportion of virtual visits increased to 28%. These visits can include multiple approaches, from video conferencing to phone calls, and the early coordination with Medical Interpreter Services helped improve access to a more diverse group of patients. Hispanic patients had the highest utilization of virtual visits (29%). Patients with Health Safety Net insurance were least likely to utilize virtual visits (24%), but those on Medicaid were on par with other payers (28%).

- In the first nine months of 2020, 68% of Mass General patients with an ambulatory visit had an active account with Patient Gateway (the Mass General Brigham electronic health record patient portal), but there is wide variation by race/ethnicity and payer. Only 29% of Hispanic patients had an active Gateway account, compared with 72% of White patients. Patients with Medicaid and Health Safety Net insurance also had much lower engagement with the patient portal.

Community Response. The COVID-19 pandemic disproportionately affected high risk communities such as Chelsea, Revere and East Boston. Mass General, in collaboration with Mass General Brigham, initiated a rapid community response to support residents in need. Mass General/MGB was at the forefront of providing testing, supporting COVID-positive residents who needed to self-isolate by providing hotel rooms with medical support, distributing over 350,000 care kits to residents over the course of 2020, supporting community education about COVID-19, and addressing social determinants of health, particularly food insecurity.

- The community response is ongoing.



The Disparities Reporting Committee (L–R): Syrene Reilly, MBA; Joan Quinlan, MPA; Elizabeth Mort, MD, MPH; Andrea Tull, PhD; Joseph Betancourt, MD, MPH; Karey Kenst, MPH; Aswita Tan-McGrory, MBA, MSPH; and Stephanie Oddleifson, MPH (photo taken prior to Universal Mask Policy).

Inpatient Patient Experience: Improvement in Care Transitions

Prior AREHQ reports described disparities in the patient experience of the hospital discharge process; Asian and LEP patients reported being less satisfied with the transition from hospital to home. An interdisciplinary team was convened in 2019 to define and implement an improvement plan. In the ensuing months, several interventions were launched including a care transitions study to better understand the needs of patients of color and LEP patients in the discharge process.

- Several themes emerged from the care transitions study, including the need for better utilization of interpreters during the discharge process; the need for translated discharge instructions, particularly regarding medications; the need for the care team to understand individual challenges and concerns of patients and family members; and a desire for follow-up after patients return home.
- These findings were translated into several specific interventions to improve the discharge process, including an increased focus on interpreter services and translation of discharge materials, and a hospital-wide effort to engage with patients around understanding their unique needs.
- Scores on the Care Transitions composite have steadily improved for both Asian and LEP patients since these interventions were launched. The scores on understanding medication are especially promising, with an 8 percentage-point improvement for Asian patients and a 10 percentage-point improvement for LEP patients since 2017. However, scores about patient and family preferences have leveled off, and there continues to be room for improvement on all measures, with scores in the 60–65% range.

Obstetrics/Gynecology: Improvement in C-section Rates for Black Women

We continue to see evidence of disparities in NTSV Cesarean section rates, with Black women having Cesarean deliveries at twice the rate of White women (46% vs 23%). This variation cannot be entirely explained by clinical factors.

- Further exploration is underway with the Obstetrics department to understand this difference and develop an improvement program. The team had planned to conduct qualitative interviews with women who had a Cesarean delivery in the spring of 2020. This work was delayed due to the COVID-19 surge but has since been re-initiated.
- In FY21, in-depth semi-structured qualitative interviews will be completed with up to 25 NTSV C-Section patients to explore their childbirth experience and the care they received at Mass General. These interviews will help us understand the contributing factors and root causes that underlie the disparity and allow us to design and implement effective improvement plans.

Primary Care: Addressing Disparities in Preventive Health Screenings, Chronic Disease Management

We explored 11 general health screenings (breast, colorectal, lung and cervical cancer, abdominal aortic aneurysm, depression, diabetes, tobacco use, chlamydia, HIV and hepatitis C). We also explored three process of care measures for patients with diabetes, and two measures for patients with hypertension and high cholesterol. We also explored 16 pediatric measures including screenings for BMI, lead levels, hearing, vision, chlamydia, depression, and anemia, all of which are part of the American Academy of Pediatrics recommendations for clinical care. Results show multiple opportunities for improvement in the year ending June 2020. Findings include:

- Disparities among Hispanic, Asian and Multiracial patients in the adult preventive composite, a summary measure of preventive screening rates.
- Significantly lower rates for breast, cervical and colorectal cancer screening for Black, Hispanic, Asian, Multiracial, and Other racial groups, and lower rates for breast and colorectal cancer screenings for patients with LEP.
- Lower rates of lung cancer screenings among Black patients.

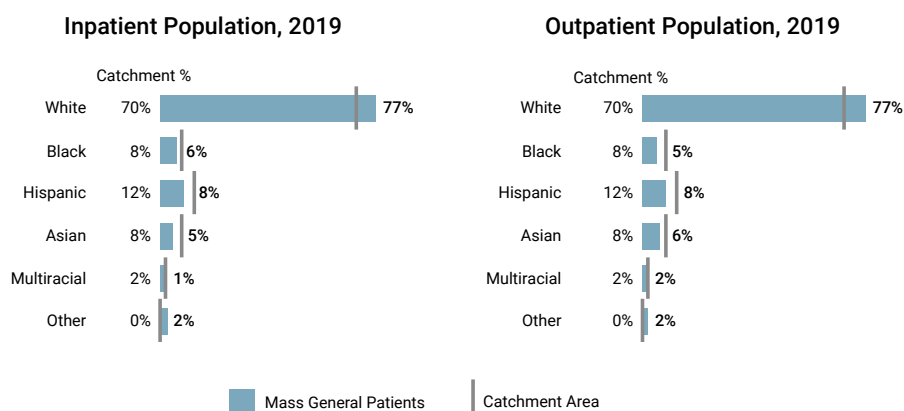
- Significantly lower rates of depression screenings in adults for all racial groups and patients with LEP, compared to White and English-speaking patients.
- Lower rates of tobacco screening for Hispanic, Multiracial and Other racial groups, compared to White patients.
- Within the cohort of patients with diabetes, racial disparities were identified in all three control measures, and in two measures for non-English speaking patients.
- Overall there are fewer disparities in the pediatric population compared to adults. The preventive composite, which is an overall measure of all screenings for the appropriate age group, shows no disparities. Furthermore, there are no disparities in pediatric immunization rates.
- BMI Screening rates are significantly lower in the Black, Hispanic, Asian, and Other racial groups, as well as pediatric patients with LEP.
- Caregiver Depression Screening rates are low among Hispanic children and children with LEP.
- Behavioral Health Screening for the very young (0 to 30 months) is low overall, with Hispanic children scoring ten points lower than White children, and LEP patients scoring ten points lower than English-speaking children.
- Chlamydia Screening rates are low across the board, but especially low in the Asian pediatric population.

Although improvement work was delayed in 2020 due to the COVID-19 pandemic, several projects are prioritized for 2021 with an implementation team in place. The Primary Care Division, along with Population Health Management, the Community Health Division and Medicaid ACO Team have piloted interventions aimed at reducing disparities in preventive screening rates and diabetes, including the use of health navigators, community health workers, and targeted supports to address social determinants of health such as food insecurity. The additional structure and resources available with the MGB United Against Racism and Mass General Structural Equity 10-Point Plan will allow the team to bring these interventions to scale in 2021.



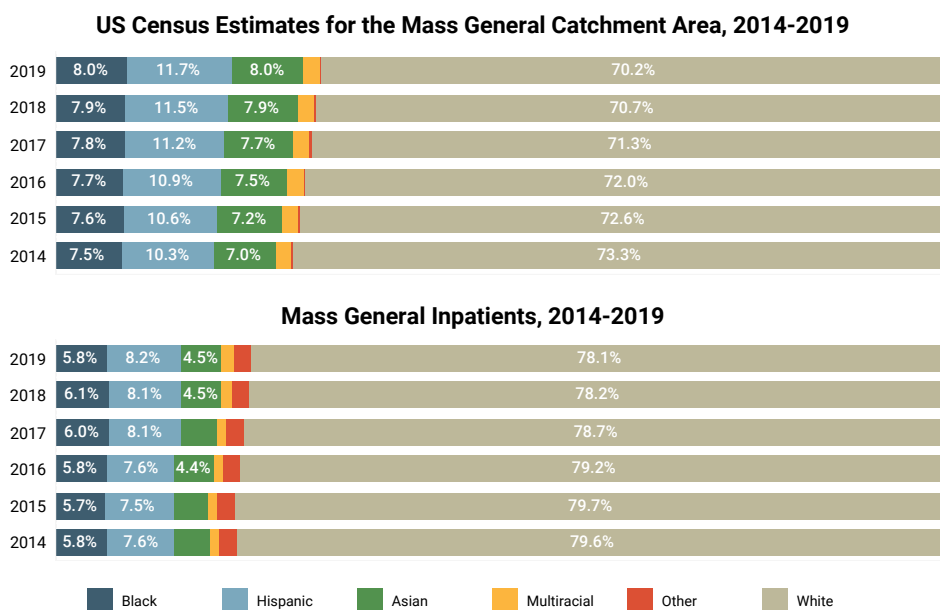
Demographic Profile of Mass General Patients

This section provides a graphical overview of the racial, ethnic, and linguistic diversity of patients receiving care at Mass General during calendar year 2019, compared with the diversity of Mass General's catchment area (nine counties in Eastern Massachusetts). When compared to the demographic profiles of the surrounding communities, Mass General patients are more likely to be White and English-speaking. In 2019, 4% of the Mass General patient population's race was reported as "Unknown," down from 7% in 2017. Efforts to improve the collection of patient race, ethnicity and language data (as well as disability access and interpreter needs) are ongoing, including training of registration staff on how to address these questions with patients.



MGH's catchment area consists of nine counties in Eastern Massachusetts: Barnstable, Bristol, Dukes, Essex, Middlesex, Nantucket, Norfolk, Plymouth, and Suffolk. The population counts for the catchment area are based on the 2019 estimates from the 2010 US census database.

The population in eastern Massachusetts is diversifying. The figure below shows a 3-percentage point increase in the non-White population between 2014 and 2019, with nearly 30% of eastern Massachusetts residents identifying as Black, Hispanic, Asian, Multiracial, or Other in 2019. At Mass General, the racial profile of inpatients remained consistent over the past three years, with about 22% identifying as people of color and proportions of patients of color holding steady.



Percentages are based on unique patients, not admissions. Newborn admissions have been removed from the calculations, due to the large proportion of unknown demographic information. MGH's catchment area consists of nine counties in Eastern Massachusetts: Barnstable, Bristol, Dukes, Essex, Middlesex, Nantucket, Norfolk, Plymouth, and Suffolk. The population counts for the catchment area are based on estimates from the 2010 US census database.

As the following table shows, the racial and ethnic profile of Mass General patients varies by setting. A higher percentage of people of color are seen in the Emergency Department and health centers than are admitted to the inpatient setting. Patients of color are underrepresented in outpatient on-campus/satellite practices and specialty clinics.

Patient Distribution by Setting, CY 2019 (%)

Setting	Percent of Patients						
Inpatient Care	White	Black	Hispanic	Asian	Multiracial	Other	Unknown
	75.1	5.7	7.9	4.3	1.3	1.9	3.7
Emergency Department							
	62.1	9.5	14.5	5.1	2.2	3.3	3.2
Outpatient Care							
All Locations	73.5	4.6	8.5	5.7	1.6	2.0	4.0
Health Centers*	51.0	6.4	26.8	5.7	2.1	4.7	3.5
On-Campus and Satellite Practices	76.4	4.4	6.3	5.6	1.6	1.8	4.0

* Health Centers are located in Charlestown (2 locations), Chelsea, Everett, North End, and Revere.

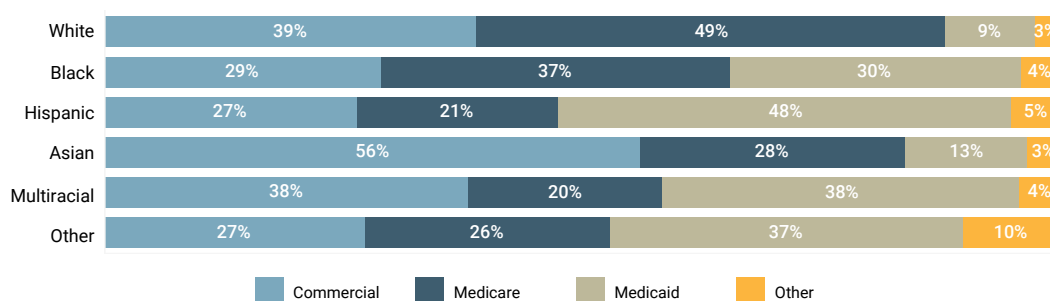
- There is considerable variation in the distribution of racially and ethnically diverse patients within inpatient services. Burns, OB/GYN, OMFS, Pediatrics, and Psychiatry see a more racially and ethnically diverse population than other inpatient services due to their larger Hispanic and/or Black populations. Conversely, Neurosurgery, Oncology, Orthopedics, Surgery and Urology see a larger proportion of White patients.

