

American baseball player, Yogi Berra, once quipped “*It’s tough to make predictions, especially about the future*”. That comical quote has come to mind recently as a result of the difficulties in making projections of health care costs as a result of the introduction of the SARS-CoV-2 virus. The past 18 months have been most challenging for health care actuaries and it’s not expected to get easier to predict costs over the next 12-24 months.

The US health care system is somewhat unique in the world. Most Americans obtain comprehensive health care coverage through their employer, including the program for federal employees. This was a result of wage freezes imposed by the US government during World War II and employers’ desire to provide an incentive, via health care benefits, to current and prospective employees as a recruitment and retention device. This became a popular approach such that the vast majority of employers in the US now offer health care benefits to their full-time employees. Other government-run safety-net programs exist for veterans (Veterans Affairs), the aged (Medicare), those at or below the Federal Poverty Line (Medicaid), and the otherwise uninsured (The Affordable Care Act Marketplace). For the most part, the system is unregulated and the distance between the individual consumer of services and the payor of those services helps to create an environment where health care costs have increased 3 to 4 times that of general inflation for at least the past four decades¹. The fact that health care costs on a per capita basis declined in 2020 versus 2019 is truly a sign of how COVID-19 has complicated anyone’s ability to make predictions.

This article attempts to outline the major changes that are expected to be experienced in the US health care system in 2021 and 2022, beyond the challenge of predicting the cost of testing the population and treating infected patients. These include the return of utilization to pre-pandemic levels and recoupment of deferred services, increased use of technology like telemedicine to improve service delivery, mental health implications due to the pandemic and social isolation, behavioral changes, long-term effects of the lack of chronic condition management, COVID-19 patients suffering long-term effects from the virus, and provider reaction to lost revenue, health care worker stress, and mitigation efforts to control the spread of the disease among staff and patients.

This article is written as a guide for actuaries and other professionals in their consideration as they attempt to predict the direction and level of health care costs. While based on experiences in the United States, much of what is shared here will have application in other countries around the world. Also, as of the time this article is being written, the pandemic is still going on, albeit with lower infection rates than in 2020 and early 2021, so any resurgence of the virus may influence how patients and providers ultimately react.

Recoupment of Deferred Care

Numerous sources have reported a clear pattern of declining usage of the US health care system in 2020 and early 2021 as a result of the desire for social isolation during the spread of the virus. Inpatient hospital

¹ Petersen KFF Health System: Tracker <https://www.healthsystemtracker.org/chart-collection/u-s-spending-healthcare-changed-time/#item-start>

admissions dropped nearly 30% in April, 2020 versus the year prior while outpatient and emergency room visits dropped nearly 47%².

However, a review of health care utilization through June 2021 and hospital financial reports through the second quarter of 2021 suggests we may be starting to see a return to pre-pandemic utilization levels. Some of the “lost” care will be forgone entirely, like annual physicals and screenings, while other care will be deferred until 2021 or later, such as elective surgeries. Recoupment of some this deferred care in addition to a return to normal utilization levels will, therefore, begin to put pressure on the health care system in late 2021 and into 2022, limited by what capacity providers have to handle any surge in requested care.

Telemedicine

The use of telemedicine increased dramatically during 2020 versus prior years due to the Federal government’s relaxation of the technology’s use for Medicare patients during the pandemic and greater acceptance of its use by providers given their desire to maintain some form of interaction with their patients. Visits via the telephone or the internet peaked at 13% of all medical claim lines in April, 2020 after being nearly 0% previously and have dropped to under 5% by April, 2021³. The central issue to the future of telemedicine, and the overall impact on the cost of care, will be how it is reimbursed as compared to an in-office visit. Telemedicine can avoid costly visits in other settings (like the emergency room for truly non-critical care) but overuse along with reimbursement levels at, or close to, in-office visits could erode any savings and potentially create a more costly component in an already expensive health care system. Currently, telemedicine visits are reimbursed at roughly \$80 per visit whereas an in-office physician visit can average \$145. The acceptance and progression of telemedicine will require close attention going forward as physicians and other health care providers push for greater acceptance with payors and, potentially, for higher reimbursement levels.

Mental Health

Utilization for mental and behavioral health services declined significantly in the early months of the pandemic in 2020 but recovered to just below 2019 levels by September, 2020². However, the stresses from the presence of the virus in the communities, social isolation, and the impact on the economy likely contributed to greater levels of anxiety and depression in the United States. The US Centers for Disease Control and Prevention’s (CDC) Pulse Survey showed the share of adults reporting symptoms of anxiety or depression disorder is significantly higher in 2020 and 2021 (ranging from 25% to 40%) versus 2019 (about 11%)⁴. An American Psychiatric Association (APA) poll reported that 62% of Americans feel more anxious than they did in 2019. That marks a sizable increase over APA polls of the three years prior to 2020, in which the figures ranged between 32% and 39%⁵.

