

The Gap Year for Routine Screenings

After Plunging Early in the Pandemic, A1c Tests, Lipid Panels, Mammograms, Colonoscopies, and Cervical Cancer Screenings Still Not Fully Recovered

KEY FINDINGS:

- Routine preventive screenings declined sharply in March and April of 2020, hitting their lowest points during the first and second week of April, when colonoscopy volumes were down 91%, mammogram volumes were down 96%, cervical cancer screenings were down 72%, lipid panels were down 65%, and A1c tests were down 61% versus the previous year.
- A1c, lipid panel, and cervical cancer screening volumes began to recover, surpassing 2019 volumes in late May and June before starting to decline again in September. Most recent average weekly volumes for these three procedures currently sit below 2019 volumes.
- Mammogram and colonoscopy volumes continued to lag behind 2019 totals throughout the summer of 2020. Volumes for both procedures began to surpass 2019 totals in September and have continued on that trendline.
- Across all routine screening procedures evaluated, none have made up for the ground lost during the height of the pandemic.

EXECUTIVE SUMMARY:

Routine preventive screenings and the early interventions they trigger have been among the most impactful advances in modern medicine. The use of mammograms for breast cancer screening has been [associated](#) with a 20% reduction in breast cancer mortality. Between 1970 and 2016, [colorectal cancer death rates](#) declined 53%, largely due to increased screening. Lipid panel tests to evaluate the amount of fat and cholesterol in a person's blood are a [proven method](#) of spotting cardiovascular risk.

In 2020, however, many Americans took a "gap year" from these routine preventive screenings. At the onset of the COVID-19 pandemic in the U.S. in March and April of 2020, when an estimated 316 million people in 42 states were urged to shelter in place to stop the spread of the virus, and many healthcare providers postponed non-urgent care, patient volumes for some of the most critical preventive screening tests such as mammograms and colonoscopies evaporated.

Overall preventive screening volumes started to bounce back in the summer of 2020 for most major tests, but the significant gap that was created between March and April 2020 has still not been closed. Perhaps more concerning, overall volumes for A1c tests, lipid panels, and cervical cancer screenings began to decline again in September 2020 as COVID-19 cases began to surge across the country.

To provide a more granular look at the impact of COVID-19 on deferral or delay of care for non-COVID-19-related conditions, we compared screening rates over the past two years for a range of common screening tests. Tracking real-world patient data across the U.S. and evaluating procedure frequency from January through October 2020 versus the same period in 2019, we were able to chart the impact of COVID-19 on volume for five common preventive screening tests.

METHODOLOGY:

This research used Komodo's Healthcare Map™, which tracks the patient journeys associated with 325 million individuals in the U.S., to assess the impact of the COVID-19 pandemic on HbA1c tests, cervical cytology screenings (including Pap smears and HPV testing), cholesterol/lipid panels, mammograms, and colonoscopies.

The total number of screening encounters was tracked weekly, on a nationwide basis throughout the U.S., from the week of January 6 to October 19 for both 2019 and 2020. The total volume of screening was then compared for the two time periods for each test.

RESULTS:

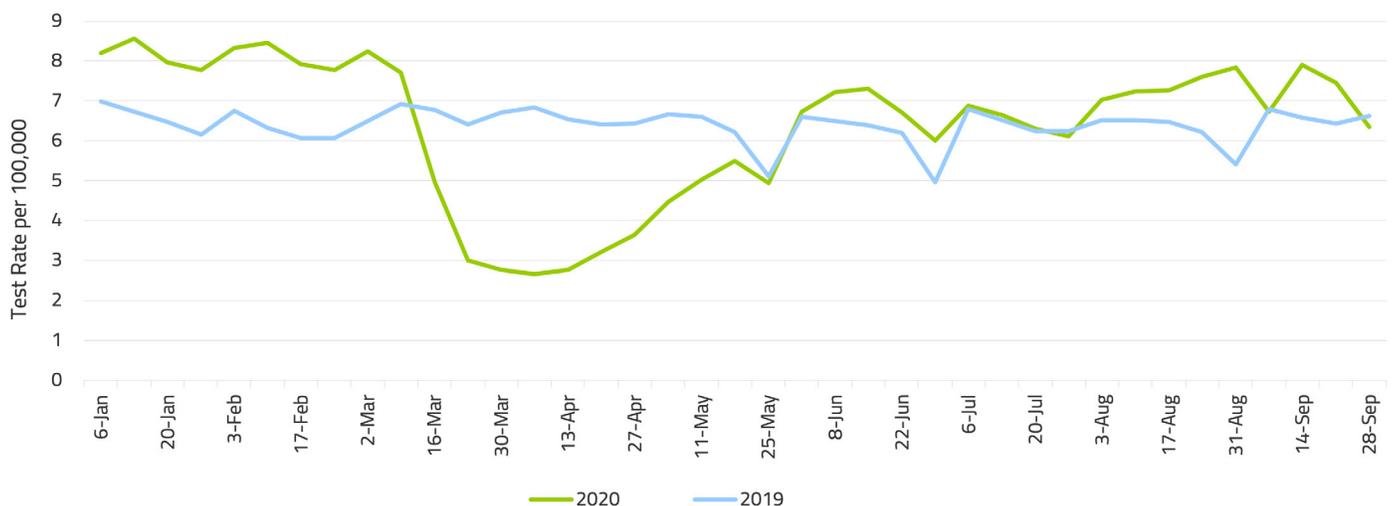
Routine preventive screenings declined significantly in the weeks following widespread shelter-in-place guidelines around the U.S. and began a U-shaped recovery in the summer of 2020. While volumes for some tests appear to have surpassed 2019 volumes in the second half of the year, some have begun to decline again as COVID-19 infection rates have climbed throughout the U.S. in recent months.