Patient Distribution Among Mass General Inpatient Services, CY 2019 (%)

	White	Black	Hispanic	Asian	Multiracial	Other	Unknown
All Specialties	75.1	5.6	7.9	4.3	1.3	1.9	3.7
Burns	66.4	6.7	11.9	2.8	2.4	2.8	7.1
Medicine	76.8	6.6	6.9	3.5	1.3	1.9	3.1
Neurology	77.4	5.0	5.6	3.6	0.7	2.0	5.6
Neurosurgery	80.4	3.6	4.4	3.6	0.8	1.5	5.7
OB/GYN	59.2	6.7	15.6	11.6	2.0	2.8	2.1
Oncology	80.8	4.4	5.0	4.6	0.5	2.1	2.6
Oral Maxillofacial	68.6	6.8	11.5	3.7	2.1		7.3
Orthopedics	84.1	3.4	4.8	2.7	0.7	1.3	3.0
Pediatrics	52.9	8.2	19.3	5.4	4.3	3.9	6.0
Psychiatry	63.8	11.5	11.5	5.2	3.1	2.9	2.0
Surgery	80.5	3.9	6.0	2.9	1.0	1.4	4.3
Urology	83.9	4.4	4.1	2.6	0.9	1.1	3.0

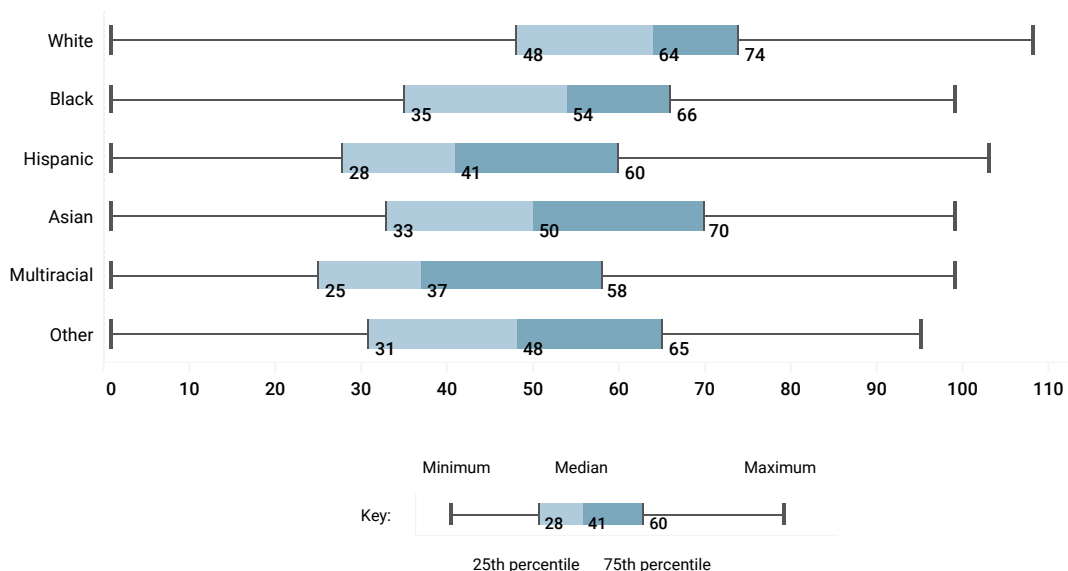
Insurance coverage is a driver of access to care, and insurance coverage among Mass General inpatients varies by race/ethnicity. Overall, Medicare represents the largest payer among Mass General inpatients (42%), followed by commercial insurance (39%) and Medicaid (14%). However, when we stratify by race/ethnicity, we find that Medicare is the predominant payer for White patients, followed by commercial insurance (White inpatients tend to be older than patients from other racial/ethnic groups and are therefore more likely to have Medicare as their primary payer). Compared to Whites, Black and Hispanic inpatients are more likely to have Medicaid as their primary payer, and less likely to have commercial insurance. Medicaid is the primary payer for nearly half (48%) of the Hispanic inpatients, compared to 9% of White inpatients. Commercial insurance is the main payer among Asian inpatients (56%). Commercial and Medicaid ACO plans are often designed to deter patients from accessing care at higher cost academic medical centers, unless those hospitals are in network. This may partially explain the variation in the racial/ethnic profile of patients seen at Mass General.

Inpatient Discharges, 2019: by Race/Ethnicity and Payer



Patients of color are much younger than their White counterparts, which may explain some of the variation in the racial/ethnic composition of inpatients by service. The median age of White inpatients in 2019 was 64, compared to 54 for Blacks, 50 for Asians, and 41 for Hispanics. Therefore, it is not surprising to see greater racial/ethnic diversity in services that serve a younger patient population, such as Obstetrics and Pediatrics. However, age alone does not account for the relative lack of diversity among other specialties such as Medicine, Neurology, or Orthopedics.

Inpatient Discharges: Age by Race/Ethnicity, 2019

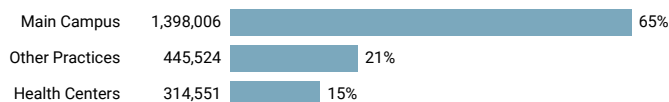


Newborn admissions have been removed from the calculations, due to the large proportion of unknown demographic information.

Focus on Ambulatory Access

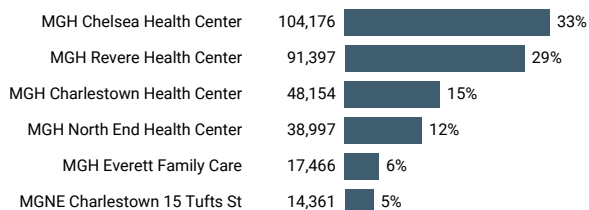
Similar demographic patterns exist in the ambulatory setting. Ambulatory practices at Mass General are located at the main campus, off-site practices and at community health centers. Most visits (65%) occur at the main campus. Yet, while only 15% of the annual visit volume occurs in the health centers, these locations are serving the most diverse patient populations.

Ambulatory Visits by Location, 2019



There are six health centers associated with Mass General Hospital, located in communities north of Boston. The Chelsea and Revere locations had the greatest number of visits in 2019. These communities have a large Hispanic and Spanish-speaking population, which is reflected in the demographic profile of the health centers.

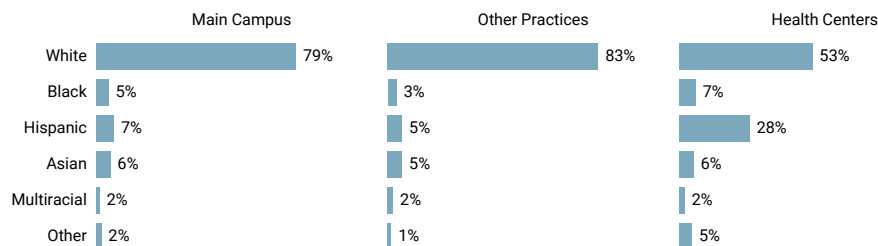
Ambulatory Visits to Health Centers, 2019



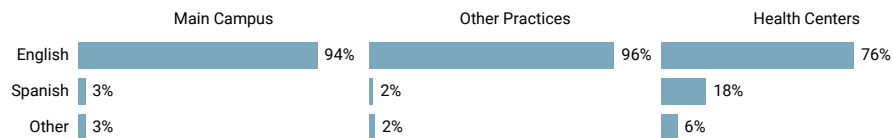
Patients seen in the health centers are more likely to be people of color, have limited English proficiency, and require an interpreter. In 2019, 28% of health center patients identified as Hispanic, compared to just 7% seeking care in ambulatory clinics at the main campus. Nearly one quarter of the health center patients have a primary language other than English, with 18% reporting Spanish as their primary language—a striking difference from non-English speakers at the main campus (6%) and other locations (4%). One quarter of health center patients require an interpreter, compared to 6% at the main campus. Health center patients are a much younger population than those seeking ambulatory care at the main campus, with a median age of 39, compared to 55 for main campus patients.

Demographic Profile of All Ambulatory Patients, 2019

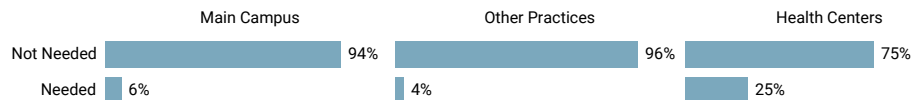
Race/Ethnicity



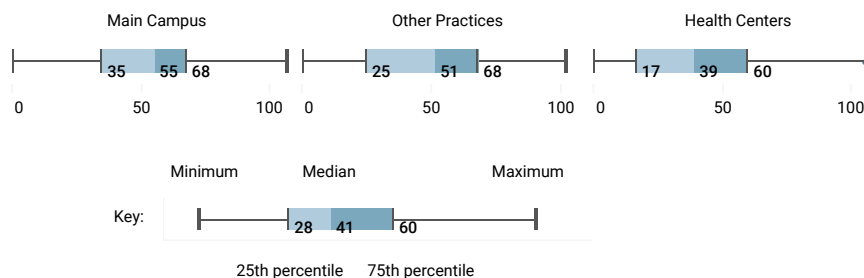
Preferred Language



LEP (Interpreter Needed)



Age

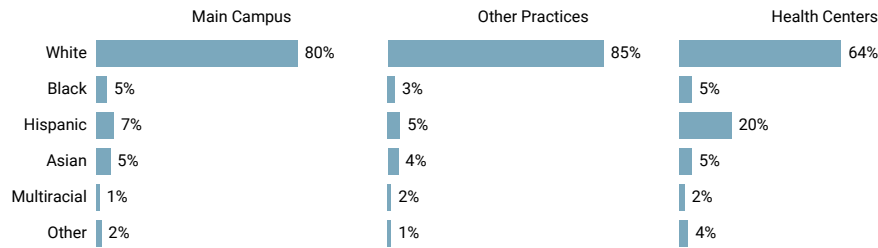


The disproportionate distribution of patients by race/ethnicity is even more pronounced within ambulatory specialty care.

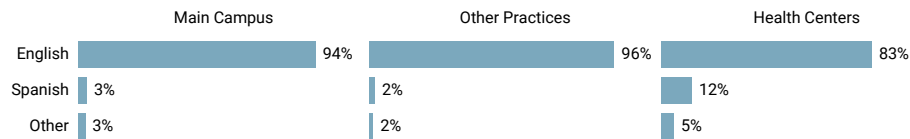
Diverse patients were less represented in specialty care in the ambulatory setting compared to all types of care, even within health centers. Nearly two thirds (64%) of specialty care patients seen in the health centers were White, compared to just 46% of primary care patients in the health centers. Black and Asian patients represented only 5% or lower of the total specialty care population across all care settings.

Demographic Profile of Specialty Care Ambulatory Patients, 2019

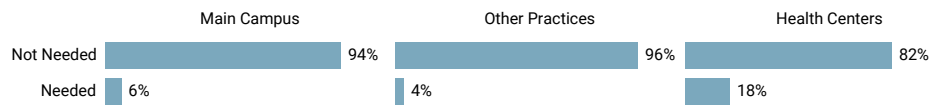
Race/Ethnicity



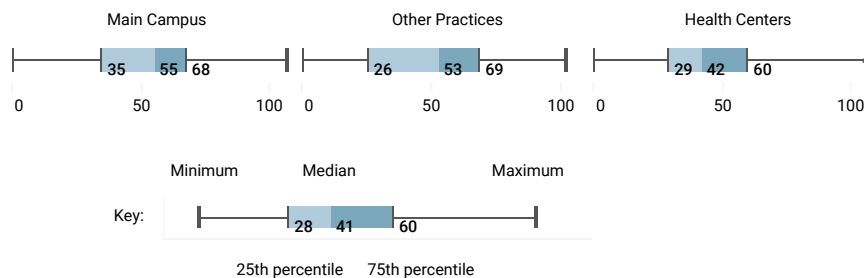
Preferred Language



LEP (Interpreter Needed)



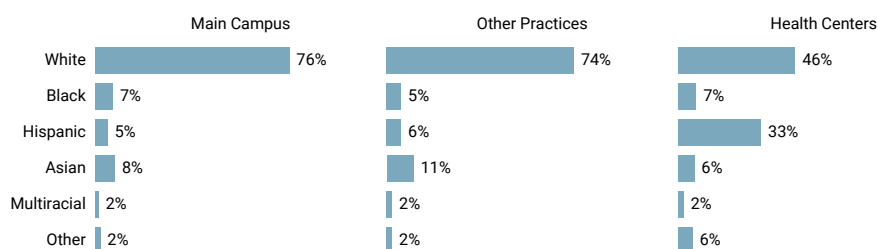
Age



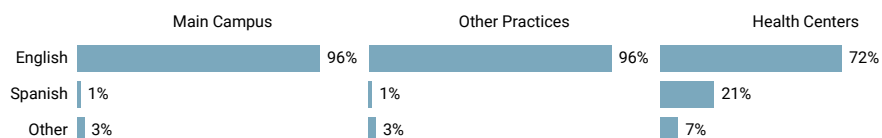
Similar patterns exist within Mass General primary care, with the health centers providing services to a more diverse population than the main campus or other primary care clinics. One third of primary care patients seen in the health centers identify as Hispanic, with 29% requiring an interpreter. In contrast, only 5% of patients seen at the primary care practices at the main campus were Hispanic, and just 4% needed an interpreter.

Demographic Profile of Primary Care Ambulatory Patients, 2019

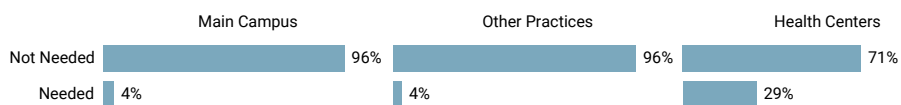
Race/Ethnicity



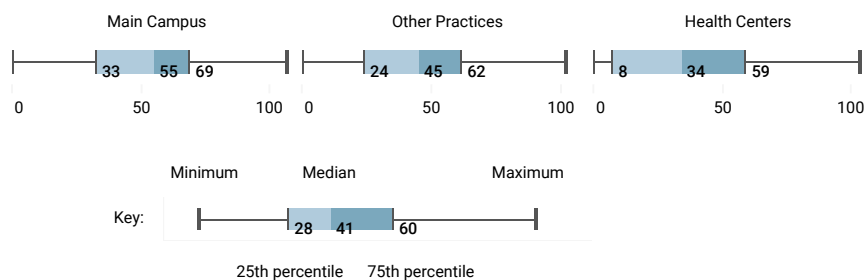
Preferred Language



LEP (Interpreter Needed)



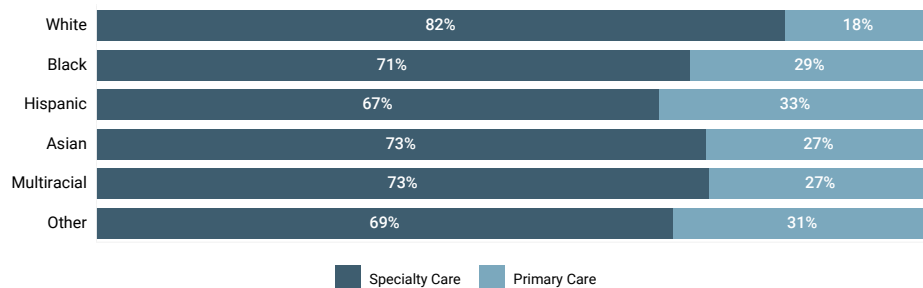
Age



The graphs above show the distribution patients across practice types and settings by various demographic factors.

