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Research Article

Economic Consequences of COVID-19 Pandemic on US Health Care Industry

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ABSTRACT

Background: Coronavirus disease 2019 (COVID-19) created an economic crisis alongside a health care crisis. Academic, private and community health care systems are continuing to experience significant lost in revenues.

Objective: Health care industry has never experienced an economic shock that was exacerbated by the need to restrict supply of certain services. From February to April 2020, health care has shed 1.5 million jobs, losing in two months all gains of the past five years.

Data sources: According to Medical Group Management Association, 97% of medical group practices experienced negative financial impact directly or indirectly related to COVID-19 pandemic. Practices reported 55% decrease in revenue and 60% decrease in patient volume since start of COVID-19 pandemic. Kaufman Hall's data from 800 U.S. hospitals showed that as volume and revenue declined, along with rising expenses, resulted in a dramatic fall in margin within a matter of weeks. Decline in hospital volume and revenue drove record-poor margin performance, setting stage for difficult recovery and permanently changed health care delivery. Hospitals operating margins fell significantly compared to same period last year and from March 2020.

Discussion: US Hospitals continue to suffer significant financial damage for three reasons: majority of elective procedures continue to be canceled, hospital capacity expansion for potential COVID-19 patients surge remain increased and demand for non-COVID-19 related health care issues is significantly decreased. US Presidents signed into law a $2 trillion relief bill that contains provisions to mitigate the economic damage inflicted on doctors and hospitals.

Conclusion: COVID-19 pandemic brings an unprecedented economic challenge to US health care system and have set in motion a domino that may impact in an unrecognizable way the face of health care and hospital practices.

Keywords: Economic consequence; COVID-19 pandemic; Health care

INTRODUCTION

Economic consequences of COVID-19 pandemic in U.S

The outbreak of the coronavirus disease 2019 (COVID-19) and its rapid global spread created unprecedented challenges, an economic crisis alongside a health care crisis. With COVID-19 pandemic, equities plummeted, and market volatility rocketed upwards, inducing volatility levels that surpassed those last seen in late 1929 and early 1930s1.

By May 2020, over 40 million people filed for unemployment insurance with an unemployment rate that peaked in April 2020 at 14.7% from 4.4% in March [1].

In August 2020, U.S. Bureau of Labor Statistics reported that as of July 2020 the total payroll employment rose only by 1.8 million with the unemployment rate falling to 10.2 %. Gradual resumption of economic activity resulted in modest job gains that occurred mostly [2] in leisure and hospitality, government jobs, retail trade, professional and business services and some in health care.

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Health care employment decreased 9.5% from February through April 2020, as more than 1.5 million healthcare workers lost their jobs. While the health care sector added over 300,000 jobs in May 2020, overall health care employment remained 6% lower than the same point in 2019. This drop in employment was less than that of non-healthcare sectors, which decreased 12.4% in May 2020 compared to May 2019.

In contrast with the three most recent recessions when the healthcare sector continued adding jobs despite significant drops in employment in the rest of the economy, with COVID-19 pandemic the health care job loss is significant. Pandemic-related job [3,4] loss among healthcare workers has been primarily concentrated in office-based settings. Of the 1.5 million healthcare jobs lost from February through April, 521,000 (35%) were among staff in dental offices.

Combined, workers at physicians' offices (-11%; -290,000 jobs) and the offices of other healthcare practitioners (-24%; -233,000 jobs) accounted for another third (32%) of total healthcare jobs lost from February through April. However, physicians' offices experienced a 2% increase in employment in May, [5] and the offices of other health practitioners also saw a 10% increase in employment. Hospitals (-2%; -122,000 jobs) and nursing and residential care facilities (-4%; -123,000 jobs) had relatively fewer job losses through April, but were among the few settings to continue losing jobs in May (Figure 1).

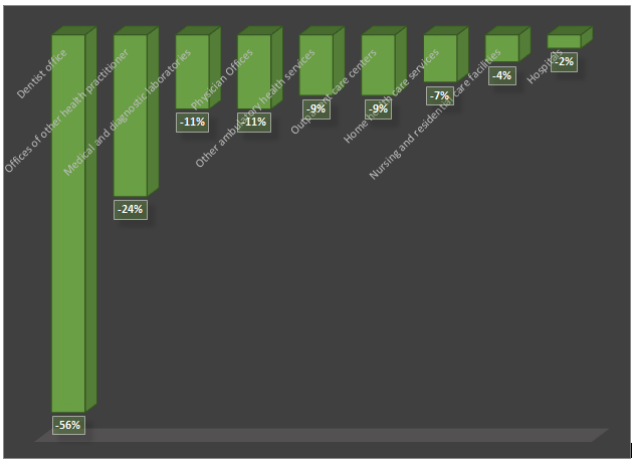

Figure 1: Percent change in employment by healthcare setting from February through May 2020.

As of February 2020, the U.S economy had entered a COVID-19 recession. Consequently, the academic, private and community health care systems are all experiencing significant lost revenues in addition to increased expenditures from facility [6] modifications and increased need for staffing. Until now, health care industry has never experienced an economic shock that is exacerbated by the need to restrict its supply of certain services.

METHODS

Differences between 2009 and 2019 recessions in health care and economy

The National Bureau of Economic Research defines a recession as "a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, [7] industrial production, and wholesale-retail sales."

Recessions are often described by the shape the economic data makes in graphs during recession and/or recovery (Figure 2).

