

Executive Summary

The Future of American Health Care Delivery

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Executive Summary

American society finds itself in a Dickensian dichotomy: we have witnessed in the last 50 years some of the most significant technological and medical breakthroughs in human history, while at the same time experiencing high levels of health care inequity and the medical (not to mention economic) fallout of a global pandemic. This report from DesignIntelligence, “The Future of American Health Care Delivery,” dives into the United States’ twentieth-century health care history before examining the dramatic impacts of the 2020 coronavirus pandemic both through the lens of media and nonprofit reports as well as the ground-level perspectives of health care staff and administrators.

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01

50-Year Trends

By looking at the major health care trends of the last 50 years, both positive and negative, we can adjust current decision-making and prepare for the future.

01

50-Year Trends

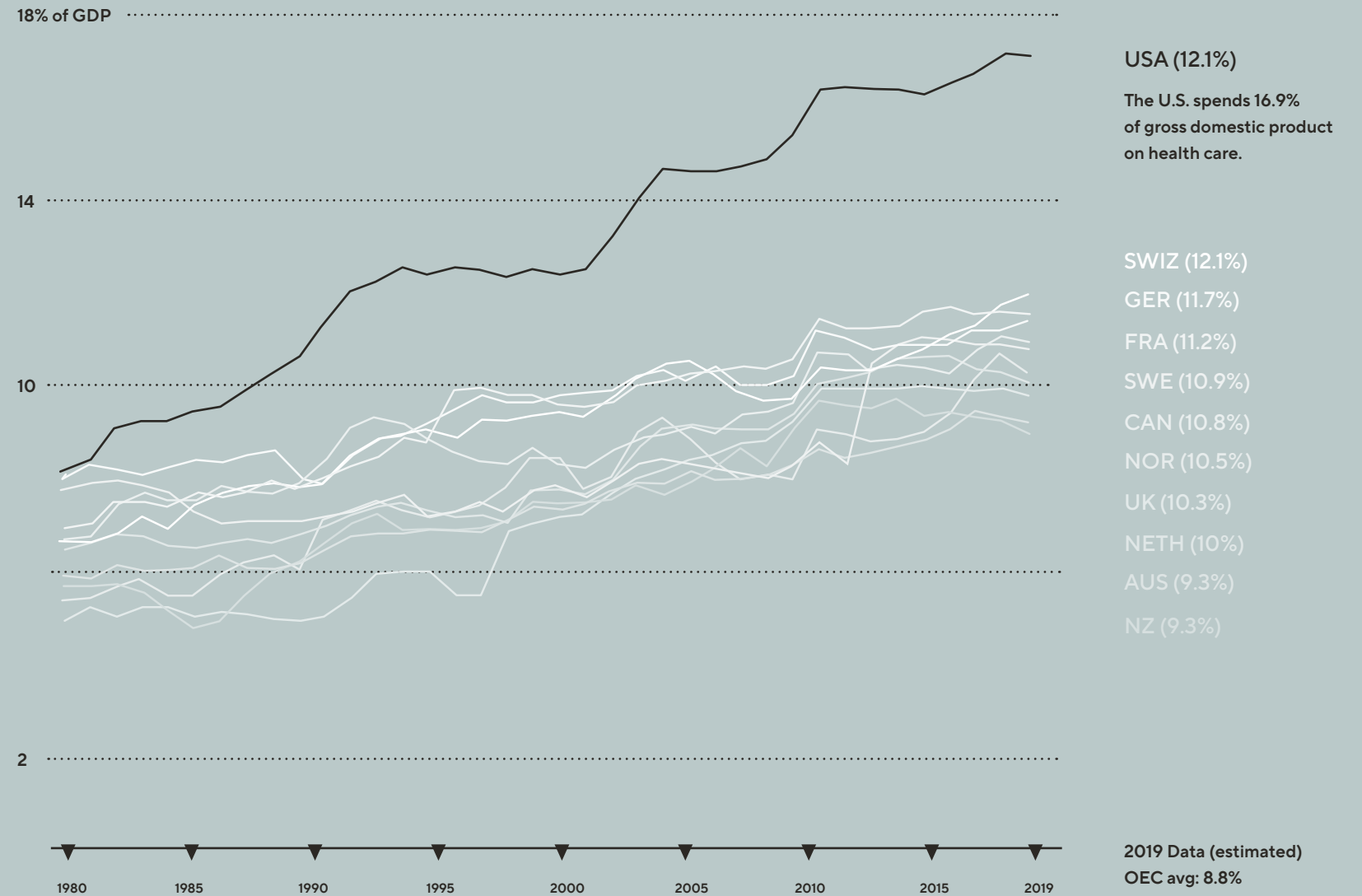
The Good & Great

In 1965, President Johnson signed Medicare and Medicaid into law. Since then, a number of other laws have increased protections for patients, including COBRA, HIPAA and the Affordable Care Act. Though the cost of insurance has steadily risen since the mid-1960s, **several measures have been put in place to make care more affordable**. The country has also seen incredible developments in medical science, most significantly the mapping of the human genome in 2000.

The Uncertain & Unequal

The Commonwealth Fund, a private research foundation, issued a report in 2019 comparing U.S. health care indicators to 10 other countries. The report found that **the U.S. spends nearly double on health care yet has the lowest life expectancy and highest suicide rates**. Moreover, the country has the highest chronic disease burden and one of the highest rates of hospitalization from preventable causes.

Health Care Spending as a Percent of GDP, 1980-2019



Source: Roosa Tikkanen and Melinda K. Abrams, *U.S. Health Care from a Global Perspective, 2019: Higher Spending, Worse Outcomes* (Commonwealth Fund, Jan. 2020). <https://www.commonwealthfund.org/publications/issue-briefs/2020/jan/us-health-care-global-perspective-2019>

02

The Spotlight

The COVID-19 pandemic revealed a legacy of intrinsic problems across the U.S. health care industry. Yet it also brought about a new understanding and appreciation for both the medical technology and our health care workers.