² Strata Decision Technology. National Patient and Procedure Volume Tracker™ Version 12.21.2020

³ Fair Health Monthly Telehealth Regional Tracker

⁴ <https://www.cdc.gov/nchs/covid19/pulse/mental-health.htm>

⁵ <https://www.psychiatry.org/newsroom/news-releases/anxiety-poll-2020>

Additionally, with over 600,000 lives in the U.S. lost to COVID-19 so far, researchers estimate that more than 5 million Americans are in mourning, including more than 43,000 children who have lost a parent⁶. The scale and complexity of the pandemic is potentially creating a public mental health burden that could deplete Americans' physical and mental health for years, leading to more depression, substance abuse, suicidal thinking, sleep disturbances, heart disease, cancer, high blood pressure and impaired immune function. This rise in mental health issues coincident with declines in mental health and behavioral health utilization early in the pandemic may signal potential issues that will need to be addressed after the pandemic subsides.

Behavioral Issues Affecting Health Care

In addition to the mental health issues, changes in human behavior as a result of the pandemic may have implications on long-term health and the associated costs. A recent survey of about 3,000 US adults by the APA found that 42% of respondents reported undesired weight gain. The average amount of weight gained was 29 lbs. (13.1 kg). While that same survey also found 18% of respondents lost more weight than they wanted, with the average loss at 26 lbs.⁷ (11.8 kg), the net impact was an overall weight gain. That same survey reported higher levels of alcohol use to cope with the stress during the pandemic.

Studies show drivers took more risk after the introduction of seat belts and air bags as a result of having a greater sense of security. This mentality could be an influence behind a 7.2% increase in motor vehicle crashes, injuries, and death in the US in 2020 as compared to 2019 despite a large reduction in the amount of car travel⁸. The increased sense of safety due to lower traffic volumes increased unsafe driving behaviors.

These, and other pandemic-induced behavioral concerns, are likely to create health care issues that will need to be addressed in 2021 and beyond.

Chronic Condition Management

While screenings and follow-up encounters dipped initially in 2020 and rebounded back above 2019 levels later in the year, encounters for diabetes, preventive wellness, and hypertension were well below the utilization levels in 2020 as compared to 2019². Additionally, it has been reported that an estimated 9.3 million breast, colorectal, and prostate cancer screenings were missed in 2020⁹. The lost visits for chronic conditions may signal a significant health care crisis in the US as 6 in 10 adults have a chronic disease and 4 in 10 have two or more, according to the CDC¹⁰.

Screenings are intended to catch cancer in the early stages, when it is less deadly, easier to treat, and potentially less costly. While it is too early to measure the effect of the pandemic on cancer diagnoses, doctors across the country anecdotally report that patients are sicker. The increased level of care required

⁶ Proceedings of the National Academy of Sciences of the United States of America, "Tracking the reach of COVID-19 kin loss with a bereavement multiplier applied to the United States"

⁷ <https://www.apa.org/news/press/releases/stress/2021/one-year-pandemic-stress>

⁸ American Automobile Association Research Brief "Travel in the United States Before and During the COVID-19 Pandemic" (July 2021)

⁹ JAMA Oncol. 2021;7(6):878-884. doi:10.1001/jamaoncol.2021.0884 Published online April 29, 2021.

¹⁰ US Center for Disease Control and Prevention (<https://www.cdc.gov/chronicdisease/index.htm>)

to treat these unmanaged conditions will likely play a part in increased utilization and cost of services in 2021 and beyond.

Long-COVID

More studies are needed to better understand the long-term health care issues associated with individuals with Long-COVID. These conditions appear in patients who have recovered from the virus but continue to exhibit symptoms for weeks and months after clearing the infection. A study of adults in Switzerland who had contracted COVID-19 found that a quarter of them still had symptoms for six to eight months following their illness¹¹. There is a wide array of symptoms that can appear.

How long will these Long-COVID patients require treatment? What side effects will be permanent? Will the permanent side effects require continuing care? Answers to these questions will afford us better insights into the needed treatment and cost for care provided to patients suffering long after the initial diagnosis of COVID-19.

Health Care Provider Implications

The decline in inpatient and outpatient volume relative to pre-pandemic levels is creating additional pressure on the finances of health systems. These financial pressures may lead to further consolidation with providers. In fact, physicians continued to leave independent practices to join hospital systems at a faster pace during the pandemic in 2020 than occurred in 2019¹². That's concerning as numerous studies¹³ in the US show that health care costs increased at a faster pace after the consolidation of large health care systems than was experienced prior to the merger, despite claims of cost-efficiencies and other community benefits made to justify the mergers.