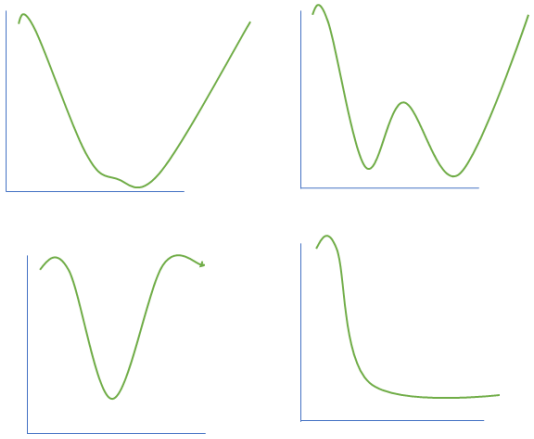

Figure 2: Commonly shaped recession terms reflected the economic data are U-shaped, W-shaped, V-shaped, and L-shaped.

In 2008, the Great Recession was catalyzed by the crisis in subprime mortgage-backed securities and led to some of the highest recorded rates of unemployment and home foreclosures in the U.S. since the Great Depression [8]. This was a U-shaped recession with a longer period before recovery. Even after growth resumed, it took 10 years before employment recovered to pre-crisis levels [9].

Health care has traditionally cushioned the blow of non-health sector job losses during and immediately following economic downturns. Job losses during the Great Recession would have been larger had health care employment not continued to grow. By 2010, there were 8.6 million fewer jobs than at the end of 2007 when the recession began; the loss would have been 9.2 million had health care not added nearly 600 thousand jobs. It took until November 2014 (65 months into the economic expansion) for non-health jobs to return to their pre-recession level [10,11], at which point health care had grown by 1.7 million jobs.

Data from the American Hospital Association suggests that every hospital job supports two additional jobs in the community. The same information shows that every $1 spent by a hospital supports roughly $2.30 in additional business activity elsewhere [12]. Up until 2020 the health care industry has been relatively immune from recessions. With COVID-19 pandemic the economy has entered a recession that is shaping up to be different. This time, health care looks to be contributing to instead of counterbalancing an accelerating economic calamity.

Impact of COVID19 pandemic on hospitals revenue

According to the Medical Group Management Association, 97% of medical group practices have experienced a negative financial impact directly or indirectly related to COVID-19. On average, practices report a 55% decrease in revenue and a 60% decrease

in patient volume since the start of COVID-19 public health emergency [13].

In employed physician networks, providers whose compensation is tied directly to production faced an immediate loss of income. Providers on pure productivity, such as compensation per wRVU or revenue minus expense models [14], were the most profoundly impacted.

Many hospitals have limited liquid assets and may not be capable of absorbing large financial shocks while also mobilizing sufficient resources to respond to the pandemic. Also, hospitals rely on surgical revenue (essential and elective procedures) and on outpatient revenue, which is affecting their financial stability during COVID-19 related restrictions on hospital services [15].

Kaufman Hall's data from more than 800 U.S. hospitals showed that as volume and revenue declined, along with flat to rising expenses, resulted in a dramatic fall in margin within a matter of weeks. This plunged nonprofit hospitals [16], which historically operate on thin margins, deep into the red. Hospitals across the country suffered a brutal month in April and May 2020 [17]. Steep decline in hospital volume and revenue drove record-poor margin performance setting the stage for not only for a difficult recovery, but a permanently changed health care delivery environment.

RESULT AND DISCUSSION

There are three major reasons why nation's hospitals suffered significant financial damage due to COVID-19 pandemic

Elective procedures were canceled: In the wake of President Trump's National Emergency declaration on March 13, 2020, multiple health agencies, including the Surgeon General of The United States, the Centers for Medicare & Medicaid Services (CMS), and the Centers for Disease Control and Prevention (CDC) [18], followed by more specific guidance from the American College of Surgeons (ACS) recommended that American hospitals cancel/postpone all "elective" surgical procedures to focus resources on the crippling impact anticipated with COVID19 spread.

Elective admissions accounted for more than 30% of total inpatient hospital revenue. Elective procedures, especially orthopedic and cardiac surgical procedures, are among the most profitable services for hospitals. By one estimate, hospitals earn $700 more for elective admissions than for admissions through the emergency department. Furthermore [19], for many hospitals, outpatient revenue now equals inpatient revenue, elective or otherwise in the days that followed this cancellation, many hospitals and health systems projected adverse financial effects totaling hundreds of millions of dollars as a result of canceling or postponing high margin "elective" surgeries to be able to adequately treat expensive, complex patients affected by COVID-19 [20]. As the elective surgeries were postponed, the professional services revenue associated with these cases was postponed as well or lost altogether.

Hospital capacity expansion for potential surge increased: Currently, hospitals are actively expanding their capacity for basic and critical care beds. Important resources such as personal protective equipment and drugs must be preserved and sourced, often at extraordinary expense.

Adjusted expenses were up both year-over-year to budget across all metrics for hospitals of all sizes in April. Total Expense per Adjusted Discharge year-over-year increases ranged from a low of 35% for the nation's largest hospitals of 500 beds or more, to a high of 68% for the nation's smallest hospitals of 0-25 beds [21].

Demand for non-COVID19 related health care decreased: Even more troubling, reduced rates of admission for heart attacks, strokes and other common emergencies suggest that patients may be avoiding necessary care out of a fear of going to the hospital. In nine major U.S. hospitals, visits for a common but serious kind of heart attack have fallen by nearly 40 %. Unfortunately, these declines were seen even in places without major COVID-19 outbreaks [22].

CONCLUSION

COVID-19 pandemic continues to represent an unprecedented medical and economic challenge for the U.S health care system. Likely the process of reaching a new health care equilibrium will last well into 2021 and perhaps in the years to come. However, COVID-19 pandemic has already set in motion a series of changes that will impact the face of health care and our practices with a new normal that is not yet recognized or predicted.

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