02

The Spotlight

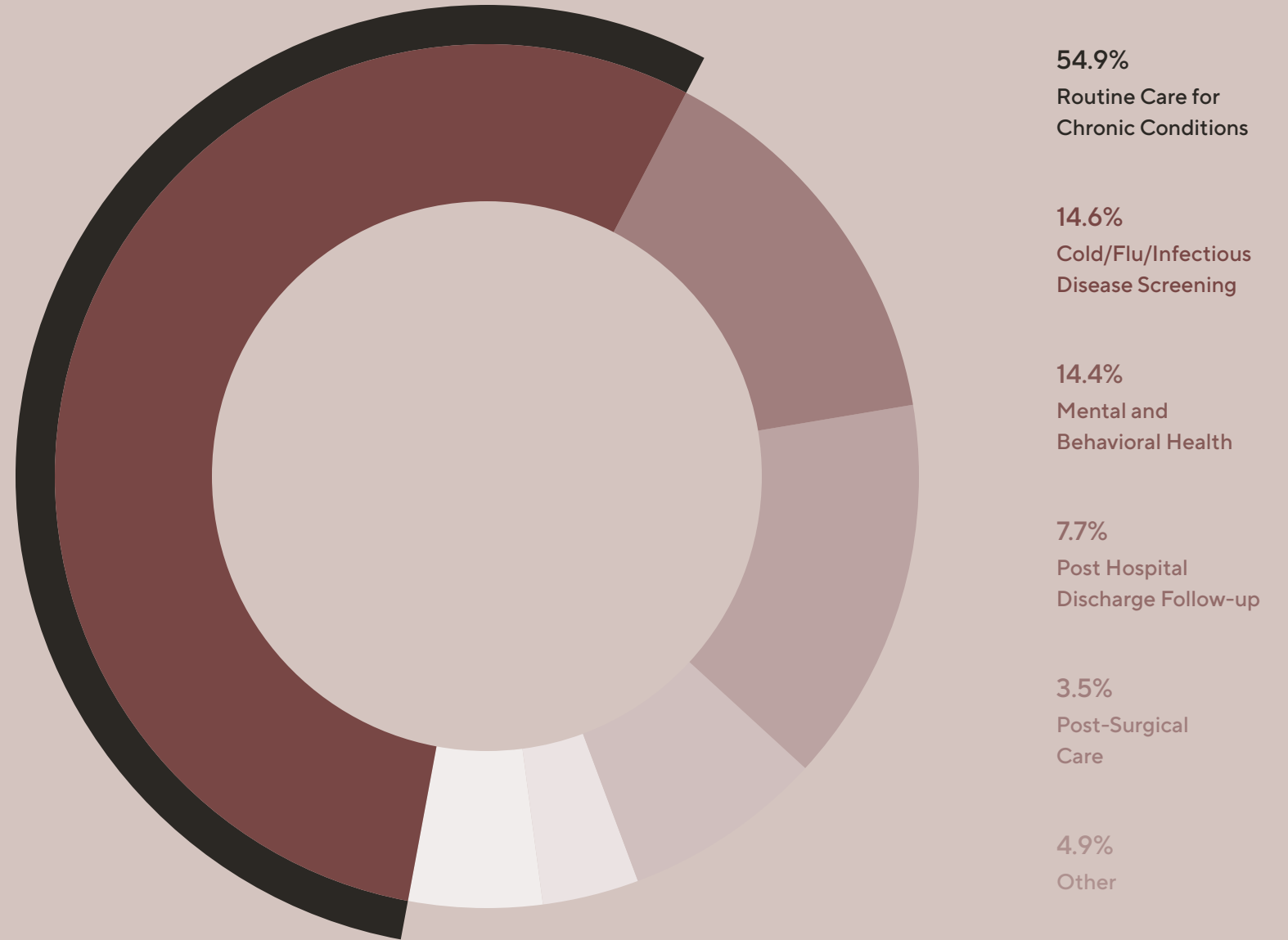
Downsides Come to Light

In mid-2020, Definitive Healthcare conducted a poll of health care leaders, which provided critical insights into the mid-pandemic state of affairs. The poll found the top concern for health care leaders was hospital revenue loss due to COVID-19 and the consequences of delayed care would continue to be felt by hospitals into the future. In addition, **most respondents believed telehealth will be used to help with chronic disease management going forward.** Moreover, multiple media organizations and health care professionals have called on the public, medical care systems and the government to be better prepared for the next crisis.

Lessons of the Pandemic

Government and industry leaders, as well as the public, will have to determine how to answer the questions highlighted by the pandemic and to what degree we transform our health care system going forward.

In What Area Do You Believe Telehealth Will Have the Most Staying Power?



Source: Definitive Healthcare, *2020 Trend Report: Predicting COVID-19's Long-Term Effects (2020)*. <https://www.definitivehc.com/resources/healthcare-insights/predicting-covid-19-long-term-effects>.

03

The Future Forward

Ground-Level Perspectives

DesignIntelligence conducted more than 30 interviews with high-level professionals working in and around health care. These interviews covered a wide variety of topics, including the immediate challenges faced by hospitals and care facilities, the role of physical space in patient care, the utilization of and changes to technology, the financial outlook for the coming years and predictions for the future of health care

03

The Future Forward Ground-Level Perspectives

Patient Care