Health care providers may leverage the decline in utilization, the need to invest in infection control measures during the pandemic, and the increase in patient volume due to provider acquisitions in negotiations with payors resulting in an increase in cost. This would likely have a greater impact in 2022 versus 2021 given the timing of the discussions between payors and providers and when new reimbursement levels would take effect.

Projections

In addition to the cost of testing and vaccinating for COVID-19, as well as the direct cost of treating COVID-19 patients, the issues outlined in this article are likely to apply upward pressure on health care costs in 2021 and 2022. The cost for treating COVID-19 patients should diminish as more people get vaccinated versus what we experienced in 2020. It is likely that continued deferral of care will outpace any recoupment of care in 2021, but not to the same degree as experienced in 2020. However, pandemic

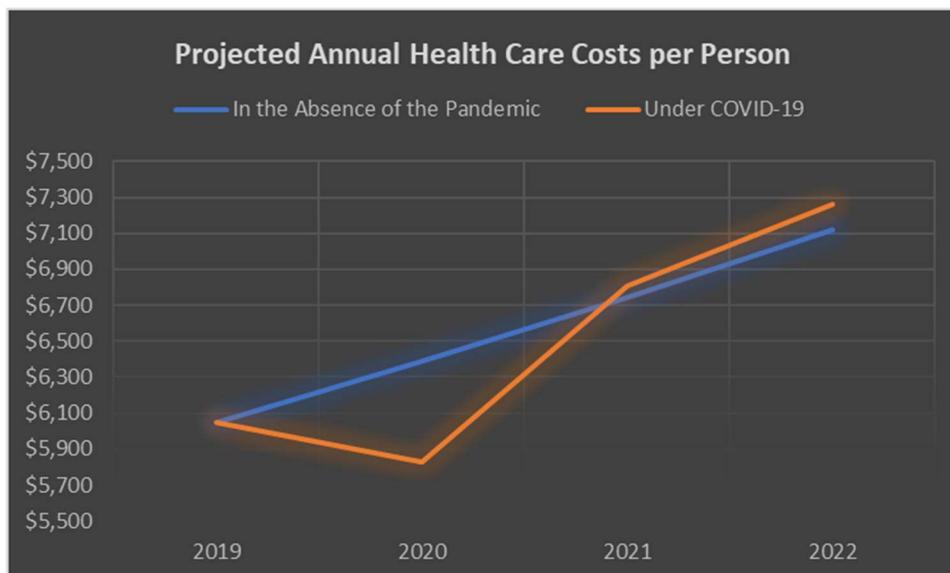
¹¹ PLOS ONE "Burden of post-COVID-19 syndrome and implications for healthcare service planning: A population-based cohort study"

¹² Physician Advocacy Institute "COVID-19's Impact on Acquisitions of physician Practices and Physician Employment 2019-2020", June 2021 Prepared by Avalere Health

¹³ "Who Pays for Health Care Costs? The Effects of Health Care Prices on Wages", Danial Arnold, Christopher Whaley, RAND Health Care. Also, "The Impact of Hospital Consolidation on Medical Costs" by the National Council on Compensation Insurance, July, 2018

induced demand from mental health claims, behavioral health issues, lack of chronic condition management, continued treatment for Long-COVID conditions, and pressure from providers on payors will add to the normal underlying increases in health care costs.

Modeling of health care costs and the associated trends, using a combination of the 2021 Health Care Cost Model produced by the Society of Actuaries¹⁴ and models developed by MorningStar Actuarial Consulting, suggest that health care costs will experience trends in excess of the expected underlying trend in the absence of the pandemic in 2021 and 2022. It is not out of the range of reasonableness for 2021 average per capita costs to be as much as 15% greater than the costs experienced in 2020, recognizing that 2020 experienced a decrease versus 2019 of an estimated 3.6%. Claim cost trends for 2022 are expected to be milder by comparison to 2021 but still above the expected underlying trend assumption of 5.6%.



Source: MorningStar Actuarial Consulting, LLC.

There is much we can learn about our health care system as a result of this dramatic intrusion into our “normal” health care environment. Better education of “consumers” as to best use of health care resources, leveraging digital solutions to promote more cost-effective care delivery, engaging medical experts at the appropriate point in the care lifecycle, and navigating patients through the complex health care delivery system are just a few areas that have the opportunity to improve care and reduce cost. If the right incentives exist, we should be able to learn from the pandemic to create a better and less costly system of delivering care in the United States.

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¹⁴ <https://www.soa.org/resources/research-reports/2020/covid-19-cost-model/>