Estimating the Impact of COVID-19 on the Health Care System

Updated September 15, 2020
As part of its efforts to support the Commonwealth with insights about the impact of the COVID-19 pandemic on the Massachusetts health care system, the Health Policy Commission (HPC) has compiled the most recent national and state information available to understand the range of potential impacts.

In the following slides, the HPC:

- Summarizes select industry reports and other economic and survey data on health care utilization and spending and provider and payer impacts, and
- Using Massachusetts utilization and spending data, models differential impacts of the pandemic on use of care by service category, provider organization and sector.

The HPC will continue to analyze the impact of COVID-19 on spending and utilization in Massachusetts as data becomes available and monitor health system changes to inform policy efforts during and after the crisis.
Summary of new industry reports and studies of the impact of the COVID-19 pandemic on spending and utilization through mid-May, after most states have reopened to varied extents.

Continued discussion of the implications of the pandemic on and opportunities for the HPC’s work including preliminary results of impact modeling on provider organizations.
The reduction in health care utilization and spending in April was dramatic, with declines of greater than 50% in many categories.

Change in quantity for April 2020 relative to April 2019

<table>
<thead>
<tr>
<th>Hospital Services</th>
<th>Physician Office Visits and Services</th>
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</thead>
<tbody>
<tr>
<td>• Emergency department visits: -50%</td>
<td>Variation by type of care (see next slide)</td>
</tr>
<tr>
<td>• Inpatient discharges: -33%</td>
<td>Overall: -60% to -70%</td>
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<tr>
<td>• Smallest hospitals: -38%</td>
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<tr>
<td>• Largest hospitals: -28%</td>
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<tr>
<td>• Outpatient revenue: -50%</td>
<td></td>
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<tr>
<td>• Operating room minutes: -80%</td>
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<table>
<thead>
<tr>
<th>Prescriptions</th>
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<tbody>
<tr>
<td>Reductions tied to fewer office visits that would initiate new prescriptions</td>
<td>Overall: -10%</td>
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</table>

The reduction in physician care and use of telehealth varied by specialty.

Visit volume (blue = in-person; green = telehealth) for week ending 5/1/20 relative to Jan-Feb 2020


Notes: “F2F” refers to in-person care that is delivered face to face.
Data through mid-May shows an increase in visit volume after steep declines in March and April, with New England rebounding more slowly.

Visit volume (all types) relative to week of March 1, 2020

Sources: Ateev Mehrotra, Michael Chernew, David Linetksy, Hilary Hatch, and David Cutler, “The Impact of the COVID-19 Pandemic on Outpatient Visits: A Rebound Emerges,” The Commonwealth Fund and Phreesia. Data from Phreesia’s clients, which include more than 1,600 provider organizations representing more than 50,000 providers across all 50 states.
Through mid-May, total telehealth claims have held steady even as some office-based care resumed.

Visit volume (all types) relative to January – February, 2020
In the Northeast, telehealth increased from 0.07% of all claims to 11.1% from March 2019 to March 2020, compared to 7.5% in the U.S. overall.
Overall health care employment has dropped 6% nationally since February 2020, with some variation among sectors, but all declining.

Percent change in health care industry employment, by sector, February – May, 2020

Massachusetts reductions from February to April
- Offices of physicians: -17k (-30%)
- Outpatient care centers: -6k (-22%)
- Nursing and home health: -18k (-12%)
- Hospitals: ~0

Sources: BLS: Table B-1. Employees on nonfarm payrolls by industry sector and selected industry detail released on June 5, 2020 and May 8, 2020.
Notes: Overall and figure excludes office of dentists and other health practitioners. "Nursing and home health" includes employment numbers for nursing and residential care facilities and home health care services.
Results of a new survey of Massachusetts providers suggest primary care practices are struggling financially.

A research collaboration across faculty from the state’s medical schools in conjunction with HPC, the Massachusetts Chapter of the American College of Physicians, and other academic partners produced a targeted survey of provider practices from late May to early June 2020 on the impacts of COVID-19.