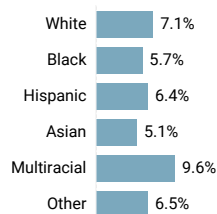
We also explored the ambulatory data by distinct racial/ethnic groups to determine how specialist utilization differed. When exploring the provider type (specialist vs. primary care) for ambulatory visits across patient racial/ethnic groups, White patients had the highest utilization of specialists. In 2019, 82% of appointments for White patients were scheduled with specialists, compared with 73% of appointments for Asian patients, 71% of appointments for Black patients, and 67% of appointments for Hispanic patients. There is at least a 9-percentage point difference in the utilization of specialists between White patients and patients of color.

Percent of Visits, Specialty vs. Primary Care Visits, by Race/Ethnicity, 2019



The utilization of behavioral health services, as a percentage of all ambulatory visits, by race, is relatively low. Further evaluation is needed to understand the implications of this on the quality. Although gaps between people of color and White patients are smaller than in other specialties, national data show some racial groups have higher rates of, or more persistent, mental health conditions, but lower rates of referral to and access to utilization of services.⁵ Higher rates of misdiagnosis and underdiagnosis have also been documented.⁶

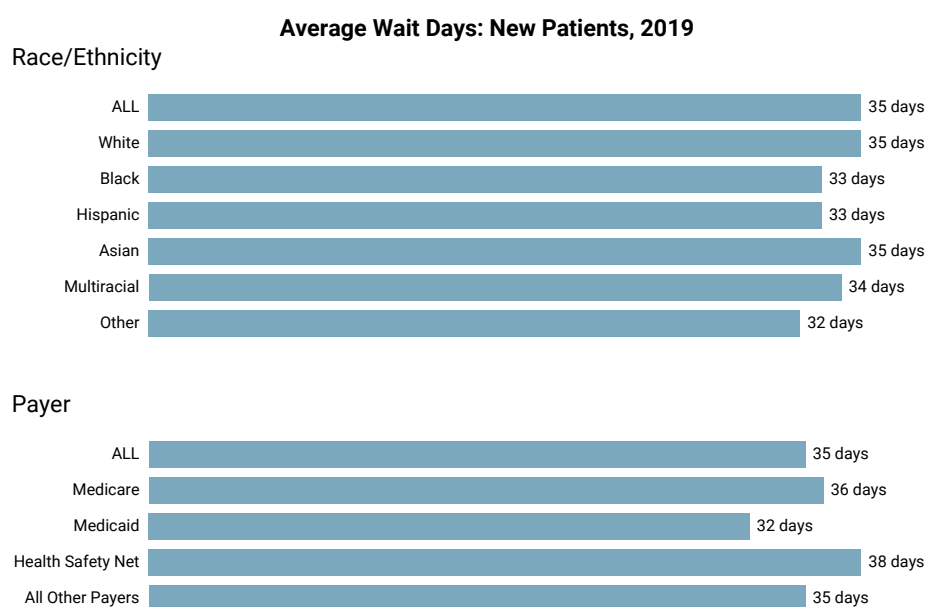
Percent of Ambulatory Visits that are Behavioral Health Visits, by Race/Ethnicity, 2019



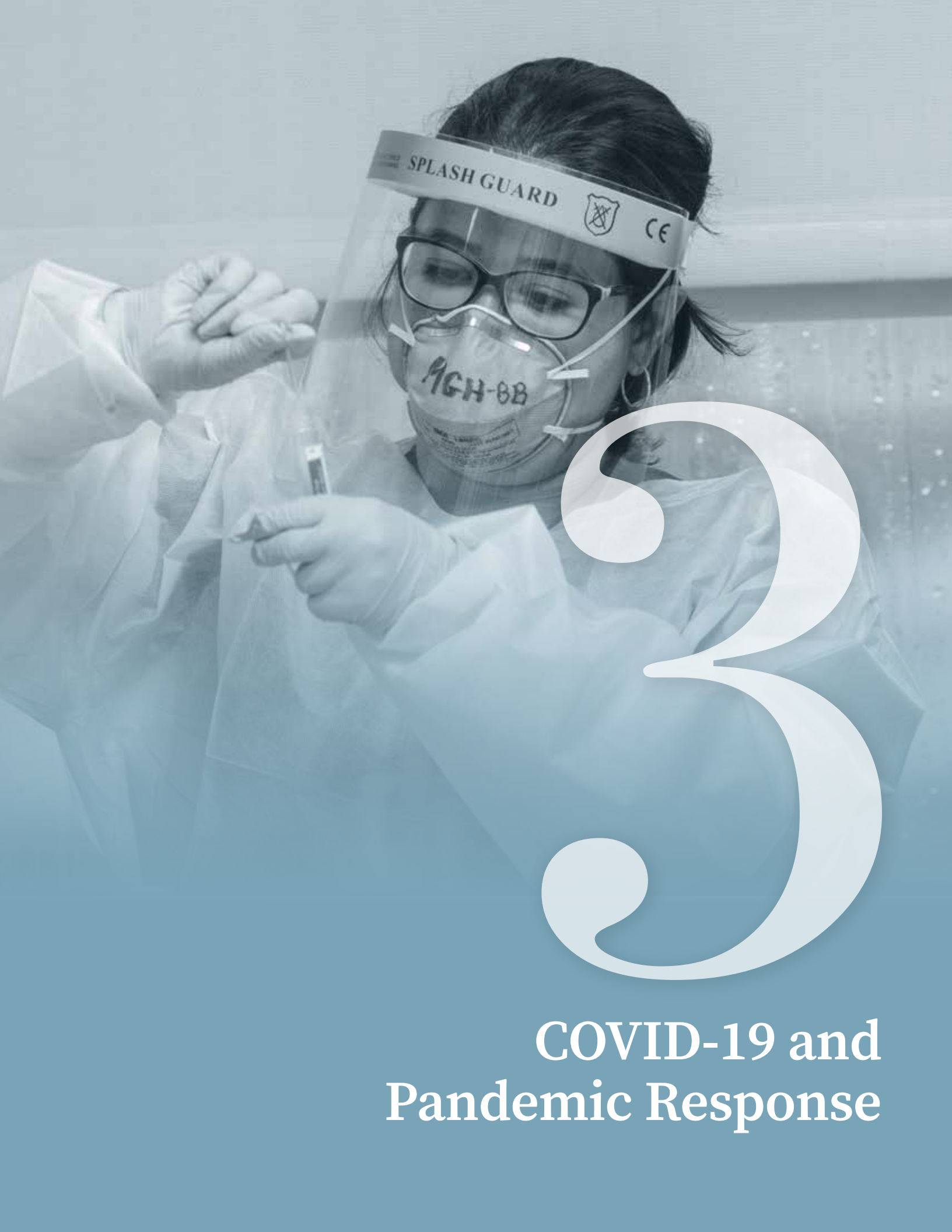
Behavioral Health Specialties include: Addiction Medicine, Child and Adolescent Psychology, Clinical Psychologist, Geriatric Psychiatrist, Psychologist, and Psychiatrist.

Access to Care

Mass General primary care physicians and specialists are in high demand, and in 2019 the average number of wait days for new patients in ambulatory settings exceeded the 14-day industry standard for all racial/ethnic and primary payer groups. On average, new patients waited 35 days to access a Mass General provider (40 days for primary care, 35 days for specialty care and 28 days in the health centers). The Ambulatory Practice Division continues to focus on improving capacity and reducing wait times for new patients. Race/Ethnicity and Medicaid coverage do not appear to be significant drivers of ambulatory access, with Medicaid patients having shorter wait times than those with commercial insurance. Yet, patients on the Commonwealth's Health Safety Net plan (who typically have no coverage) waited 3 days longer on average than patients with other types of health insurance. Wait days were longest for White and Asian patients.



This wide variation in access to both inpatient and ambulatory specialty care is not a new pattern at Mass General and requires further study to understand the drivers and opportunities for improvement. It is clear that structural barriers to access to healthcare exist, and social determinants of health affect healthcare utilization. Yet, the specific interventions to improve the representativeness of patients will likely vary by specialty, and perhaps by condition. As we reimagine access to care in the wake of the COVID-19 pandemic, we have a unique opportunity to understand these patterns of utilization by race and ethnicity and address structural barriers to care.



COVID-19 and Pandemic Response

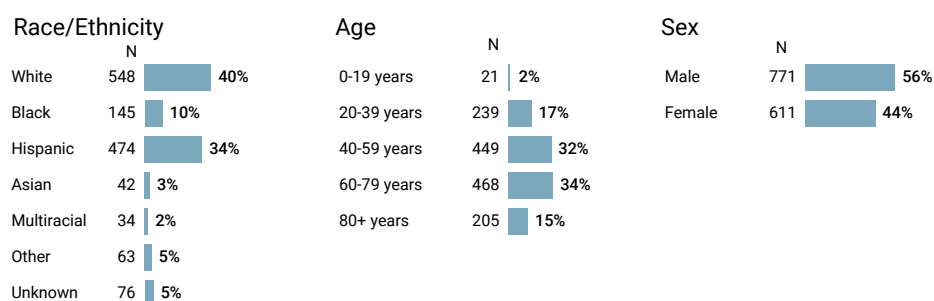
The COVID-19 pandemic has highlighted many structural inequities throughout society and exposed the barriers to quality health care among marginalized groups in the US. As we learned more about the virus and its effects, it became clear that socioeconomic factors such as working conditions, housing density and underlying comorbidities played a prominent role in the progression of the pandemic. Evidence quickly grew that people of color were more likely to contract COVID-19 and are more likely to suffer serious illness or death as a result.^{7,8,9} At Mass General Hospital, we witnessed these inequities very early in the Spring surge, and it quickly shaped the response of our hospital and health care system.

Demographic Profile of Mass General Inpatients During COVID-19 Surge

COVID-19 cases began to surge in the metro-Boston area in early March 2020. Soon thereafter, evidence of “hot spots” in racially and ethnically diverse communities emerged. Providers in the Emergency Department noted an influx of Hispanic patients and demand for Spanish-speaking interpreters soared. The Center for Quality and Safety was tasked with building a dashboard to help the Hospital Incident Command Center manage hospital operations and developed a view to display demographics of the patients admitted during this time. This information was used to ensure proper staffing of interpreters in the inpatient setting, as well as a coordinated pandemic response in the communities most affected by the virus.

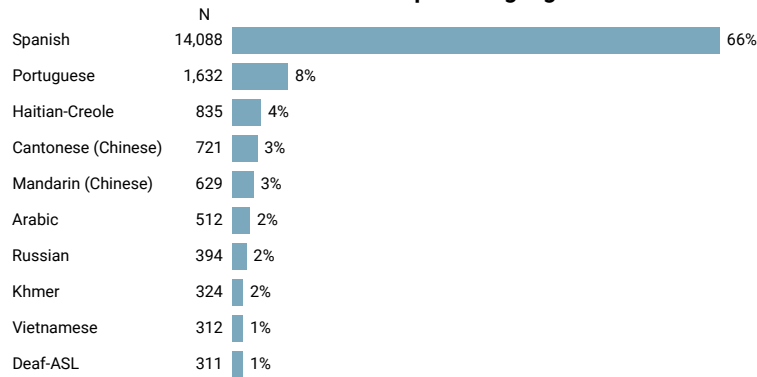
The differences in the demographic profile of COVID-19 positive inpatients during the surge months of March, April and May were striking. With the virus escalating in hard-hit communities with a large Hispanic population, such as Chelsea, East Boston and Revere, Mass General began to see an influx of these patients admitted to the hospital. Over this 3-month period Mass General cared for almost 1,400 COVID-19 positive patients in the inpatient setting. Over one third (34%) of the COVID-19 positive patients were Hispanic and another 10% were Black, in contrast to just 9% and 6%, respectively, among inpatients in 2019. Over 80% of COVID-positive patients were over the age of 40, and the majority (56%) were men. These are similar to findings in other hospitals, and consistent with higher risk of hospitalization for older, male and minority patients.¹⁰

COVID-19 Positive Inpatient Admissions, March-May 2020



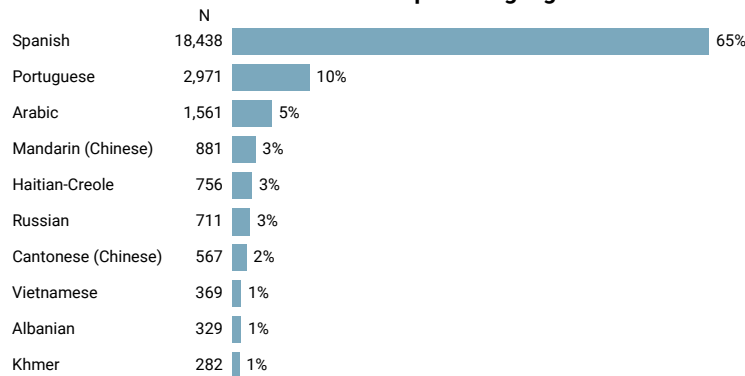
The differences in primary language were even more prominent. During the surge, 41% of the COVID-19 positive inpatients spoke a primary language other than English, compared to just 9% of the inpatients in 2019. Forty percent required an interpreter, compared to only 8% of inpatients in 2019. The vast majority of these patients spoke Spanish. Of the more than 21,000 interpretations in the inpatient setting during the surge, two thirds were with Spanish-speaking interpreters.

