**Q7: Government Rescue Package: Sector Healthcare Becomes A Darling!**

In responding to Coronavirus pandemic, President Trump signed into law the Coronavirus Preparedness and Response Supplemental Appropriations Act of 2020. This $8.3 billion package provides funding for the country’s response to coronavirus, including emergency telehealth waiver, vaccine development, and assistance for affected small business[[1]](#footnote-1).

Later, the federal government also adopted Coronavirus Aid, Relief, and Economic Security Act (CARES Act), providing additional $2 trillion stimulus package to sector healthcare. In CARES Act, additional federal money is appropriated for special programs in the healthcare-related provisions. Notably, the bill extends funding for several healthcare programs, including Medicaid Disproportionate Share Hospital, National Health Service Corps, Community Health Centers, and Teaching Health Centers that operate Graduate Medical Education programs. CARES Act further expands Medicare telehealth flexibility, including for federally qualified health centers, rural health clinic and home dialysis patients. The bill temporarily lifts the Medicare sequester and institutes an add-on payment for hospital in-patients with COVID-19[[2]](#footnote-2).

Highlights of these two Acts include:

1. **Hospital systems**

In CARES Act, it provides new $100 billion for hospitals and healthcare providers in responding to concerns from the healthcare community over the intense impact of covid-19 response. It also provides $250 million for hospital preparedness program grants or cooperative agreements with current grantees, subgrantees or other entities meeting criteria. Section 3708 provides prompt economic assistance to healthcare providers on the front lines fighting the covid-19 virus, helping them to furnish needed care to affected patients. The payments for hospital, physician, nursing home, home health and other care is boosted. Section 3710 increases the payment that would otherwise be made to a hospital for treating a patient admitted with COVID-19 by 20 percent. Section 3719 accelerates payment program during the COVID-19 emergent period.

1. **Safety device manufacturers and PPE**

In Coronavirus Emergency Appropriations Act, pharmaceuticals and medical supplies such as masks and personal protective equipment are provided to support healthcare preparedness and Community Health Centers to improve medical surge capacity, taking up $1 billion.

1. **Telemedicine**

In Coronavirus Emergency Appropriations Act, $500 million is estimated to be spent in telehealth which allows Medicare beneficiaries to receive telehealth services from home, without the potential risk of exposure associated with visits to medical care facilities. Telehealth services can be provided to Medicare beneficiaries via phone if the phone allows for audio-video interaction between the provider and the beneficiary. Patients in rural areas or have chronic diseases such as dialysis can get more care in the safety of their home.

In CARES Act, Section 3212 declares that telehealth network and telehealth resource center grant program will expand funding for evidence-based telehealth networks and telehealth technologies by $29 million for each fiscal year from 2021 through 2025.

1. **Veterans’ healthcare[[3]](#footnote-3)**

The Department of Veterans Affairs (VA) will receive $19.6 billion in additional funding to fight the pandemic. The majority of the money allocated to VA will go directly to the Veterans Health Administration. This funding will provide essential medical services, including vital medical and protective equipment, testing kits, personal protective equipment (PPE), and medical supplies to support growing demand for health-care services at VA facilities and through telehealth services. Provisions in the bill require VA to provide PPE to all home health-care workers serving veterans at home and in the community. To support VA staff working overtime during the COVID-19 pandemic, the CARES Act waives pay caps for VA staff so they can be fully compensated for hours served.

The funding provided by the CARES Act will ensure VA is able to provide additional care and support for the most vulnerable veterans. The most notable change in how veterans are able to receive VA health care during the pandemic is the expansion of telehealth services. Funds to bolster telehealth capabilities through increased telework and call center capabilities will deliver health care and mental health services while helping mitigate the risk of virus transmission.

1. **Extra financial support for CDC and NIH**

Coronavirus Emergency Appropriations Act funds $2.2 billion for the CDC to support federal, state, and local public health agencies to prevent, prepare for, and respond to the coronavirus, and $475 million of it must be allocated within 30 days. As for vaccines, therapeutics, and diagnostics, NIH are funded $826 million for basic research and development.

In CARES Act, $4.5 billion is available for CDC from Fiscal Year 2020-2022 for public health preparedness and response. And $945 million for NIH to support the expansion of research plans under the first supplemental.

1. **R&D joint ventures with pharma**

CARES Act provides $3.5 billion for the Biomedical Advance Research and Development Agency to support the development of countermeasures, vaccines and other technologies, treatments and therapies.

1. **Other biotech involved in vaccine and drug development**

Biotech companies also get funding from government for COVID-19 treatments development.

BARDA will provide Mesa Biotech, Inc. of San Diego, California, with technical expertise and $561,330 in immediate funding to pursue eventual Food and Drug Administration (FDA) approval or clearance of its diagnostic test. With BARDA’s support, the company can complete the development work necessary to request Emergency Use Authorization (EUA) from the FDA for the Accula COVID-19 point-of-care test within two months of the award. The Accula COVID-19 diagnostic test requires minimal sample handling, and a 30-minute sample-to-result time[[4]](#footnote-4).