- Responses from more than 400 practices across all provider types
- Practice-level results are weighted, where appropriate, by provider FTE
- Convenience sample – not necessarily representative

NOTE: Results are preliminary
Primary care practices are considering a range of potential responses, including furloughs, salary or service cuts, and increased consolidation.

Of all practices, % that checked each response (multiple responses allowed). PRELIMINARY RESULTS

Source: Preliminary results from survey of Massachusetts provider practices conducted May 20 to June 10; results weighted by practice FTE
Many primary care practices report an interest and preference for a partial capitation payment system going forward.

Of all practices, subjective favorability of each payment method. DATA ARE PRELIMINARY

Source: Preliminary results from survey of Massachusetts provider practices conducted May 20 to June 10; results weighted by practice FTE
Several estimates suggest a significant dampening of spending for calendar year 2020 (relative to 2019).

<table>
<thead>
<tr>
<th>Decrease in spending from reduction in non-COVID-19 care</th>
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<tbody>
<tr>
<td>- <strong>-4 to -22%</strong> (Milliman Actuarial Consulting)</td>
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<tr>
<td>- <em>Largest magnitude for Commercial</em></td>
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<td>- <em>Smallest magnitude for Medicaid</em></td>
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<td>- <strong>-12%</strong> (implied) (Kronick, May 2020 Health Affairs blog)</td>
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<table>
<thead>
<tr>
<th>Increase in spending due to COVID-19 Care</th>
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<tr>
<td>- 1.6 to 2.7% (Milliman)</td>
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<td>- 1.0 to 1.6% (Kronick)</td>
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The HPC applied estimates in the midpoint of this range to industry reports of spending impacts by category of care to estimate annualized impacts by provider organization type.

Results of Simulated Effects on Massachusetts Providers and Total Spending for Calendar Year 2020

Relatively larger impacts expected for:

- **Community Hospitals**
  - Generally rely on a greater share of revenue is from outpatient care, which has a larger reduction
  - On average, community hospitals were in a more difficult financial position pre-COVID

**Median Days Cash on Hand (FY18), by system**

- **Physician-led Organizations and Community Health Centers**
  - Less inpatient revenue to offset reductions in non-COVID care elsewhere
The HPC can support the Commonwealth with insights about the impact of the COVID-19 pandemic and inform policy efforts during and after the crisis.

Potential HPC work:

- Examine **differential impacts** on different types of provider organizations, for example:
  - Community hospitals and Academic Medical Centers (AMCs)
  - Physician practices, including primary care practices
  - Community Health Centers

- Model impact of potential **market structure changes**, including consolidation pressures resulting from COVID-19

- Evaluate the impact of **temporary** changes in practice and policy (e.g., expansion of telehealth, expanded scope of practice, setting of out-of-network benchmarks, reduction in unnecessary or low-value care, reduction in administrative complexity) and make policy recommendations to **sustain positive changes**

- Explore, with other public and private partners, new/revised payment models for **primary care, behavioral health care, and hospitals** that can provide necessary revenue, while still incentivizing efficient and innovative care delivery

- Evaluate **health system and workforce capacity** to support health planning for potential future infection waves or pandemics

- Target **innovative investments** to foster resiliency within the health care system and communities most impacted by the COVID-19 pandemic and resulting health, social, and economic disruptions (e.g., MassUP)
Summary: Updated Findings of the Impact of COVID-19 on Health Care

As the COVID-19 pandemic produces unique challenges to the Massachusetts health care system, the HPC is leveraging its data assets, research expertise, investment experience, and market knowledge to support policy efforts during and after the crisis. A compendium of industry reports on utilization trends and other COVID-related findings may be found on the HPC’s website.