Interpretations Provided to Inpatients During COVID-19 Surge, March-May 2020 Top 10 Languages



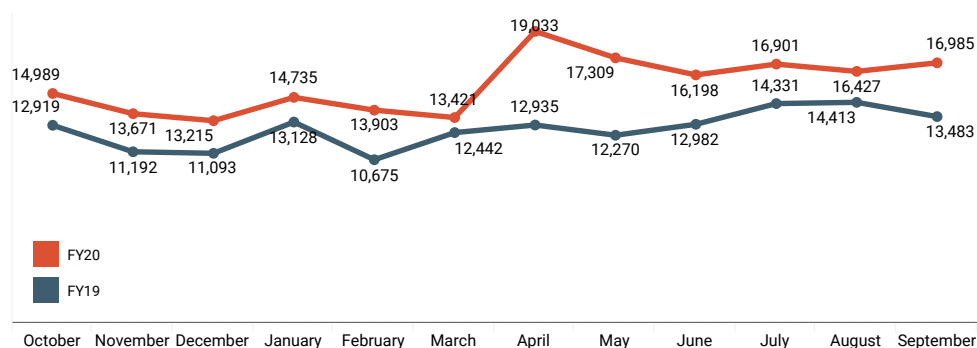
Of course, many COVID-positive patients were treated in the ambulatory setting, and interpreters were required for those visits as well. Over 28,000 interpretations were provided in the outpatient setting during the surge months, again with two-thirds in Spanish.

Interpretations Provided to Outpatients During COVID-19 Surge, March-May 2020 Top 10 Languages



The increase in need for interpreters is even more striking when comparing year-over-year volumes. The graph below shows monthly interpretations (all care settings) in FY19 (blue) and FY20 (orange). Demand for interpreter services was consistently higher in every month of FY20, but the spike in April and May during the COVID-19 surge is remarkable. It is also notable that demand for interpreters remained at unprecedented levels in the post-surge summer months.

Interpretations Provided, FY2019 and FY2020



This level of demand for interpreters required quick innovation to meet the need. The Interpreter Services Department rapidly created several new pathways and innovations to meet the needs of non-English speaking patients while keeping staff safe throughout the pandemic. Innovations included:

Responding to new logistical needs and keeping the workforce safe. At the beginning of the pandemic, 80% of the Medical Interpreter Services staff began working from home. This required a recalibration of equipment and technology to ensure interpreters had the secure equipment needed to work remotely. All team members gained access to the VICS and Patient Connect apps to conduct video interpretations for inpatients and patients in the Emergency Department. This technology also enabled interpreters to interpret for family meetings between providers on-site and remote families of patients through Patient Connect. During the summer, the operational model was altered yet again to adapt to the new guidance for social distancing and keeping staff safe. At this point 40% of the team was on-site and the remainder were working remotely. Medical Interpreter Services accessed technology to allow for the use of call center phones at home for eight additional interpreters.

Shifting schedules to meet increasing demand. The pandemic created new demand for Interpreter Services to assist with communicating test results as the volume of Spanish and Portuguese-speaking inpatients skyrocketed. Prior to the pandemic, Interpreter Services staff worked normal business hours, but schedules needed to be adjusted early on to accommodate the high number of calls being made to the Mass General Brigham COVID-19 Hotline regarding test results and instructions. The team quickly adjusted to covering nights and weekends to meet the growing need. During the spring surge, demand shifted from the ambulatory to the inpatient setting. Ambulatory practices moved to providing virtual care with limited in-person visits available at the beginning of the declaration of the state of emergency, but the overall need for interpreter services grew as COVID-19 disproportionately affected limited English proficient communities in metro-Boston. The average pre-COVID (October 2019- February 2020) number of encounters for interpreters in a day with all practices/units opened was 470. During the height of the surge, interpretations were conducted at an average of 553 encounters per day.

Supporting virtual visits. On April 22 Interpreter Service staff were able to join Epic integrated virtual visits and were able to start interpreting for providers and patients in video virtual visits. The number of successful video visits with patients with limited English proficiency was low (initially <1%) because of issues with patient access to and literacy with technology. Additional issues included the complex process of signing up for Patient Gateway, the fact that Patient Gateway was available only in English and Spanish, and providers' limited ability to support patients in using Gateway and virtual visit technology. Improving access to virtual visits for patients with limited English proficiency was a focal point for interpreter services, and in December 2020, 868 virtual visits were completed—the highest number to date, representing about 1.5% of virtual visit volume in December. Efforts to improve access to digital health services for patients with limited English proficiency continue as virtual visits remain an important method for accessing medical care.

Developing new models for interpreter services. The Medical Interpreter Services team activated several new approaches to serve the influx of patients with limited English proficiency, including:

- Supporting the Spanish Language Care Group (SLCG) by facilitating Qualified Bilingual Staff assessments for providers who were delivering care directly to patients in languages other than English, primarily Spanish. The Spanish Language Care Group is an innovation that was initiated in April at the peak of the COVID-19 surge on inpatient floors, in the ICUs and the Emergency Department. The SLCG consists of physicians (ranging from residents to faculty) who are native Spanish speakers and who bring clinical, linguistic and cultural competence to assist in the care of COVID-19 patients. SLCG physicians work directly with the clinical teams, completing time consuming clinical tasks such as consents, patient education, discharge instructions and family communication. The SLCG is a complementary resource to traditional interpreter services, and



Members of the Ernesto Gonzalez Spanish Language Care Group, a consult service created during the COVID-19 response that collaborates with teams in offering language concordant, culturally sensitive, patient-centered care.

this innovation led to improved effectiveness and efficiency of the clinical care teams, as well as improved patient experience for Spanish-speaking patients.

- Partnering with the Emergency Department to pilot a Spanish interpreter who was solely dedicated to the ED for an entire shift.
- Supporting the Respiratory Illness Clinics (RICs) where patients are tested for COVID-19. In the RIC setting, Interpreter Services provided the necessary technology for appropriate language access for patients with limited English proficiency and provided interpreters for RIC encounters by telephone and video.
- Extending services to sister organizations in the Mass General Brigham (MGB) family. In normal circumstances, the main campus, health centers and other MGB institutions run independently with regard to language access services. During the pandemic, the decision was made to provide services to any and all MGB sister institutions. Main campus interpreters supported the Mass General Chelsea RICs by providing weekend and night coverage.
- Assisting in new care settings, such as Boston Hope (the field hospital for post-discharge services, established at the Boston Convention Center) and in the communities of Chelsea and Revere where hotel rooms were reserved to give patients who tested positive an appropriate place to self-isolate.

Meeting skyrocketing demand for written translation services. Patients with limited English proficiency required written instructions upon discharge from the hospital or after encounters in the Respiratory Illness Clinics, creating unprecedented need for translation services. Furthermore, these materials required constant updating as clinical knowledge about the disease evolved. Materials included hospital signage, patient care instructions, guidance and policies. They also included text messages sent to Mass General staff in five languages (Spanish, Portuguese, Chinese, Arabic and Haitian Creole).

Patient Portal, Virtual Visits and Impact of COVID-19

One of the defining features of the pandemic was the rapid adoption of telehealth technology following changes in CMS and commercial payer regulations that allowed for widespread provider payment for virtual visits. At Mass General and across the country, providers experienced a decline in patient demand as the pandemic progressed, as patients avoided medical settings out of concern for their safety.¹¹ Improving access to telehealth was a critical lever for patients to maintain their care during a time when many ambulatory practices were closed or operating on a limited capacity. Yet, long-standing disparities in access to technology resulted in unequal telehealth utilization, further exacerbating health disparities among the highest risk patients.¹²

At Mass General, the Ambulatory Practice Management Division quickly created several platforms for virtual visits to enable maximum flexibility for providers and patients. This presented new challenges as office staff, providers and patients learned how to use the technology effectively. The swift transition from in-person to virtual visits also highlighted racial, ethnic and socioeconomic inequities in access to digital technology.

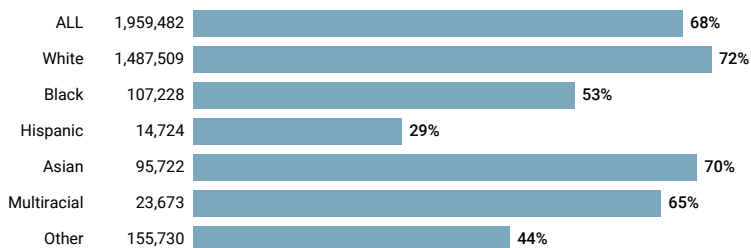
Patient Portal

Use of the Patient Gateway/My Chart portal is another measure of patients' comfort with and access to technology. In 2020, 67% of Mass General patients with an ambulatory visit had an active account with Patient Gateway, but there is wide variation by race/ethnicity and payer. Only 29% of Hispanic patients had an active Gateway account, compared with 72% of White patients. Patients with Medicaid and Health Safety Net insurance also had much lower engagement with the patient portal (Health Safety Net is a Commonwealth of Massachusetts program that pays some acute medical expenses for uninsured and underinsured patients).

It is important to note that this measure provides us with the percent of patients who have registered for a Patient Gateway account only; it does not measure the number of patients who actually use the portal. Further exploration needs to be done to understand the degree of Patient Gateway utilization by race/ethnicity, language, and payer.

Percent of Patients Active on Patient Gateway, Jan-Sept 2020

Race/Ethnicity



Payer



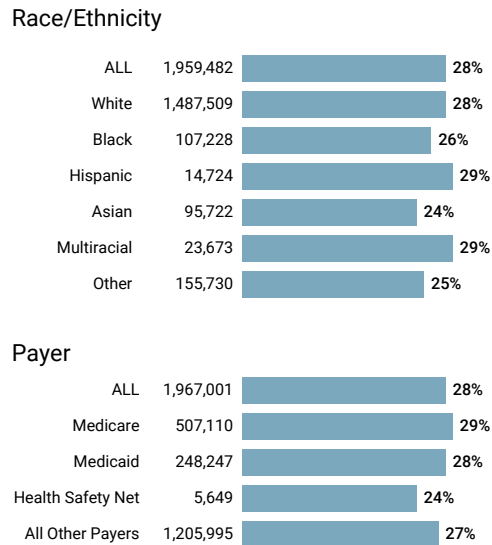
Virtual Visits

Regardless of the variation in Patient Gateway utilization, Mass General ambulatory management quickly established multiple platforms for virtual visits in the wake of the pandemic. In 2019, less than 1% of ambulatory visits at Mass General were conducted virtually. In the first nine months of 2020, the proportion of virtual visits increased to 28%. These visits included multiple approaches, from video conferencing to phone calls, and the early coordination with Medical Interpreter Services helped improve access to a more

diverse group of patients. Although Hispanic patients had the lowest participation in Patient Gateway, they had the highest utilization of virtual visits. Patients with Health Safety Net insurance were least likely to utilize virtual visits, but those on Medicaid were on par with other payers.

Barriers to digital access to care persist in low-income communities and communities of color. Some patients remain skeptical of virtual technologies and care tools such as Patient Gateway out of concern for being tracked as an undocumented immigrant, for example. There is much work ahead to understand the needs and preferences of our diverse patients in terms of digital technology, to raise digital literacy, and to leverage technology to reach all populations equitably.

Percent of Patients with Virtual Visits, Jan-Sept 2020



Community Health Rapid Response

As previously noted, the communities of Chelsea, East Boston and Revere were particularly hard-hit by the COVID-19 pandemic, with infections topping 700/10,000 population in Chelsea. These cities are densely populated (Chelsea is the most densely populated community in the Commonwealth) with a high proportion of economically marginalized residents, many of whom are immigrants. People living in these communities are more likely to work in essential jobs where remote work is not an option. They are more likely to rely on public transportation, and are more likely to live in crowded conditions, often in multigenerational households. These are largely communities of color; in Chelsea, 67% of residents identify as Hispanic.

Marginalized populations have been disproportionately affected by pandemics and other disasters throughout history, and at-risk communities in metro-Boston faced an array of challenges to remain healthy, safe and secure during the COVID-19 pandemic. Government agencies, nonprofit social service programs and health care providers rapidly scaled up a series of interventions to support these communities that were hardest hit by COVID-19.

Mass General Brigham and Mass General maintain a strong presence in these neighborhoods through our health center network. Community health leadership quickly engaged to meet the needs of these residents through a series of interventions leveraging public health principles to mitigate the spread of COVID-19 and support the broader socioeconomic and health needs of the community. These interventions focused on the key strategies of case identification, isolation, mitigation, communication, and addressing the underlying social determinants of health.

Case Identification: Testing. COVID-19 testing was conducted through the Chelsea Respiratory Illness Clinic (RIC), in accordance with testing supply and evolving testing criteria. 6,923 individuals were tested at the Chelsea RIC between April 1 and June 24, 37% were Chelsea residents, 15% were from Revere, 11% from Everett, and 5% from East Boston.

Mitigation: Care Kits. Throughout 2020 Mass General/Mass General Brigham distributed over three million masks, 350,000 units of soap and 330,000 units of hand sanitizer in affected communities, as well as 351,000 care kits comprised of masks, sanitizer, and educational materials in English and Spanish. Kits were distributed during the spring surge, and more kits were assembled over the summer in preparation for a fall/winter surge. Delivery is ongoing in 2021.

Isolation. Mass General provided the medical nursing care, as well as interpreter services, at a hotel contracted by the cities of Chelsea and Revere. The hotel was designed as a place for COVID-positive residents to voluntarily self-isolate and keep their families safe. This program provided housing and medical care to 153 patients. Services included onsite symptom monitoring, behavioral health support, and 24/7 medical care.

