

New Opportunities for the Expansion of Telemedicine during the COVID-19 Pandemic

Bryan T. Arkwright, M.H.A.¹

Abstract

Telehealth / Telemedicine has realized extensive growth through the global presence of COVID-19. The Centers for Medicare and Medicaid Services (CMS) and other federal and state agencies have lifted restrictions as well as enacting both permanent and temporary changes, creating a thriving and more accessible market of telehealth / telemedicine activities, innovations, and advances in care. Healthcare and the world are now amidst a digital health revolution; exploring the opportunities, planning for growth, and applying technology to care in new and exciting ways. This article compares industrial revolution elements and outlines the popular COVID-19 telehealth use cases in the market today as well as emerging future trends and opportunities.

¹ School of Law, Wake Forest University, Winston-Salem, NC

Address Correspondence To:
Bryan T. Arkwright, M.H.A.
School of Law,
Wake Forest University,
1834 Wake Forest Rd,
Winston-Salem, NC, 27109
arkwribt@wfu.edu

Introduction

The profound impact COVID-19 has on the world is undeniable and will be measured well into the future, we are only beginning to understand many of the effects and others are still yet to be discovered.

Perhaps one silver lining is the digital health revolution and the new and plentiful opportunities related to the expansion of Telehealth / Telemedicine during the COVID-19 Pandemic.

Merriam Webster defines revolution in a variety of ways; several revolution definitions are related to a celestial body and orbiting, periods of time and motion, and finally; change. The definitions related to change are a great layering of explanation as it pertains to the digital health revolution and emerging opportunities.

Specifically;

“Revolution –

- *2a: a sudden, radical, or complete change*
- *2c: activity or movement designed to effect fundamental changes in the socioeconomic situation*
- *2d: a fundamental change in the way of thinking about or visualizing something: a change of paradigm*
- *2e: a changeover in use or preference especially in technology.”¹*

Each of the change definitions describe to an extent the experience that healthcare providers, leaders, and patients are realizing as telehealth reaches new levels of high

utilization, both in the access and delivery of healthcare in the US and globally.

These straightforward definitions set the stage of understanding as one begins to analyze the recent adoption and utilization of telehealth throughout the pandemic. The significant growth of telehealth during the pandemic is also a product of a series of coverage policies and restrictions being temporarily lifted or enacted by the Centers for Medicare and Medicaid (CMS).³

The Fourth Industrial Revolution

Klaus Schwab's 2017 book, "The Fourth Industrial Revolution", describes three reasons that fortifies his belief that we are in fact in a fourth and recognizable industrial revolution. Each of the three reasons describes well the types of impact telehealth has had during the pandemic, and will continue to have.

1. *"Velocity: Contrary to the previous industrial revolutions, this one is evolving at an exponential rather than linear pace. This is the result of the multifaceted, deeply interconnected world we live in and the fact that new technology begets newer and ever more capable technology."*
2. *"Breadth and Depth: It builds on the digital revolution and combines multiple technologies that are leading to unprecedented paradigm shifts in the economy, business, society, and individually. It is not only changing the "what" and the "how" of doing things but also the "who" we are."*
3. *"Systems Impact: It involves the transformation of entire systems, across (and within) countries, companies, industries and society as a whole."*

"In all case, particularly with artificial intelligence, genetic engineering and other technologies that could conceivably escape our control, we need to take care in building systems that minimize risks and improve the human condition."⁴

Schwab concludes his explanation of the three reasons with a challenge to society of taking great care in our handling of the decisions to expand, manage, and regulate new technologies like telehealth; holding priority in minimizing risks and improving the human condition.

COVID-19 Telehealth Use Cases in Market Today

The spring of 2020 saw hospitals and health systems who were in a state of zero or limited digital health or telehealth activities aggressively launch and scale telehealth business models and use cases. Opportunity was not always the listed reason for implementation when speaking with healthcare leaders, more often it was in a manner of desperation and need to contain, isolate, and maintain safe access to care due to COVID-19.

The most popular telehealth use cases through COVID-19 include:

- "A patient with mild respiratory symptoms needs evaluation, but has been told not to go to the emergency room;
- A patient has no symptoms of COVID-19 but had contact with someone infected by the novel coronavirus and wants to be evaluated;
- A patient needs care of an unrelated reason (e.g. management of chronic health condition), but cannot go in-person due to clinic closure or fear of coronavirus exposure;
- A provider has been quarantined due to COVID-19, but can continue to see patients from their home via virtual visits; and,
- A patient with severe symptoms of COVID-19 is hospitalized, and needs a specialty consult with an infectious disease doctor in a remote location."⁵

Patients leveraging these popular COVID-19 telehealth use cases were accessing private practice providers, for-profit telehealth provider companies and hospitals and health systems who were offering telehealth services. Providers themselves were learning to prioritize care by any and all means possible, working to deliver care in both an efficient and high-quality, safe manner. Patients have also benefitted beyond the safety and quality of efficient telehealth; now awakened to convenience and new access to their provider many did not have prior, patient centered care is not only a perception but a reality associated with telehealth as shown by satisfaction scores and surveys from COVID-19.⁶

Emerging Telehealth Use Cases in Market

The complexity of these use cases and operating an overall telehealth program are not to be overlooked as these programs and use cases all have unique operations, clinical, technical, and financial elements to them.⁵ Taking an active management approach to the operations, clinical, technical, and financial has never been more important to ensuring a program's or service's sustainability and ability to operate within the ever changing and maturing policy and regulatory environment.⁷

The opportunities for telehealth during the COVID-19 pandemic are well documented and proving essential as the US and global population attempts to control and mitigate the spread of COVID-19. However, the near-term future is bright for telehealth as patients, providers, and the healthcare market in general has a newfound confidence in digital health and telehealth.⁸ Emerging opportunities the market will see an increase in include but are not limited to:

- Virtual Care Centers or large provider (nurse, nurse practitioner, physician assistant, and physician) staffed call centers with advanced communications technologies;
- Remote Patient Monitoring; large scale population health management of chronic condition patients using telehealth synchronous and asynchronous technologies;
- Behavioral Health and Mental Health applications, services, and networks; while already a well-documented and utilized telehealth use case before and during COVID, the market will see a rise in both the demand and inventory of behavioral and mental health offerings as a result of social distancing, isolation, and long term effects on front line healthcare workers.

Whatever role one plays in the healthcare market, clench the opportunities with telehealth while recognizing and respecting how it links to the US and global economy entering and thriving in the fourth industrial revolution.

Disclosures

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