A1C Tests Show Signs of W-Shaped Recovery

The chart below depicts the trendline in HbA1c tests, a common screening and monitoring test for diabetes in January–October of 2020 versus the same period in 2019. The sharp drop-off in testing activity can be seen starting in early March as patients began canceling appointments on their own, and dipping lower in April as non-urgent medical appointments were canceled in many regions. A1c tests reached a low point the week of April 6, 2020, when testing rates were down 61% versus the previous year. Volumes began to recover throughout May, ultimately surpassing those of 2019 the week of May 25. In the first week of September, however, volumes began to decline again, and in late 2020 rates of A1c tests again fell below those seen in 2019.

Those numbers may continue to decline as COVID-19 cases continue to surge nationwide and patients and HCPs postpone appointments. Additionally, though tests like A1c can be done through a laboratory without an HCP's oversight, the need for large-scale COVID-19 testing may have overwhelmed labs that would normally carry out these screenings.

A1C TEST RATE PER 100,000: 2020 VS. 2019



Cholesterol Test Volumes Fall in March and September

A similar trend is playing out with cholesterol/lipid panel test volumes, which fell sharply throughout the month of March, reaching a low point during the week of April 6, when volumes were down 65% versus the previous year. After recovering throughout the summer and early fall, lipid panel volumes began to fall again during the first week of September 2020.

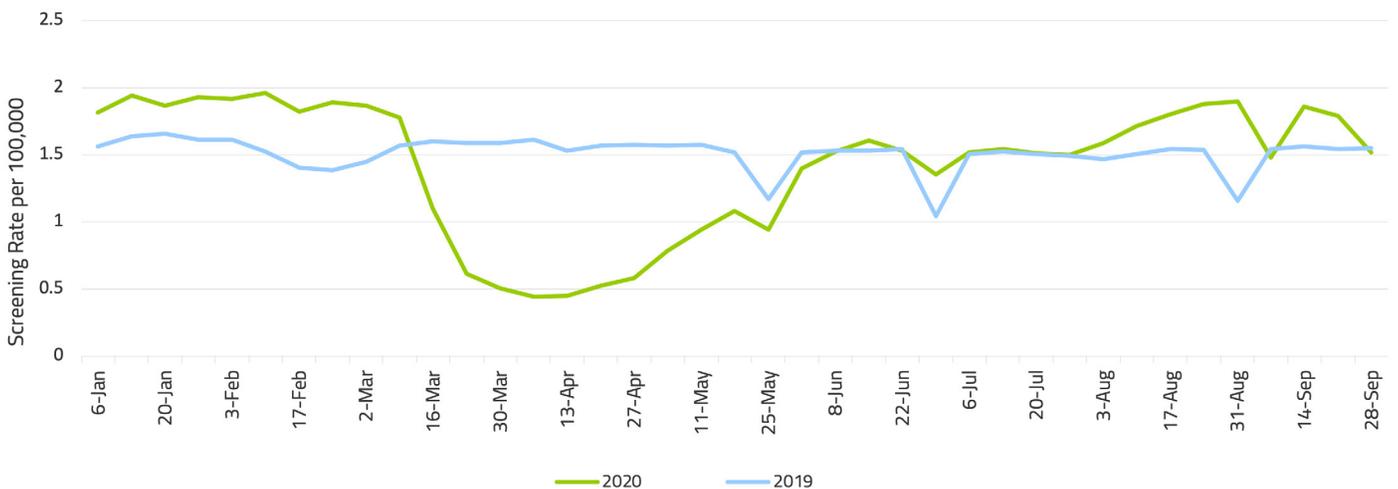
LIPID PANEL RATE PER 100,000: 2020 VS. 2019



Cervical Cancer Screenings Decline After Bouncing Back

Cervical cytology screenings, which include Pap tests and HPV screening, exhibited a similar trend to A1c and lipid panel tests throughout 2020, though with a steeper decline and shallower recovery, likely a result of these tests requiring an HCP, compared to the other tests, which can be accessed through a lab. At the low point for the year – the week of April 6, 2020 – cervical cancer screenings had fallen 72% versus the previous year. Test volumes did not start to consistently surpass those of 2019 until the week of July 27. Test volumes began to fall again the week of September 7.