Communication. There were many efforts to communicate information about the virus, how to care for oneself or family members, the importance of social isolation when symptomatic, symptom screening, contact tracing, and a host of community resources to assist residents during this difficult time. Communication/education efforts occurred through traditional media channels as well as direct calls/texts/mailings to residents. Some residents reported too many calls/texts, and there is an effort to better coordinate messaging with other agencies and local officials in the future.

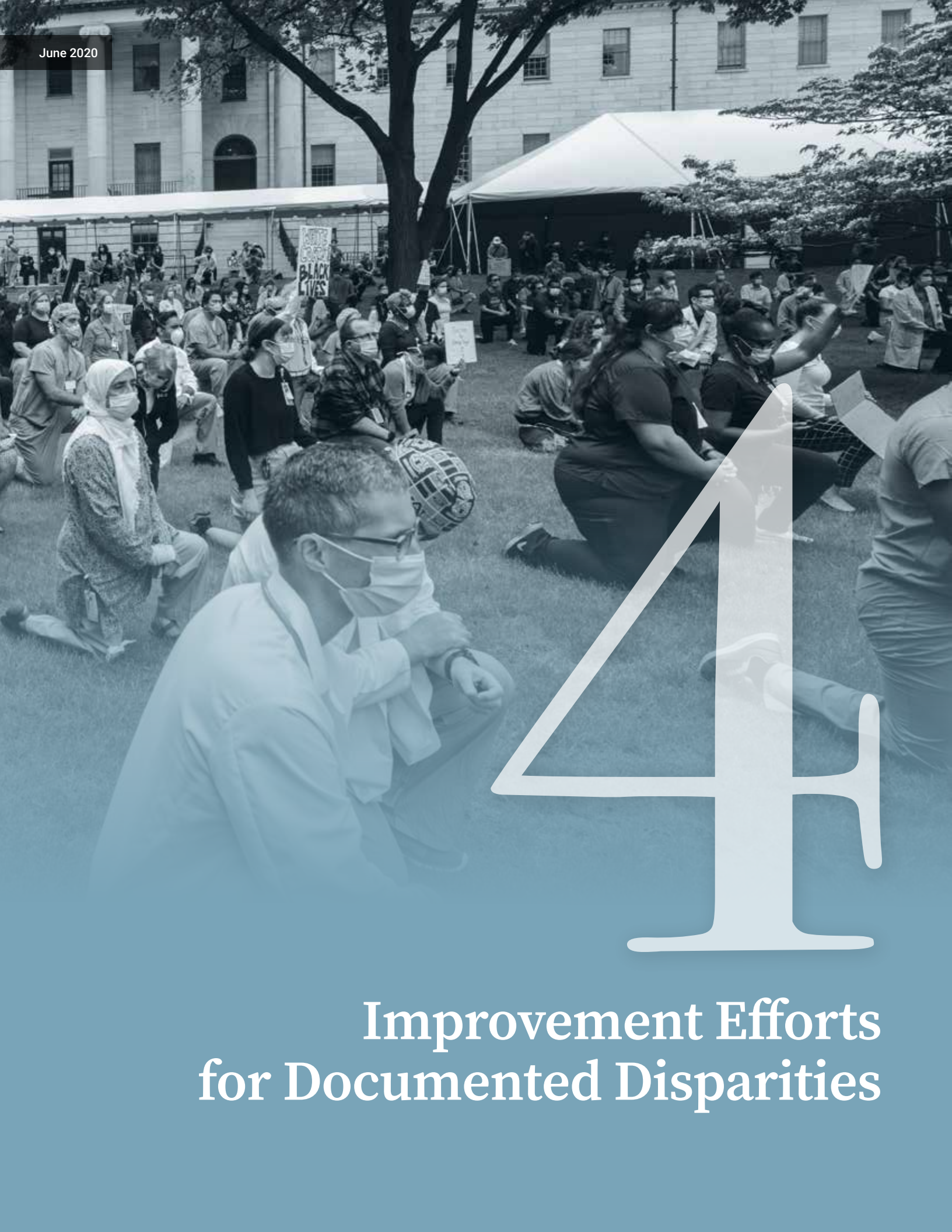
Social Determinants of Health: Food Insecurity. Food insecurity quickly became a primary concern for metro-Boston residents as the economic fallout of the shutdown affected thousands of families. As the situation escalated, access to food reached crisis levels with over 3,500 Chelsea families standing in line at food distribution sites. Mass General supplemented the food supply distributed by the City of Chelsea and Greater Boston Food Bank. The Mass General Emergency Fund also supported grocery and meal delivery to COVID-19 positive residents, distributing over 2,200 Fresh Boxes to residents of Chelsea and surrounding communities, and 448 prepared meals to residents in quarantine. Moving forward, the focus is on screening

for social determinants of health, particularly food insecurity, at the point of COVID-19 testing, and connecting residents with community resources where needed.

The COVID-19 pandemic is far from over, and Mass General continues to develop ways to support communities that are disproportionately affected by the disease and its socioeconomic fallout. The inequitable health and social impact of COVID-19 has elevated the importance of pursuing equity throughout the care continuum at Mass General, as we continue to advance improvement in previously documented disparities and work to address the many new challenges that have emerged through this crisis.



June 2020



Improvement Efforts for Documented Disparities

Mass General has been stratifying quality, safety and patient experience measures by race, ethnicity and language for more than a decade. Throughout this process, we have identified areas in need of improvement and embarked on initiatives to reach uniform high quality. Although some of this work was paused during the COVID-19 crisis while we addressed the acute needs of marginalized communities, we have made progress in some areas and continue the work.

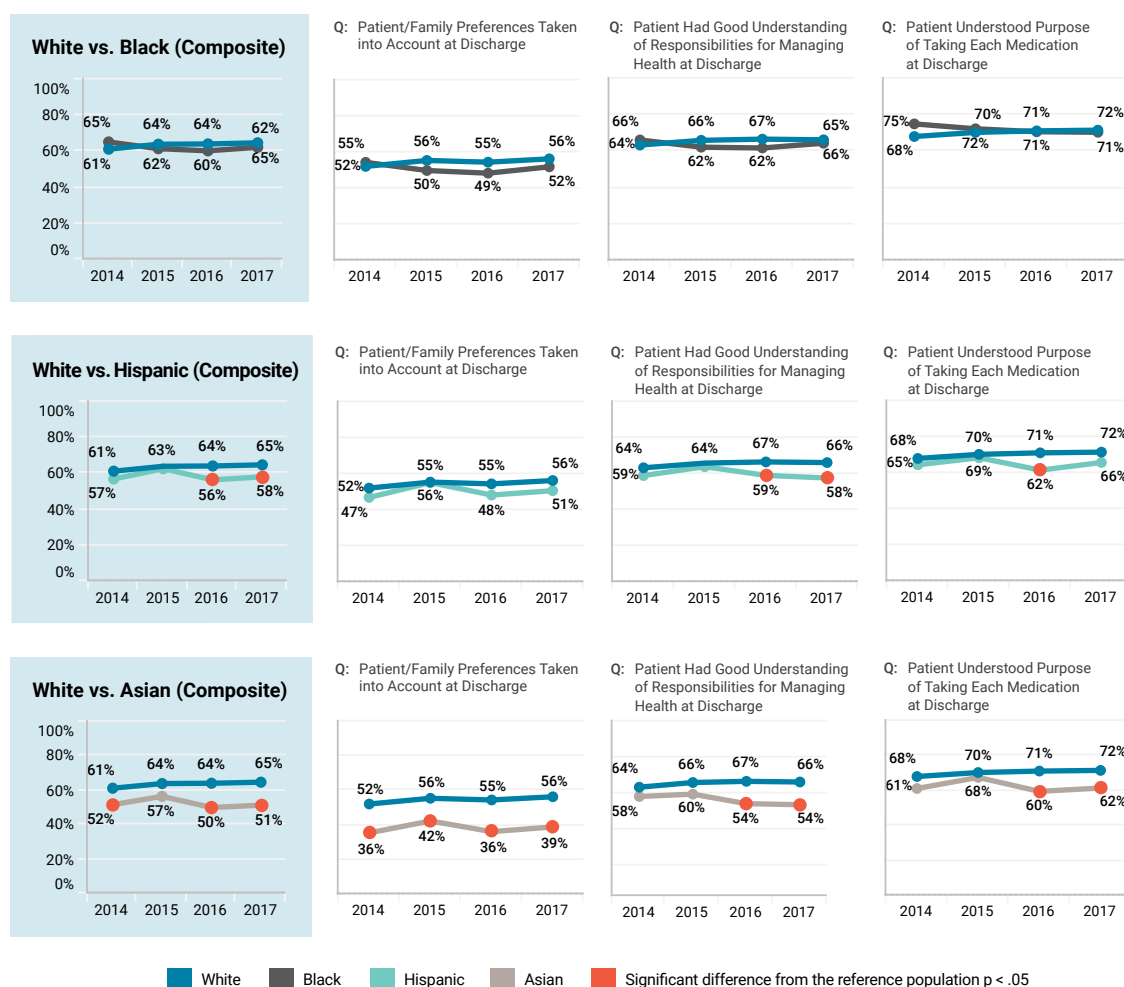
Patient Experience with the Discharge Process

Each year, we explore the data from our inpatient and ambulatory patient experience surveys, looking for differences in scores by race, ethnicity and language. In 2017, we identified significant disparities by race, ethnicity and language in patients' reported experience of the discharge process, as measured by the HCAHPS Care Transitions composite. The questions in this composite measure three distinct aspects of the discharge process:

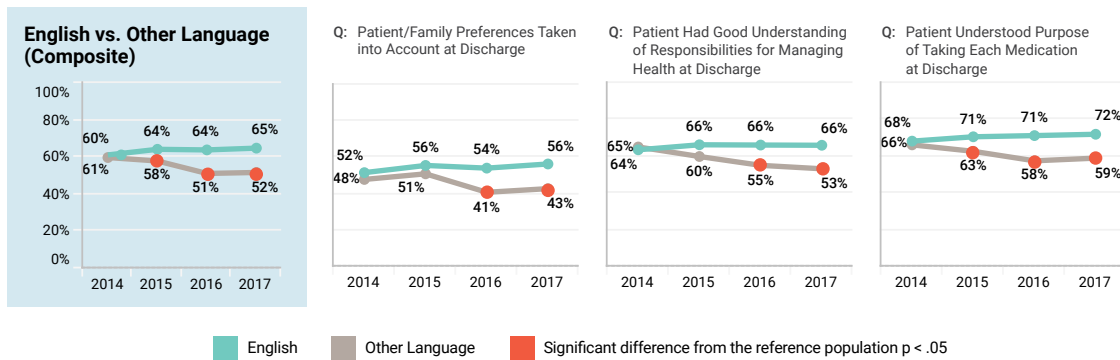
- Patients felt their own and their family's preferences were taken into account in the discharge process;
- Patients had a good understanding of what they needed to do to care for themselves after discharge; and
- Patients understood the reason for each medication prescribed at discharge.

In 2017, we noted the differences were greatest for Asian and Hispanic patients, and these gaps were widening over time. Furthermore, there was a persistent gap between English-speaking patients and patients with a primary language other than English.

HCAHPS Composite: Care Transitions Compared by Race, 2014–2017



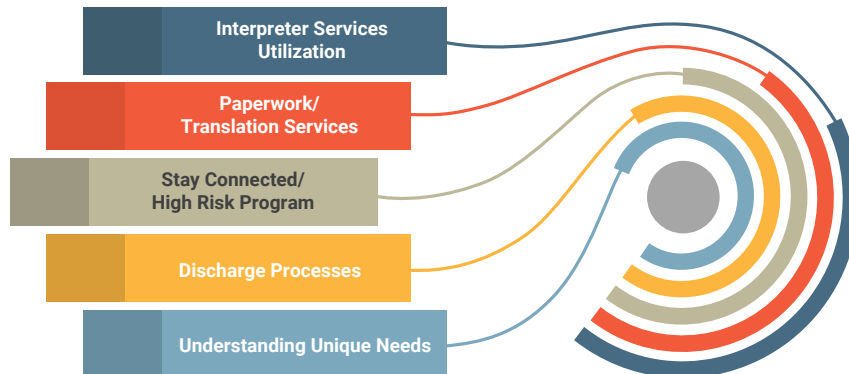
HCAHPS Composite: Care Transitions by Language, 2014–2017



This was particularly concerning because the discharge process is a critical component of the inpatient stay. Our goal is to set patients up for success as they transition from the hospital to their community. Patients who do not understand their medications or care plans have a greater likelihood of readmission and other complications. We convened an interdisciplinary team to further explore the data and lead improvement strategies. After two years and several interventions, we are seeing those gaps narrow.

The team focused on multiple avenues for improvement: some were based on improved communication strategies, others were based on structural issues with the discharge process, and others focused on the specific needs of complex patients. Ultimately, several interventions were launched around interpreter use and improving the discharge process, informed by an additional study of the care transitions needs of Mass General's diverse patients. Overall results are promising and scores on the Care Transitions questions have improved.

Care Transitions Improvement Focus Areas



As a first step, the team commissioned a Care Transitions Survey to address the post-hospital period and gain insight into patient concerns, with a special focus on racial, ethnic and language differences.¹³ The Care Transitions Survey was conducted with 214 patients from July to September 2019 by a team based in the Health Policy Research Center. The eligible population included Mass General inpatients, discharged in March, April, and May 2019. Eligible patients were stratified by race/ethnicity and language and sampled within strata. Results are presented by race/ethnicity, as well as for a cross-section of all racial groups. Surveys were conducted in English, as well as in Spanish, Portuguese, Chinese, Khmer, Haitian Creole and Vietnamese. Respondents were asked the following questions about the discharge process:

- What was most important to you, or mattered most to you, when you left the hospital?
- How have you been doing since you left the hospital?