Naturally, one of the chief points of discussion in these interviews was the impact that COVID-19 had on inpatient and outpatient care. Insufficient staffing and a lack of enough physical space for patient isolation were two of the top challenges for inpatient care. In the realm of outpatient care, budgetary constraints, lack of space and a scarcity of supplies were among the chief concerns mentioned.

Access to critical medical supplies was of particular concern to many of the interviewees, with many noting that their system had switched from a just-in-time model to maintaining a 90- or 120-day stock. Logistically, this shift has also led to problems of space and warehousing such a stockpile. Yet it was unclear to the respondents if this change would be permanently or temporary.

The strongest consensus amongst the respondents came when questioned about whether the COVID-19 pandemic had an impact on work hours or conditions: 93% responded in the affirmative.

In almost all cases, non-clinical staff were forced to work remotely. Respondents also discussed the impact of the pandemic. **Despite the pandemic, hospital systems are taking great pains to understand and improve patient experience.** Nearly every interviewee confirmed that their hospital uses some method of surveying patients about their time with the facility, with most noting they use Press Ganey specifically.

More than 85% of those surveyed said their hospital system belongs to an ACO or Value-Based Care (VBC) network, and they discussed both positive and negative impacts of this.

Finally, survey respondents noted that COVID-19 has greatly increased their external and internal communication, leading in particular to greater back-and-forth between hospital staff and administration. Many expressed hope that this change would be permanent.