CERVICAL CANCER SCREENING RATE PER 100,000: 2020 VS. 2019



Mammogram Volumes Virtually Disappear Before Slow Recovery

Mammogram procedures virtually ground to a halt in the early weeks of the COVID-19 crisis, falling 96% versus 2019 levels the week of April 6, 2020. Volumes stayed suppressed throughout much of 2020, only starting to consistently normalize to year-ago volumes the week of September 7, 2020. Mammogram volumes have continued to climb throughout the observed second wave of COVID-19 infections.

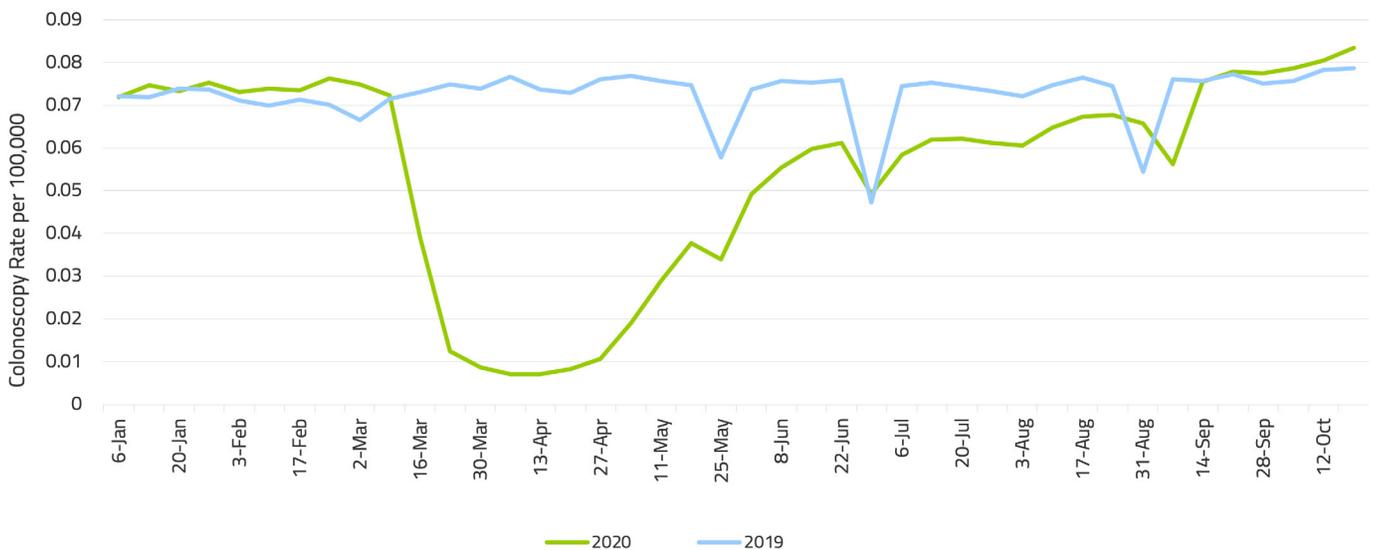
MAMMOGRAM RATE PER 100,000: 2020 VS. 2019



Colonoscopy Volumes Slowest to Bounce Back

Similar to the trend observed in mammography, colonoscopy volumes plummeted in March and April, reaching a low point the week of April 6, 2020, when overall volumes were down 91% versus the previous year. Colonoscopy volumes have been the slowest of the tests observed to recover. As late as the week of September 7, 2020, colonoscopy rates were still 26% lower than those observed in 2019. By the week of September 14, 2020, colonoscopy rates began to normalize to those of 2019.

COLONOSCOPY RATE PER 100,000: 2020 VS. 2019



CONCLUSIONS:

For the last several decades, one of the great healthcare success stories has been the steady increase in preventive screening and its correlation to improved outcomes for some of the world's deadliest diseases. Cancer, cardiovascular disease, diabetes – all of these can trace improvements in mortality and quality of life to increased preventive screening, which allows for early medical and surgical intervention and engagement with appropriate specialists.

But even with all its marked benefits, preventive testing has proven a major challenge for the healthcare system since well before COVID-19 struck. As recently as 2015, one [Health Affairs study](#) found that only 8% of Americans aged 35 and older reported having received all of the appropriate, high-priority clinical preventive services recommended for them; nearly 5% reported having received none of them. What happens when the hard work to improve preventive screening is so dramatically disrupted? And what will the longer-term impacts be of the massive gap in preventive testing that has grown out of the COVID-19 pandemic?

This report highlights the significant behavioral effects of the pandemic on preventive screening and demonstrates how intermittent surges in COVID-19 cases can quickly result in sharp declines in screening volume. More research is required to evaluate the full impact of these declines in important screening on chronic disease management and overall healthcare outcomes. We plan to expand this research to examine screening rates in specific high-risk populations such as those with homozygous familial hypercholesterolemia (at risk for major adverse cardiovascular events), BRCA and HNPCC mutations (at risk for breast and colon cancer), and others. Future analyses of these high-risk groups could also include a more rigorous analysis of diagnoses and interventions. It will be important to factor the learnings from this type of analysis into planned responses to future pandemics in order to ensure continuity of care and early identification of common diseases, even in the face of more urgent healthcare crises.

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