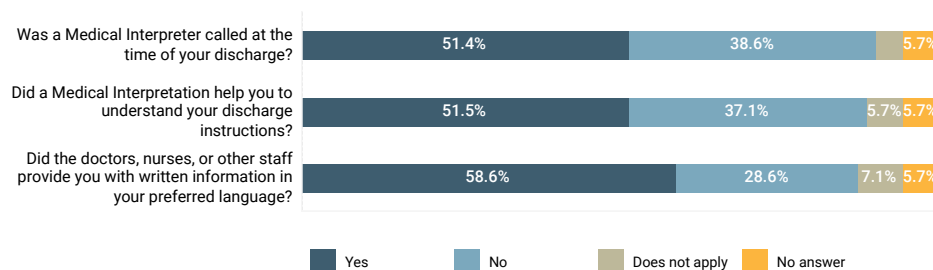
- Since you left the hospital, have you worried about any of the following? If so, why have you been worried?
- Is there something the staff at MGH could have done better to help you and your family when you left the hospital and returned home?

The survey highlighted several themes and areas of opportunity in the discharge process. These include:

- Need for better utilization of interpreters at discharge;
- Need for translated written discharge instructions, particularly regarding medications
- Need for the care team to understand individual challenges and concerns of patients, family members
- Desire for follow-up after patients return home.

The discharge experience is often hectic, with patients and their family members receiving a tremendous amount of complex information in a short period of time. It is often challenging for patients to understand and synthesize that information, and the experience is especially difficult for patients with LEP. Of the respondents who spoke a language other than English (n=70), nearly 40% reported not having an interpreter present at discharge, and nearly 30% reported not receiving written instructions in their preferred language.

**Care Transitions Survey Results:
Patients whose Preferred Language is not English,
Discharged March-May 2019**



Respondents reported several worries or concerns after leaving the hospital, ranging from understanding their medications, to having enough help at home, to financial issues. These patient comments highlight the multitude of issues that arise for patients as they navigate from the hospital to the community. Although some of these issues are outside the control/expertise of the discharging clinical team, there are certainly other issues that can be addressed via appropriate information or referrals during the discharge process. In those areas where the care team is unable to intervene, it is still helpful to understand the concerns and issues patients face as they go home.

Patient Concerns in Transition from Hospital to Home: Primary Themes

Understanding your medications

- Concerns about side effects/dosage and duration of medications
- Difficulty paying for medications

Getting home health care services

- Difficulty managing home health services
- Worried that I could not take care of myself

Getting transportation to appointments

- Unemployment/low income/financial issues—cost of transportation and parking
- Unable to drive/long trip/trouble arranging for the RIDE, a transit service for people with disabilities for whom public transportation is not accessible

Getting medical supplies or equipment you need

- Unemployment/low income/financial issues
- Lack of medical insurance coverage

Getting enough food

- Unemployment/low income/financial issues
- Trouble eating/unable to cook

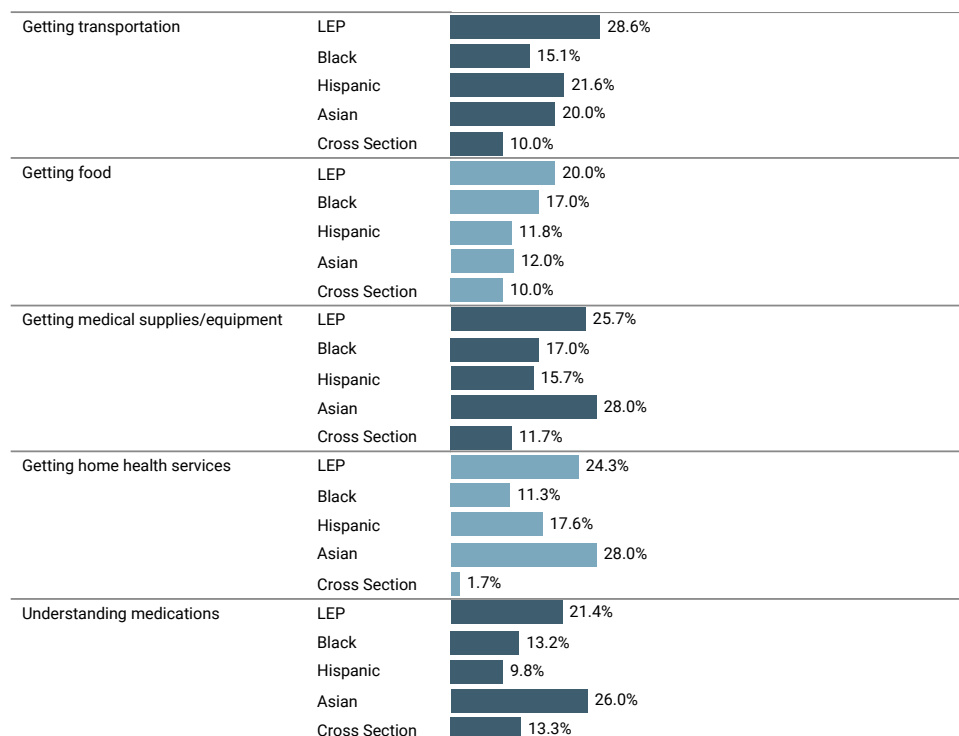
Anything else at all

- Difficulty managing family life/housekeeping
- Worried about recovery/relapse
- Accessibility at home

Stratifying the data by race/ethnicity and language revealed several areas of concern for the limited English-speaking and Asian populations, with understanding medications, getting home health services, and medical supplies as top concerns.

Care Transitions Survey Results: Patients Discharged March-May 2019

Since leaving the hospital, have you worried about...





The Care Transitions Study confirmed the challenges and concerns that were initially identified in the stratification of the HCAHPS surveys. This prompted several interventions to better communicate with diverse patients in the discharge process, and set them up for a successful transition to the community:

Renewed focus on use of Interpreter Services. The Medical Interpreter Services team is called upon to facilitate clinical discussions throughout the inpatient stay, but this step is sometimes overlooked in the discharge process. Although it can be challenging to coordinate the timing, these results reveal the importance of the interpreter's presence during the hospital discharge. The team promoted the use of interpreters at discharge, with a focus on medical/surgical units.

Medication translation cards. The Medical Interpreter Services team launched a simple but powerful intervention for limited English proficient patients: a wallet card that includes the patient's medication list and instructions translated in the patient's preferred language. Unfortunately, the Electronic Health Record does not automatically translate all discharge instructions into multiple languages; therefore, patients rely on a translation service that can take up to 5 business days to provide discharge instructions in the patient's preferred language. These medication cards are completed by the interpreter on site so the patient goes home with medication instructions they can understand. The interpreter also annotates the discharge documentation with key instructions in the preferred language, although the complete translation of the documents takes longer to complete.

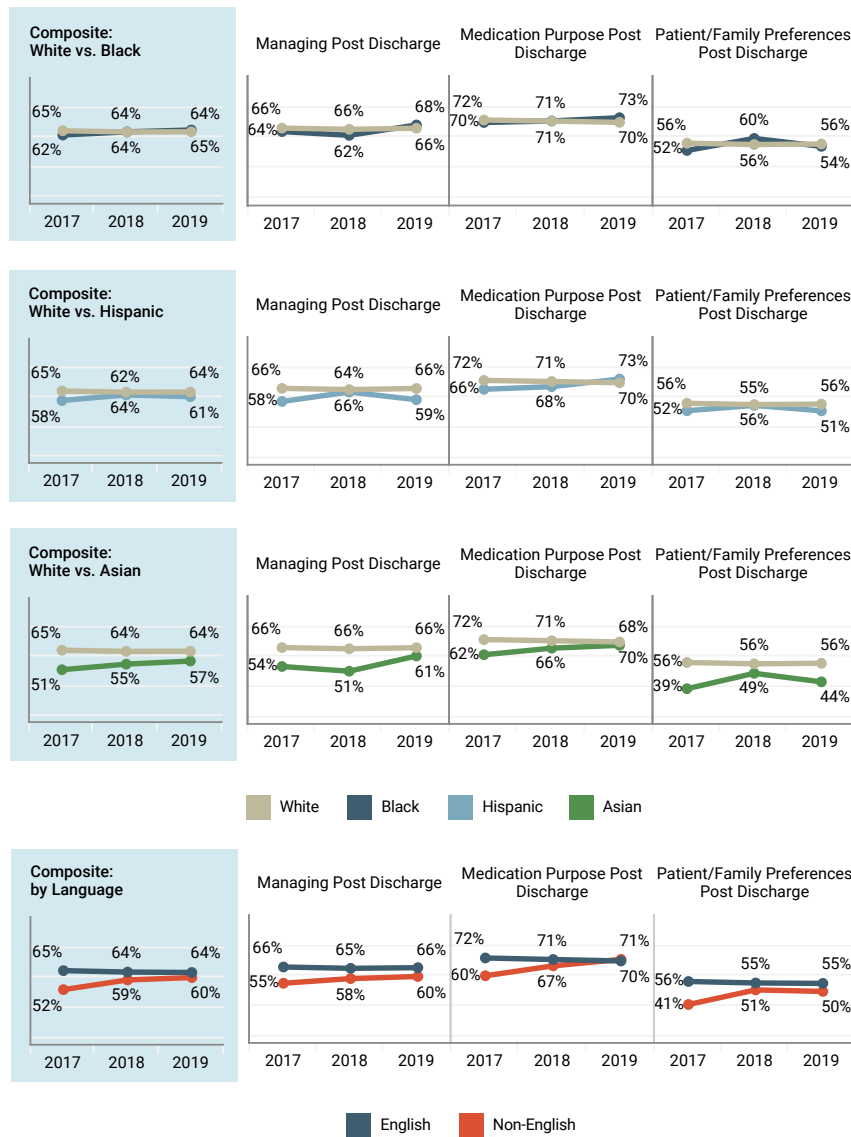
“What Matters to You” Campaign. The Patient Experience leadership launched the “What Matters to You?” campaign to coach clinical teams in understanding patients' concerns and intervening where appropriate. This was a broad, institution-wide effort to 1) ask patients about their worries, concerns and preferences; 2) listen to patients' concerns; and 3) act on that information when possible. Not all concerns are within the realm of the care team's responsibility, but the act of asking and listening go a long way to reduce patients' anxiety and help them feel that their individual needs and preferences are taken into consideration.

Stay Connected Program. Patients at high risk for readmission due to clinical or socioeconomic factors were offered an array of post-discharge interventions through the Stay Connected Program. Interventions included pharmacist medication reconciliation at discharge, scheduling follow-up appointments prior to discharge, as well as post-discharge care coordination and visits from a nurse practitioner to address needs arising on return to the community. During the initial COVID surge, the care coordination team supported myriad emerging concerns including health-related social needs among the communities most affected by COVID-19.

Standardized Assessment of Medical Interpreter Needs. In collaboration with the Care Continuum Steering Committee, the CQS Process Improvement team worked with the Medicine and OB/GYN departments to improve care transitions for patients with limited English proficiency through a standardized assessment of interpreter needs. The ultimate goal of the assessment was to ensure that interpreters are provided at all key points during the hospitalization and throughout the discharge process. The intervention is now expanding to additional units.

These interventions were launched throughout 2018 and 2019 and many of these efforts continue to evolve, reflecting the changing needs of Mass General patients. We are pleased to report the Care Transitions composite scores have steadily improved for both Asian and limited English proficiency patients. The scores on understanding medication are especially promising, with a six percentage-point improvement for Asian patients and an 11 percentage-point improvement for LEP patients since 2017. However, scores about patient/family preferences have leveled off and in fact decreased in the Asian population, and scores about managing post discharge and patient/family preferences have also decreased in the Hispanic population. There continues to be room for improvement on all measures, with scores only in the 60–65% range. The team planned to conduct qualitative interviews with Asian patients to better understand their concerns and identify potential interventions targeted to the Asian population; however, this work was delayed due to the COVID-19 surge. We plan to move forward with this effort when the pandemic ends. We continue to monitor these disparities and seek to improve the patient experience with the discharge process for all patients.

HCAHPS Care Transitions: Composite and Constituent Questions, 2017-2019



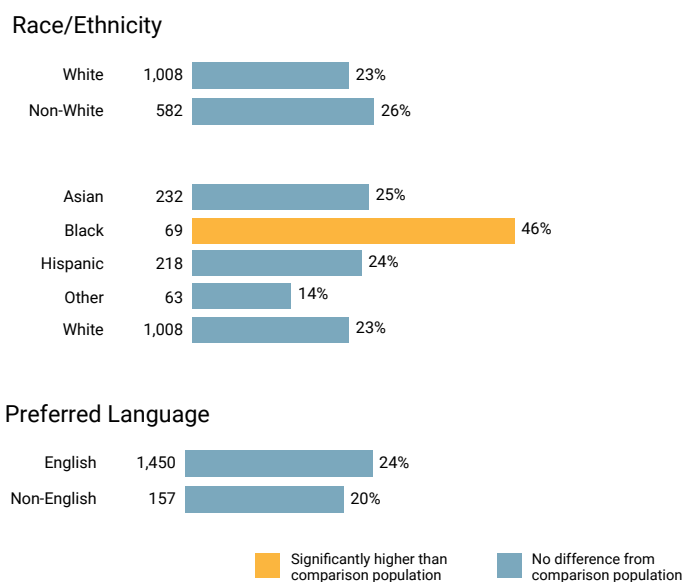
NTSV Cesarean-Section Rates

The Cesarean delivery rate in the U.S. has been rising over the last two decades, reaching its highest rate of 32.9% in 2009.¹⁴ These deliveries are associated with increased maternal morbidity, longer recovery periods, and future pregnancy complications.