Role of the Physical Environment

The next series of interview questions asked how COVID-19 changed the ways in which hospitals use their physical space. **For most, their hospital was forced to find ways to redistribute space to keep coronavirus patients and staff safely isolated.** Moreover, new spaces had to be created for warehousing supplies and for providing safe outdoor rest areas for staff. As a result, a large number of those who responded believed that the use of space would continue to evolve after the pandemic ended.

Most (72.7%) of the respondents agreed or strongly agreed with the idea that a hospital's physical environment plays a key role in determining patients' health outcomes.

They noted that a hospital's physical environment gives patients a view of what to expect for their care, especially aspects such as cleanliness, modernity, layout and size. **A hospital visitor's emotional reaction to the space plays a significant role in whether they choose to receive care and how well they recover while there.** Ninety percent indicated that their system was planning at least one reconstruction project in the next three years. Patient experience was mentioned by all but one respondent as a factor in these planned renovations. Similarly, 90% indicated that office space would be changing as part of these future projects. Most revealed that their office spaces would be transforming into more flexible-use space (indicating a continued reliance on remote work).



93%
of Respondents
Said 'Yes'.

Source: DesignIntelligence,
The Future of American
Health Care Delivery (2021).

Has COVID-19 led to permanent changes in work hours and/or conditions at your facility?



72.7%
of Respondents
agreed or
strongly agreed

Source: DesignIntelligence,
The Future of American
Health Care Delivery (2021).

Does a hospital's physical environment play a key role in determining patients' health outcomes?



90%
of Respondents
Said 'Yes'.

Source: DesignIntelligence,
The Future of American
Health Care Delivery (2021).

Is your health system planning at least one reconstruction project within the next three years?

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The Future Forward Ground-Level Perspectives Con't

Many hospitals discovered that they lacked enough space in segregated units at the beginning of the pandemic to prevent disease spread.

Role of Technology

COVID-19 saw a dramatic increase in the use of technology in patient care. Most of those interviewed agreed or strongly agreed that COVID has accelerated the demand for new technology in the health care environment. Telemedicine, the practice of digital physician consultations rather than in person, has perhaps been the greatest beneficiary of this demand, and almost every interviewee indicated that this was a positive change for patient care. It's more convenient, often more accessible and allows for greater access to behavioral health care. It also reduces the burden on hospitals, as patients with minor injuries no longer need to visit in person. **Seventy-eight percent of respondents said that telemedicine will be a permanent fixture in health care going forward.**

Still, some noted that insurance companies and hospital systems have yet to streamline the reimbursement process for telemedicine, while others discussed the socio-economic imbalance. Moreover, some diagnoses require lab tests and physical touch, while certain fields (such as pediatrics or elderly care) are not well suited for digital doctor visits.

An additional 84% indicated that technology is changing how hospitals use their physical space. As diagnostic technology and robotics improve, hospitals will have to dedicate space to these tools. However, computer technology has streamlined much of the admissions process and work-from-home technology will lead to the partial or total removal of administrative offices.

Financial Outlook

When asked to examine their hospital's financial outlook for 2021, the responses were mixed, though slightly positive overall. Beyond that, the outlook for 2023 was far more positive.

Nearly all the respondents strongly agreed with the statement, **"The cancellation or postponement of elective procedures has posed a significant financial strain for our health care system."** Others anticipated increased regulation in the coming years due to changing political parties in the White House — thus, the uncertain financial future of many hospital systems.

As a result of this dramatic decrease in income, many hospitals decelerated or delayed their acquisition of non-COVID-related equipment. And though some had returned to pre-COVID spending levels, others were limiting spending to only strategic, non-COVID purchases under strict scrutiny.



93%
of Respondents
Said 'Yes'.

Source: DesignIntelligence,
*The Future of American
Health Care Delivery* (2021).

Knowing that use of telemedicine increased this year due to COVID, do you believe this change to be mostly permanent or mostly temporary?

The Future of Health Care

When asked to predict the future of health care, responses were generally (if cautiously) optimistic. Though most forecast continued struggles in 2021, the consensus was that positive impacts would be felt by 2023 — especially after the development of a vaccine.

COVID-19 will also have an impact on the future of patient care in terms of how and where patients receive treatment. Due to fears of infection at larger hospitals, patients will likely switch to telemedicine and/or smaller community clinics for their primary care.

Telemedicine was listed by nearly all the respondents as a technology necessary for the future of health care, second only to artificial intelligence analytics.