Besides, Emergent BioSolutions has received $14.5 million in funding from the Biomedical Advance Research and Development Agency to speed the development of expedite COVID-19 plasma therapy[[5]](#footnote-5).

1. **Small business**

Apart from funding the healthcare-related provisions, $ 1 billion in loan subsidies are available to help small business, small agricultural cooperatives, small aquaculture producers, and nonprofit organizations which have been impacted by financial losses as a result of the coronavirus outbreak. This funding could enable the Small Business Administration to provide an estimated $7 billion in loans to these entities[[6]](#footnote-6).

We suppose that sector healthcare is comparatively robust under serious economic circumstance because of the government rescue packages and supports. This information inspires us that healthcare can be a protected sector.

Especially, we find telehealth as a promising sector within the Sector Healthcare. With more and more attention and funding, telehealth will develop rapidly. Also, under the circumstance of covid-19, people will quickly adapt to online medicine and feel comfortable to use it, which will be an opportunity for the development of telehealth. We, as students with data analysis backgrounds, can help telehealth companies to analyze their huge amount of patient data and provide advanced online medical services with AI techniques. Actually, we have seen may job opportunities in this area these days. Despite the current downturn in the labor market, we find that there are still many emerging opportunities in healthcare analysis, giving us confidence that the sector we are experts in would not be as severely impacted by current crisis.

**Q8: Social Implications of An Uneven Market Crash**

We rank the weighted average of Value Retention of different sectors, and their performance are shown as below.

**Table 2 Weighted average of Value Retention of different sectors**

|  |  |
| --- | --- |
| **GICS.Sector** | **Weighted\_VR (%)** |
| Consumer Staples | 76.50 |
| Health Care | 72.11 |
| Communication Services | 70.97 |
| Information Technology | 69.34 |
| Consumer Discretionary | 68.83 |
| Utilities | 63.93 |
| Materials | 63.25 |
| Real Estate | 60.95 |
| Industrials | 57.78 |
| Financials | 57.15 |
| Energy | 44.29 |

It can be seen that sectors like Health Care, Communication Services, and Information Technology are relatively better protected under covid-19 with less decrease in value. We regard sectors in this condition as chance of survival group. By contraries, sectors like Industrials and Energy are relatively less immune to sudden crashes due to covid-19 with dramatic decrease in value. We regard sectors in this condition as risk of collapse group.

We find that there are significant differences in education status between these two groups. According to U.S. Bureau of Labor Statistics, among the employed, the likelihood of working in a management, professional, or related occupation increases with educational attainment. By contrast, the likelihood of working in service occupations; natural resources, construction, and maintenance occupations; and production, transportation, and material moving occupations decreases by educational attainment.

In 2016, the majority of employed people with at least a bachelor’s degree worked in management, professional, and related occupations. Sixty-three percent of people with a bachelor’s degree, 85%with a master’s degree, 91% with a professional degree, and 94% with a doctoral degree worked in this occupational group.

Workers with less than a high school diploma had the highest likelihood of being employed in service (32%); natural resources, construction, and maintenance (25%); and in production, transportation, and material moving (25 %) occupations. Less than 1 in 10 were employed in management, professional, and related occupations.

Workers most likely to be in sales and office occupations were those who had at least a high school diploma but did not have an advanced degree.

In other words, the sectors of chance of survival group such as Health Care, Communication Services, and Information Technology are mostly the social clubs of employment of highly educated and elite workforce, while blue-collar contrast mostly in the groups with sectors already at the risk of collapse.

To conclude, the market may encounter even more of inequality of job opportunity hence income and wealth after corona virus. People with low education level will face with high risk of losing job and worse health condition due to payment failure.

手机屏幕截图

描述已自动生成

**Figure 1 Occupations vary by education**

1. https://www.asco.org/practice-policy/policy-issues-statements/asco-in-action/congress-passes-funding-bill-respond [↑](#footnote-ref-1)
2. https://www.hklaw.com/en/insights/publications/2020/03/coronavirus-response-cares-act-summary [↑](#footnote-ref-2)
3. https://www.legion.org/veteranshealthcare/248698/covid-19-stimulus-bill-provides-nearly-20b-va [↑](#footnote-ref-3)
4. https://www.hhs.gov/about/news/2020/03/18/hhs-supports-mesa-biotech-develop-rapid-diagnostic-detect-novel-coronavirus-infections.html [↑](#footnote-ref-4)
5. https://techcrunch.com/2020/04/03/emergent-biosolutions-gets-14-5m-in-federal-funding-to-expedite-covid-19-plasma-therapy-development/ [↑](#footnote-ref-5)
6. https://www.asco.org/practice-policy/policy-issues-statements/asco-in-action/congress-passes-funding-bill-respond [↑](#footnote-ref-6)