Approximately 60% of all Cesarean deliveries are first Cesarean deliveries. Nationally, fewer than one in ten women with a prior Cesarean delivery has a vaginal birth in a later pregnancy.¹⁵ For this reason, efforts to reduce the Cesarean delivery rate have focused on women who are at “low risk” to require a first Cesarean delivery, defined as nulliparous (first-time mothers) and term (greater or equal to 37 weeks) women carrying a singleton and vertex-presenting (head down) fetus, or NTSV. Since 2009, several national organizations have issued objectives to track Cesarean deliveries among women with NTSV pregnancies, including the U.S. Department of Health and Human Services, the Joint Commission, and the American College of Obstetricians and Gynecologists. Research using national data, including work from Mass General faculty, demonstrates that in the U.S., Black women have consistently higher rates of primary cesarean deliveries, a finding not entirely explainable by differences in other measurable characteristics such as obesity, medical co-morbidities, obstetrical risk factors or labor management practices.

Mass General has submitted data to the Joint Commission on NTSV Cesarean section rates since 2013. Although required submissions and analyses do not stratify by race/ethnicity, we separately explored NTSV Cesarean delivery rates among White/POC and English-speaking/LEP patients. No evidence of a disparity was present for either group at this level. However, further stratification revealed significantly higher NTSV Cesarean rates among Black women, consistent with national trends and past exploration of the data at Mass General.

NTSV Cesarean-Section Rates:
Chart-abstracted measure, by race/ethnicity and language, 2017-2019



The Obstetrics Department leadership, in collaboration with the Disparities Solutions Center, Center for Quality and Safety, and Mass General Equity and Inclusion, has embarked on a project to understand the contributing factors and root causes of this disparity as an initial step toward developing interventions to lower the Cesarean rates among low-risk Black women. The team had planned to conduct qualitative interviews with women who had a Cesarean delivery in the spring of 2020; however, this work was delayed due to the COVID-19 surge. The project is currently underway in early 2021.



Allison Bryant Mantha, MD, MPH, Department of Obstetrics and Gynecology, meets with a patient (photo taken prior to Universal Mask Policy).

Chart-abstracted data indicates a persistent disparity, yet we need a better understanding of the root causes before we can identify a pathway to improvement. As a first step in this process, our goal is to explore the patient perspective of their birth experience, with emphasis in the following areas:

- Understanding patients' expectations for the birth and how they feel about having had a C-Section
- Understanding patients' perspectives on the reason(s) for having had a C-Section
- Comparing patients' understanding of why they had a C-Section with the reasons recorded in their chart
- Exploring patients' perceptions of the birth experience, how they were treated, and their satisfaction with the results of their care
- Understanding patients' experience of care provided by physicians, nurses, midwives, and other staff

In-depth semi-structured qualitative interviews will be completed with up to 25 NTSV C-Section patients to explore their childbirth experience and the care they received at Mass General. The interview guide includes semi-structured, open-ended questions and demographic questions. Eligible participants will include White non-Hispanic and Black patients with an NTSV C-Section delivery. A minimum of 50% of participants recruited will be Black women. Findings from these interviews will inform a broader improvement plan that will be described in future editions of this report.

New Areas of Exploration: Improving Disparities in Primary Care

Past editions of this report included stratification of HEDIS (Healthcare Effectiveness Data and Information Set) measures in primary care. The HEDIS measure set includes several preventive health screenings and chronic disease care measures among patients with commercial insurance, sourced from claims data. In 2017, Partners (now Mass General Brigham) Population Health began a new program to measure ambulatory quality across all patient populations via e-Clinical Quality Measures (eCQMs). Leveraging our electronic health record, we can now report on ambulatory screening and primary care quality for the entire Mass General population, regardless of payer.

Disparities in cancer screening rates for Asians are reflected in the national literature. Nationally, rates of screening for breast cancer were similar between the Black and White populations, however Blacks with advanced breast cancer were diagnosed less often than Whites, and this disparity has only widened over time. Screening rates for colorectal cancer were also similar between Black and White individuals. The percentage of those who had received cervical cancer screening was lowest among Asians.¹⁶

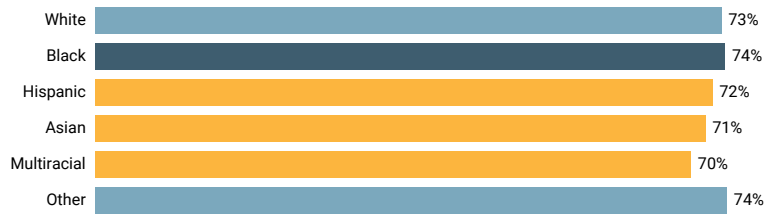
According to the 2015 National Impact Assessment of Quality Measures Report, there were persistent racial disparities in the following Medicare Part C HEDIS measures: breast cancer screening (age 52–59), colorectal cancer screening, glaucoma testing, access to ambulatory services for patients age 65+, osteoporosis management in women who had a fracture, eye exams for diabetics, blood pressure control among hypertensive patients, and rheumatoid arthritis management. In all of these measures, the evidence suggests disparities are declining over time.¹⁷ eCQMs do not yet exist for a number of these measures.

Even though the 2020 Spring COVID-19 surge disrupted ambulatory care, substantially reducing in-person visits and forcing the rapid adoption of virtual care, we evaluated 17 adult measures and 16 pediatric measures of quality in primary care for the year ending June 2020. Many of the workflows developed to accomplish these preventative measures and screening were lost and, in some cases, alternative workflows that relayed on virtual visits and patient portals were harder to implement for some groups of patients. We explored 11 general health screenings (breast, colorectal, lung and cervical cancer; AAA (abdominal aortic aneurysm); depression, diabetes, tobacco use, chlamydia, HIV and hepatitis C). We also explored three process of care measures for patients with diabetes, and two measures for patients with hypertension and high cholesterol. Pediatric measures included screenings for BMI, lead levels, hearing, vision, chlamydia, depression, and anemia, among others, all part of the American Academy of Pediatrics recommendations for clinical care. Results show multiple opportunities for improvement in the year ending June 2020.

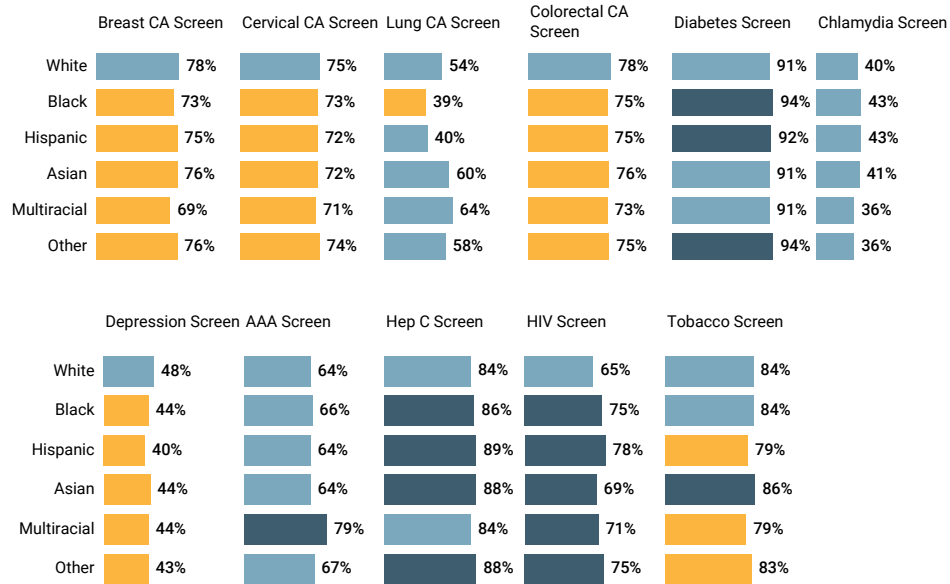
Findings in the Adult Measures

- The adult preventive composite, a summary measure of preventive screening rates, shows disparities among Hispanic, Asian and Multiracial patients.
- Significantly lower rates for breast, cervical and colorectal cancer for Black, Hispanic, Asian, Multiracial, and Other race groups, and lower rates for breast and colorectal cancer screenings for patients with limited English proficiency.
- Lower rates of lung cancer screenings among Black patients.
- Significantly lower rates of depression screenings for all racial groups and patients with LEP, compared to White and English-speaking patients.
- Lower rates of tobacco screening for Hispanic, Multiracial and Other race groups, compared to White patients.
- Within the cohort of patients with diabetes, racial disparities were identified in all three outcome measures, and in two measures for non-English speaking patients.

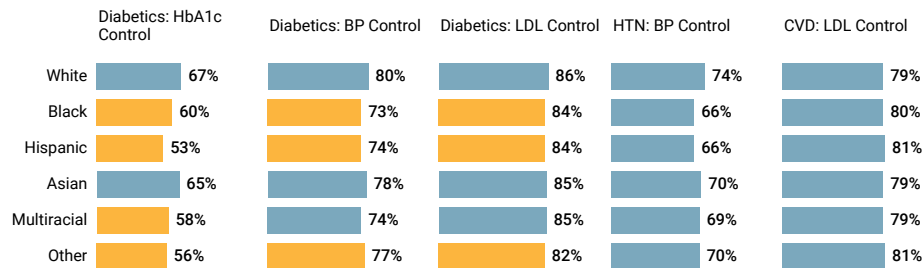
Adult Preventive Care Composite: by Race 7/1/19-6/30/20



Adult Preventive Care: by Race/Ethnicity, 7/1/19-6/30/20



Adult Chronic Disease Care: by Race/Ethnicity, 7/1/19-6/30/20

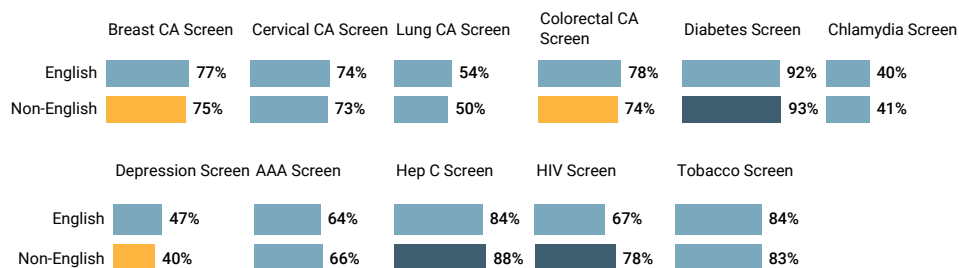


■ Significantly lower than comparison group
 ■ No significant difference from comparison group
 ■ Significantly higher than comparison group

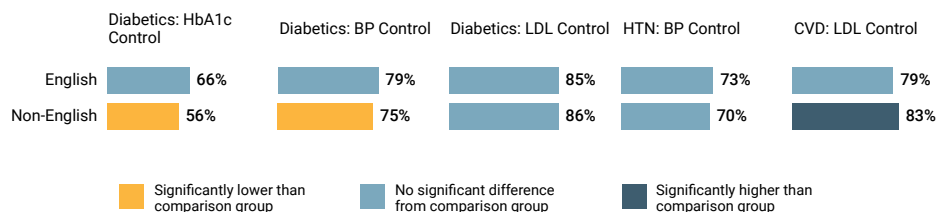
Adult Preventive Care Composite: by Language 7/1/19-6/30/20



Adult Preventive Care: by Language, 7/1/19-6/30/20



Adult Chronic Disease Care: by Language, 7/1/19-6/30/20



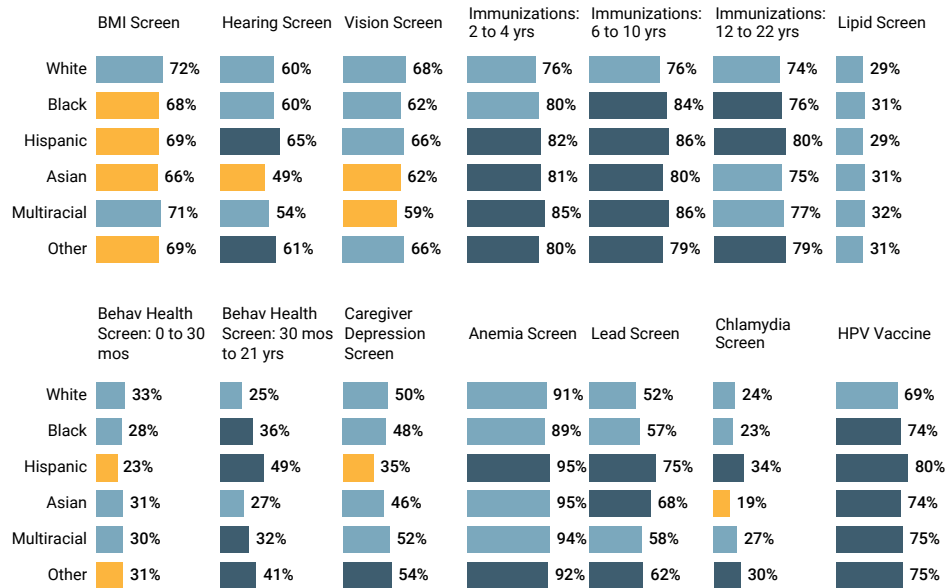
Findings in the Pediatric Measures

- Overall there are fewer disparities in the pediatric population compared to adults. The preventive composite, which is an overall measure of all screenings for the appropriate age group, shows no disparities. Furthermore, there are no disparities in pediatric immunization rates.
- BMI Screening rates are significantly lower in the Black, Hispanic, Asian, and Other racial/ethnic groups, as well as pediatric patients with limited English proficiency.
- Caregiver Depression Screening rates are low among Hispanic children and children with LEP.
- Behavioral Health Screening for the very young (0 to 30 months) is low overall, with Hispanic children scoring ten points lower than White children. The low screening rates are in large part due to the removal of screening devices from primary care practices, due to COVID-19 safety concerns.
- Likewise, Chlamydia Screening rates are low across the board, but especially low in the Asian pediatric population.
- We did not find any disparities by race, ethnicity or language in the pediatric Asthma Control measure, however, rates are below 50% in all groups.