Most of the interviewees also discussed strategies currently employed by their hospital systems to combat future staffing shortages, especially efforts to work with nearby colleges and universities.

Several participants took time to emphasize that the future of health care will involve addressing systemic racial and economic inequalities and the ways in which the health care system might build patient and community trust.

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Insight

Fundamentally, the economics of health care will need to change to provide more equitable access to medicine in this country. A kind of revolution may be necessary — a “rational revolution” in which technology is better utilized, personalized medicine becomes the norm and racial and social inequities are addressed head-on. In this way, the future health care industry will contribute to the greater good of the nation.

Resources

Part 1: 50 Years Trends—End Notes

1. "Timeline: History of Health Reform in the U.S.," Kaiser Family Foundation, published March 25, 2011, <https://www.kff.org/health-reform/timeline/history-of-health-reform-efforts-in-the-united-states/>.
2. "30 Years/30 Devices : 1979 : The 1980s : The 1990s : The 2000s : Older Technologies," Medical Device and Diagnostic Industry, posted June 1, 2009, <https://www.mddionline.com/news/30-years30-devices-1979-1980s-1990s-2000s-older-technologies>.
3. "30 Years/30 Devices : 1979 : The 1980s : The 1990s : The 2000s : Older Technologies."
4. F. S. Collins and V. A. McKusick, "Implications of the Human Genome Project for Medical Science," JAMA (2001): 540–544, <https://pubmed.ncbi.nlm.nih.gov/11176855/>.
5. "Human Genome Project produces many benefits," National Human Genome Research Institute, published November 17, 2011, <https://www.genome.gov/27549135/nov-2011-human-genome-project-produces-many-benefits>.
6. Citation needed <https://www.medscape.com/features/slideshow/20th-anniversary#page=4>
7. John Geyman, "COVID-19 Has Revealed America's Broken Health Care System: What Can We Learn?," International Journal of Health Services (January 2021), <https://journals.sagepub.com/doi/full/10.1177/0020731420985640?-%20journalCode=joha#articleCitationDownloadContainer>.
8. "Health Statistics," OECD, accessed March 16, 2021, <https://www.oecd.org/health/health-statistics.htm>.
9. "U.S. Health Care from a Global Perspective, 2019," the Commonwealth Fund, published January 30, 2020, <https://www.commonwealthfund.org/publications/issue-briefs/2020/jan/us-health-care-global-perspective-2019>.

10. "U.S. Health Care from a Global Perspective, 2019."
11. Lekhnath Chalise, "How have healthcare expenditures changed? Evidence from the Consumer Expenditure Surveys," Beyond the Numbers, 9, no. 15 (November 2020), <https://www.bls.gov/opub/btn/volume-9/how-have-healthcare-expenditures-changed-evidence-from-the-consumer-expenditure-surveys.htm>.
12. Rabah Kamal, Daniel McDermott, Giorlando Ramirez, and Cynthia Cox, "How has U.S. spending on healthcare changed over time?" Health System Tracker, Peterson-KFF, posted December 23, 2020, <https://www.healthsystemtracker.org/chart-collection/u-s-spending-healthcare-changed-time/#item-star>.
13. Matthew Rae, Cynthia Cox, and Larry Levitt, "Deductible Relief Day: How rising deductibles are affecting people with employer coverage," Health System Tracker, Peterson-KFF, posted May 15, 2019, <https://www.healthsystemtracker.org/brief/deductible-relief-day-how-rising-deductibles-are-affecting-people-with-employer-coverage/>.
14. "2019 Survey of America's Patients: An Examination of How Patients Experience the American Health Care System," The Physicians Foundation (September 2019), <https://physiciansfoundation.org/wp-content/uploads/2019/10/The-Physicians-Foundation-2019-Survey-of-Americas-Patients.pdf>.
15. Thomas P. Reith, "Burnout in United States Healthcare Professionals: A Narrative Review." Cureus 10, no. 12 (December 4, 2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6367114/>.

16. "Burn-out an 'occupational phenomenon': International Classification of Diseases," World Health Organization, May 28, 2019, <https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases>.
17. Taking Action Against Clinician Burnout, 68.
18. Barbara Ehrenreich and John Ehrenreich, The American Health Empire: Power, Profits and Politics (New York: Vintage Books, 1970), 29–39.
19. Paul Starr, The Social Transformation of American Medicine (New York: Basic Books: 1982), 448.