- Health care spending dropped 30% in April. Overall health care spending in 2020 is still on track to be approximately 10% lower than in 2019.
- Health care spending dropped faster than the overall economy in April (30% vs. 14%), but health care employment dropped slower than overall employment (6% vs. 12%).
- Most Massachusetts hospitals had negative margins in the first quarter of 2020.
- One national for-profit health plan that operates in Massachusetts reported a doubling of net income in April-June of 2020, driven by a 70% medical loss ratio (vs. 83% MLR in Q2, 2019)
- Independent primary care practices in Massachusetts are much more likely to say they will close versus hospital or health system-owned practices.
- Pediatric visits remain far below pre-pandemic levels while adult visits have returned to baseline levels as of mid-June when including telehealth.
- Telehealth visits have declined by about a third from their April peak as adult in-person visits have increased.
Total health care spending in April 2020 was 30% less than the previous year, with substantial variation by category.

Change in spending between April 2019 and April 2020

- GDP: -13.7%
- Personal health care: -30.1%
- Hospital care: -40.7%
- Physician and clinical services: -40.9%
- Other professional services: -50.1%
- Dental services: -60.8%
- Home health care: -33.2%
- Nursing home care: 6.3%
- Prescription drugs: 5.1%
- DME: -20.6%

By mid-June, outpatient visits in the Northeast had returned to 80% of baseline levels when telehealth is included.

Data are presented as a percentage change in the number of visits in a given week from the baseline week (March 1–7). Distribution of states across U.S. census divisions is available at the census website.

Pediatric visits remain far below baseline levels while adult visits are approaching typical rates.

Data are presented as a percentage change in the number of visits of any type (in-person and telemedicine) in a given week from the baseline week (March 1–7).

Source: Ateev Mehrotra et al., *The Impact of the COVID-19 Pandemic on Outpatient Visits: Practices Are Adapting to the New Normal* (Commonwealth Fund, June 2020). [https://doi.org/10.26099/2v5t-9y63](https://doi.org/10.26099/2v5t-9y63)
Changes in visit volume vary by specialty.

Data are only for select specialties shown. The decline shown is reflective of all visit types (in-person and telemedicine). Visits from nurse practitioners and physician assistants are not included.

Source: Ateev Mehrotra et al., *The Impact of the COVID-19 Pandemic on Outpatient Visits: Practices Are Adapting to the New Normal* (Commonwealth Fund, June 2020). [https://doi.org/10.26099/2v5t-9y63](https://doi.org/10.26099/2v5t-9y63)
As of mid-June, visits have returned to baseline levels for many conditions when telehealth is included.

Telehealth visits have declined from their peak in April, but remain far above the pre-pandemic baseline.

Massachusetts Practice Survey: Independent practices are more likely to say that they would close.

Overall likelihood that practice would take each action

- Furlough or lay off employees
- Cut salaries of providers or employees
- Cut services or other operating expenses
- Close the practice
- Generate revenue by providing more services
- Generate revenue by improved diagnostic coding
- Consolidate with other practices
- Sell the practice
- Evolve toward membership-based practice
- Consolidate with hospital or health system

Notes: “Independent” in the survey meant owned by a hospital or health system.
National health care employment remains 5% below February levels. Massachusetts saw a larger drop in physician office and nursing home/home health employment.

Percent change in national health care industry employment, by sector, February 2019 – June 2020

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<tr>
<td><strong>OVERALL HEALTH CARE</strong></td>
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<tr>
<td>Holidays</td>
<td>-2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
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<td>-6%</td>
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<td>-5%</td>
<td>-6%</td>
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<td>-4%</td>
<td>-3%</td>
<td>-2%</td>
<td>-1%</td>
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MA vs US employment changes from February 2020 to June 2020

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<thead>
<tr>
<th></th>
<th>MA</th>
<th>US</th>
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<tbody>
<tr>
<td>Offices of physicians</td>
<td>-14%</td>
<td>-6%</td>
</tr>
<tr>
<td>Outpatient care centers</td>
<td>-8%</td>
<td>-5%</td>
</tr>
<tr>
<td>Nursing and home health</td>
<td>-14%</td>
<td>-5%</td>
</tr>
<tr>
<td>Hospitals</td>
<td>-2%</td>
<td>-3%</td>
</tr>
<tr>
<td>Overall health care</td>
<td>-9%</td>
<td>-5%</td>
</tr>
<tr>
<td>Overall (total nonfarm)</td>
<td>-14%</td>
<td>-9%</td>
</tr>
</tbody>
</table>

Sources: BLS: Table B-1. Employees on nonfarm payrolls by industry sector and selected industry detail released on July 2, 2020, June 5, 2020, May 8, 2020, and March 6, 2020.