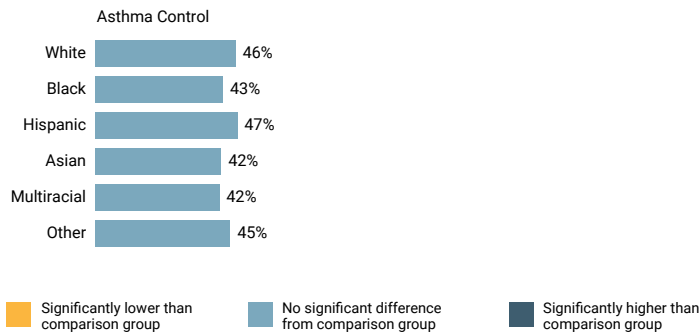
Pediatric Preventive Care Composite: by Race, 7/1/19-6/30/20



Pediatric Preventative Care: by Race/Ethnicity, 7/1/19-6/30/20



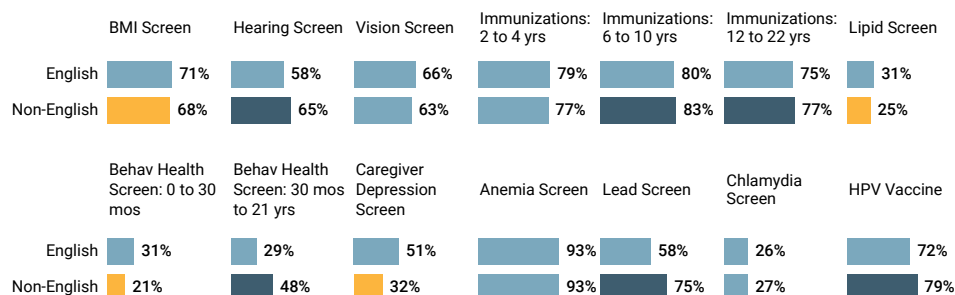
Pediatric Chronic Disease: by Race/Ethnicity, 7/1/19-6/30/20



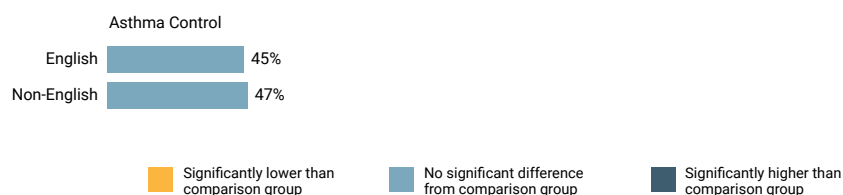
Pediatric Preventive Care Composite: by Language, 7/1/19-6/30/20



Pediatric Preventative Care: by Language, 7/1/19-6/30/20

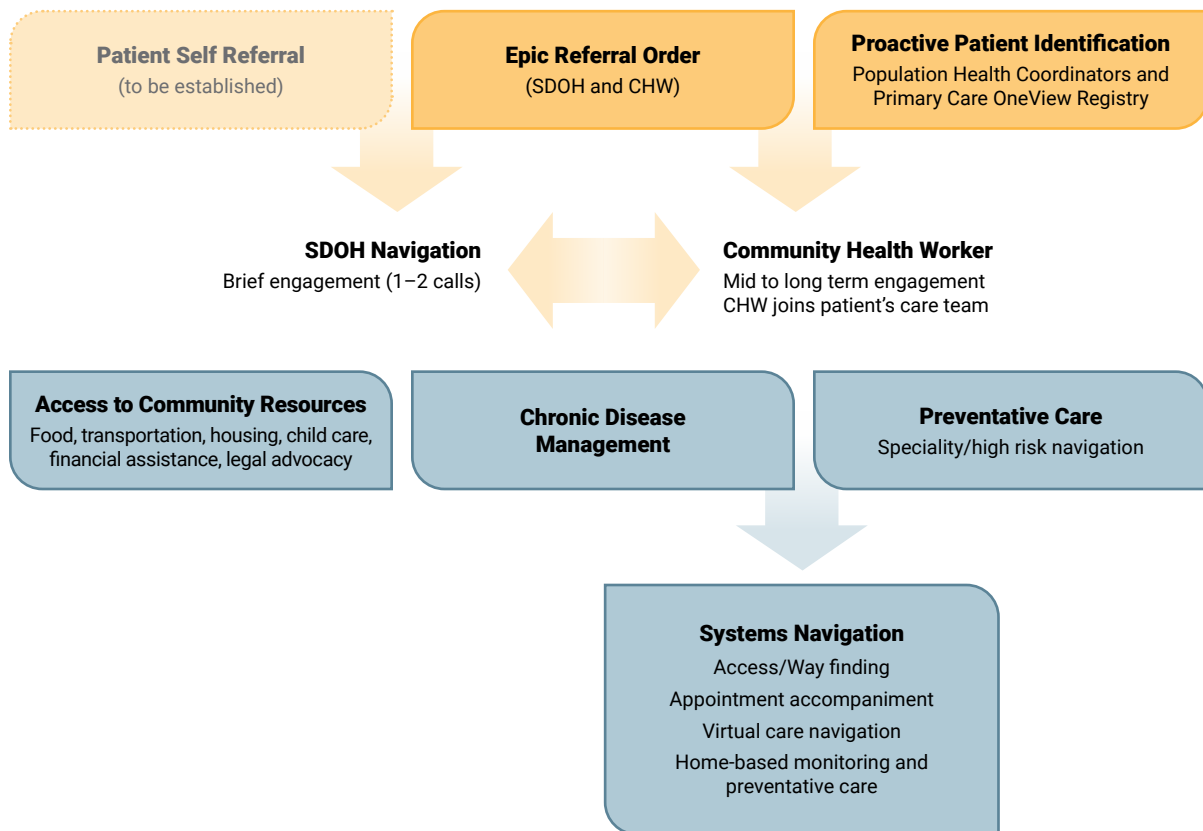


Pediatric Chronic Disease Care: by Language, 7/1/19-6/30/20



Mass General recently convened a team consisting of Primary Care leadership, Population Health Management, Community Health, the Integrated Care Management Program, the Center for Quality and Safety and the Disparities Solutions Center to prioritize the effort and develop a set of interventions to reach uniform high quality. The Primary Care Division, along with Population Health Management, the Community Health Division and the Mass General Medicaid ACO Team have piloted interventions with at-risk patients, including the use of health navigators, community health workers, and targeted supports to address social determinants of health such as food insecurity. In addition, practices have reallocated staff to help patients learn to use Patient Gateway and have adopted new workflows for screenings. The additional resources available with the adoption of the Mass General Structural Equity 10-Point Plan will allow the team to bring these interventions to scale in 2021.

Future State: Proactive Patient Identification for SDOH, Chronic Disease and Preventive Navigation



June 2020



Moving Forward: 2021 Vision and Goals

The year 2020 has been intensely challenging as the COVID-19 pandemic exposed the rampant and deep disparities in health and socioeconomic status facing so many of our neighbors. Yet, these challenges brought opportunity and hope in the form of widespread public awareness of racial inequities and open conversations about structural racism. Organizations like Mass General and Mass General Brigham are examining our practices and acknowledging the structural racism that exists in our institutions. More importantly, we are implementing bold plans to make Mass General a more welcoming, inclusive and equitable organization for our patients and workforce.

The Disparities Solutions Center, in partnership with the Center for Quality and Safety, commit to continued exploration of our quality and safety metrics, seeking out disparities and convening teams to eliminate them. We are thrilled to have the engagement and commitment of our colleagues throughout Mass General, as well as the new structure and resources to support our ongoing equity improvement work via the Structural Equity 10-Point Plan. Although the COVID-19 pandemic slowed some of our improvement projects this year, we are well-positioned to ramp them up in 2021. This commitment is evident in our 2021 Institutional Quality and Safety Goals, where we strive to *“Accelerate improvement in reducing disparities in clinical care and patient experience through Initiative 4 of the Mass General Structural Equity 10-Point Plan to Assure Equity in Access to, and Delivery of Clinical Care.”*



We approach this work with humility and a deep commitment to improve healthcare equity for all.



References and Appendices

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Appendix A: Methods and Data Collection

The data in this report are drawn from a wide variety of institutional sources (see Appendix B for a complete list of data sources). The time periods vary depending on the measure and availability of data being presented. In several cases, groups needed to be combined into White and Other, and English-speaking and Other groupings to meet minimum sample size requirements. We recognize the sensitivities and limitations inherent in combining multiple racial and linguistic groups in this manner and seek to limit this practice when sample sizes are sufficiently large for more nuanced analysis between groups. For some measures, multiple years of data have been combined to ensure that sample sizes are adequate to draw meaningful conclusions. White and English-speaking groups are used as the comparison group for statistical analyses throughout the report. These populations are used as comparison groups to succinctly quantify disparities between historically privileged White and English-speaking patients, and patients of color and speakers of other languages, so that efforts to reduce disparities can be implemented. Finally, the naming conventions for the data elements are based on the nomenclature of the data sources. This explains why in some cases “White” is used, while in other cases “Non-Hispanic White” is used.

Collection of Data on Race, Ethnicity, and Language at Mass General

In July 2014, Mass General transitioned from its existing registration and billing system to Epic as part of the Partners-wide eCare implementation. In doing so, Mass General changed its race and ethnicity data collection slightly. In the past, when patients presented for registration, registrars asked them to identify first their race and then their ethnicity using categories that were standard across the state; whether a patient identified as Hispanic/Latino was included in the question about race. During registration in Epic, registrars now ask patients to first identify their ethnicity, then race, and then answer the Office of Management and Budget (OMB) standard question “Hispanic/Latino: Yes/No.”

With the transition to Epic, the category lists for both ethnicity and race remain largely the same, using pre-existing lists as a model. Training surrounding the collection of this data remains the same as well. When a patient asks why Mass General requests this data, registration staff are trained to explain that we collect this information to better serve our diverse patient population. Because self-identification is the gold standard for collecting data on race and ethnicity,¹⁸ registrars are trained never to enter their perception of the patient’s race or ethnicity. If a patient does not wish to provide this information, registrars select the value of “Declined.” Patients rarely decline to answer these questions; only 3% declined to provide their race in calendar year 2019.^{vi} If a patient’s stated race or ethnicity is not an option available to registrars in the system, the patient is registered with a code of “Other,” and additional information is entered in the free-text fields to communicate the person’s self-reported race or ethnicity.

Registrars continue to collect data on patients’ preferred languages with the question: “In what language do you prefer to discuss health-related concerns?” With the implementation of Epic, registrars now ask an additional question regarding language preferences: “In what language do you prefer to receive written materials?”

Patients are also asked if they need an interpreter to help them communicate with their providers and understand their care. This is also noted in their patient record within Epic.

^{vi} Among pediatric/adult inpatients; newborns excluded.

Similarly, the data collection around patient disabilities slightly expanded with the implementation of Epic. In addition to pre-existing values (Blind/Visual Impairment, Cognitive, Deaf/Hard of Hearing, Physical/Congenital, Multiple, Declined, None, and Unavailable), Mass General registrars are now able to document Speech Impairments and Special Requests. A free-text comment box accompanies the value entered. As the ambulatory scheduling system and patient placement system (IDX and AllScripts, respectively) moved to Epic as well, this data continues to remain integrated across the front-end to allow for proactive accommodations for inpatients, as well as outpatient practices.

All data collected at the patient's initial Mass General registration, including data on race, ethnicity, language, interpreter needs and disability, are confirmed during subsequent annual registration updates. The accuracy of these data has increased markedly in the last decade as a result of standardizing the methodology for objectively assessing race. We continue to monitor the completeness of data and strive to collect this demographic information on all of our patients.

Appendix B: Data Sources and Dates Presented

Data/Measures	Source of Data/Measures	Dates Presented
Catchment Area Demographics	American Community Survey Data (2010 US Census database with estimates for later years)	CY 2014 – 2019
Patient Population by Setting	EPIC, EPSI (Mass General Billing)	CY 2019
Patient Distribution among Inpatient Services	EPIC, EPSI	CY 2019
Patient Distribution among Ambulatory Services	MGH/MGPO Ambulatory Health Equity Dashboard, EPIC/EDW	CY 2019
Ambulatory Quality Measures	eCare, EDW Quality Insight database	July 2017 – June 2020
Patient Experience: HCAHPS & CG-CAHPS	QDM (external system with patient satisfaction data)	CY 2017 – 2019
Caring for Patients with Limited English Proficiency	Medical Interpreter Services	FY 2019 – 2020
Obstetrics/Gynecology Measures	Chart Reviews, D4Q, Vizient	CY 2016 – CY 2019

Mass General Diversity and Inclusion Statement

Because of diversity we will excel. We think broadly about diversity and everything that makes us unique. It is core to our mission. Our differences make the MGH a more interesting and distinctive environment in which to work and are an important means of providing the very best care to every one of our patients, regardless of race, ethnicity, gender, gender identity, religion, age, sexual orientation, disability, life experiences, geographic backgrounds, skills and talents among others. We will not excel without recognizing and appreciating everyone's perspectives.

Through inclusion we will respect. Together we work hard to make this hospital a diverse and inclusive place of healing. Encouraging a broad range of opinions, ideas and perspectives drives creativity, innovation and excellence. Our continued engagement in our nationally recognized initiatives and programs highlights our commitment to diversity and inclusion. But this ongoing work will not be complete until every employee, every patient, every family member, every visitor feels safe, respected, welcome, comfortable, supported and accepted within our walls.

Focused on equity we will serve, heal, educate and innovate. Our job is to improve health and save lives, regardless of what our patients or colleagues look like, where they come from, what they believe, or who they love. Issues of equity and justice are not separate but rather intertwined with patient care, education, research, and community health. Targeting inequality enhances the quality of care for all. We believe in treating our patients and each other with the dignity that every human being deserves.

Massachusetts General Hospital—strengthened by diversity, unified through inclusion, committed to equity.

Everyone is appreciated and valued here.





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