Part 2: The Spotlight—End Notes

1. Definitive Healthcare, "2020 Trend Report: Predicting COVID-19's Long-Term Effects," <https://www.definitivehc.com/resources/healthcare-insights/predicting-covid-19-long-term-effects>.
2. Definitive Healthcare, "2020 Trend Report."
3. Definitive Healthcare, "2020 Trend Report."
4. Definitive Healthcare, "2020 Trend Report."
5. Susan Stacey, "What the COVID-19 Pandemic has Taught Me," American Hospital Association, November 19, 2020, <https://www.aha.org/news/healthcareinnovation-thursday-blog/2020-11-19-what-covid-19-pandemic-has-taught-me>.
6. George W. Bush, "National Strategy for Pandemic Preparedness," November 1, 2005, National Institutes of Health, <https://www.c-span.org/video/?189676-1/national-strategy-pandemic-preparedness>.
7. Barack Obama, "Speech before the National Institutes of Health," December 2, 2014, <https://www.cnn.com/videos/politics/2020/04/10/barack-obama-2014-pandemic-comments-sot-ctn-vpx.cnn>.
8. Bill Gates, "The next outbreak? We're not ready," March 2015, TED Talks, https://www.ted.com/talks/bill_gates_the_next_outbreak_we_re_not_ready?language=en#t-52110.
9. Maria Castellucci, "Lessons learned more than six months into the U.S. response to COVID-19," Modern Healthcare, October 3, 2020, <https://www.modernhealthcare.com/transformation/lessons-learned-more-six-months-us-response-covid-19>.
10. Peter M. Sandman, "Public health's share of the blame: US COVID-19 risk communication failures," Center of Infectious Disease Research and Policy, August 24, 2020, <https://www.cidrap.umn.edu/news-perspective/2020/08/commentary-public-healths-share-blame-us-covid-1>.
11. Sandman, "Public health's share."
12. DeLene Beeland, "Covid-19 Pandemic Is Worsened Without Coordination," Emerging Pathogens Institute, the University of Florida, November 10, 2020, <https://epi.ufl.edu/articles/covid-19-epidemic-is-worsened-without-coordination.html>.
13. Beeland, "Covid-19 Pandemic is Worsened."
14. Susan R. Bailey, "Pandemic exposes dire need to rebuild public health infrastructure," American Medical Association, February 10, 2021, <https://www.ama-assn.org/about/leadership/pandemic-exposes-dire-need-rebuild-public-health-infrastructure>.
15. Bailey, "Pandemic exposes dire need."
16. Trust for America's Health, "The Impact of Chronic Underfunding on America's Public Health System: Trends, Risks, and Recommendations, 2020," April 2020, <https://www.tfah.org/report-details/publichealthfunding2020/>.

17. Trust for America's Health, "The Impact of Chronic Underfunding."
18. Trust for America's Health, "Ready or Not: Protecting the Public's Health from Diseases, Disasters, and Bioterrorism," March 2021, https://www.tfah.org/wp-content/uploads/2021/03/TFAH_ReadyOrNot2021_Fnl.pdf.
19. Trust for America's Health, "Ready or not."
20. Trust for America's Health, "Ready or not."
21. Priya Chandran, Marcus Torelm, Cassandra Yong, and Jennifer Clawson, "Five Lessons from the Pandemic for Health Care Systems," Boston Consulting Group December 3, 2020, <https://www.bcg.com/publications/2020/five-lessons-for-health-care-systems-covid-19>.
22. Earth Institute, "Inadequate COVID-19 Response Likely Resulted in 130,000 - 210,000 Avoidable Deaths," Columbia University, October 22, 2020, <https://news.climate.columbia.edu/2020/10/22/covid-19-response-avoidable-deaths/>.
23. Gabriel Perna, "COVID-19: A turning point for AI regulation in health care," Health Evolution, April 9, 2020, <https://www.healthevolution.com/insider/covid-19-a-turning-point-for-ai-regulation-in-health-care/>; more information about the panel discussion can be found here: <https://www.healthevolution.com/pandemic-response-call-to-action/>.
24. Gabriel Perna, "10 health care leaders on lessons from COVID-19," Health Evolution, July 6, 2020, <https://www.healthevolution.com/insider/10-health-care-leaders-on-lessons-from-covid-19/>.

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