Notes: "Overall and figure excludes office of dentists and other health practitioners. "Nursing and home health" includes employment numbers for nursing and residential care facilities and home health care services."
Massachusetts hospital margins were negative in Q1 of 2020 for all cohorts.

Total margin for Massachusetts hospitals for Q4 2019 and Q1 2020

<table>
<thead>
<tr>
<th>March 31, 2018</th>
<th>March 31, 2019</th>
<th>March 31, 2020</th>
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<tbody>
<tr>
<td>Statewide Median</td>
<td>4.1%</td>
<td>4.2%</td>
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<tr>
<td>AMC</td>
<td>4.1%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Teaching Hospital</td>
<td>4.7%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Community Hospital</td>
<td>1.7%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Community-HPP</td>
<td>5.6%</td>
<td>4.8%</td>
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By the end of July, outpatient visits in the Northeast had stabilized at 10% below baseline. Regional spikes in COVID-19 cases depressed visits in those areas.

Data are presented as a percentage change in the number of visits in a given week from the baseline week (March 1–7). Hot spot states were the top 10 states in terms of new cases per capita in the weeks of June 28th and July 4th, according to data from the New York Times. These hot spots were divided into two groups: 1) Arizona, Florida, and Texas, which clearly had a different trajectory of visits, and 2) Alabama, Georgia, Idaho, Louisiana, Nevada, and South Carolina. The Northeast includes Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

Pediatric visits remain 25% below baseline. Behavioral health visits did not drop as dramatically, but remain 15% below baseline levels.

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Percent change in visits from baseline: visit counts include telehealth

Data for only four specialty areas shown to illustrate the range of trajectories. The decline shown is reflective of all visit types (in-person and telemedicine). Visits from nurse practitioners and physician assistants are not included. Behavioral health includes psychiatrists, psychologists, and social workers. Urgent care center visits are not included in adult primary care or pediatrics.

Telehealth visits declined by about a third from their peak in April, and accounted for roughly 10% of visits by the end of July.

Changes in visits by telehealth/office/institutional relative to February baseline

National health care employment remained 4% below February levels, with variation by sector. Physician office employment dropped more in Massachusetts than nationally; hospital employment dropped less.

Percent change in national health care industry employment, by sector, February 2019 – July 2020

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<tr>
<td></td>
<td>-4% OVERALL HEALTH CARE</td>
<td>-4% OVERALL HEALTH CARE</td>
<td>-4% OVERALL HEALTH CARE</td>
<td>-4% OVERALL HEALTH CARE</td>
<td>-4% OVERALL HEALTH CARE</td>
<td>-4% OVERALL HEALTH CARE</td>
</tr>
<tr>
<td>Hospitals</td>
<td>-1%</td>
<td>-2%</td>
<td>-3%</td>
<td>-4%</td>
<td>-5%</td>
<td>-6%</td>
</tr>
<tr>
<td>Nursing and home health</td>
<td>-6%</td>
<td>-6%</td>
<td>-6%</td>
<td>-6%</td>
<td>-6%</td>
<td>-6%</td>
</tr>
<tr>
<td>Outpatient care centers</td>
<td>-8%</td>
<td>-8%</td>
<td>-8%</td>
<td>-8%</td>
<td>-8%</td>
<td>-8%</td>
</tr>
<tr>
<td>Offices of physicians</td>
<td>-7%</td>
<td>-5%</td>
<td>-3%</td>
<td>-1%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Overall health care</td>
<td>-7%</td>
<td>-4%</td>
<td>-3%</td>
<td>-2%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Overall (total nonfarm)</td>
<td>-11%</td>
<td>-9%</td>
<td>-7%</td>
<td>-5%</td>
<td>-3%</td>
<td>-1%</td>
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</table>

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