

OVERVIEW OF THE TELEMEDICINE SECTOR AND ITS GROWTH DRIVERS

Definition

“Telemedicine” is the use of real-time audio-video technologies to deliver healthcare over a distance. Telemedicine allows medical providers to deliver patient care services to remotely, underserved locations, including medical consultation, diagnosis, treatment, education and care management. Telehealth also helps to facilitate patient self-management and ongoing caregiver support. The primary types of telemedicine are: (i) **Synchronous** consisting of direct, real-time audio-video conferencing between doctor and patient; and (ii) **Asynchronous or “Store and Forward”** where patient health care data and digital images are captured, packaged as a case file, and transferred via a HITECH and HIPAA compliant platforms to a clinician who then responds with a diagnosis and therapeutic recommendations within 48 hours.

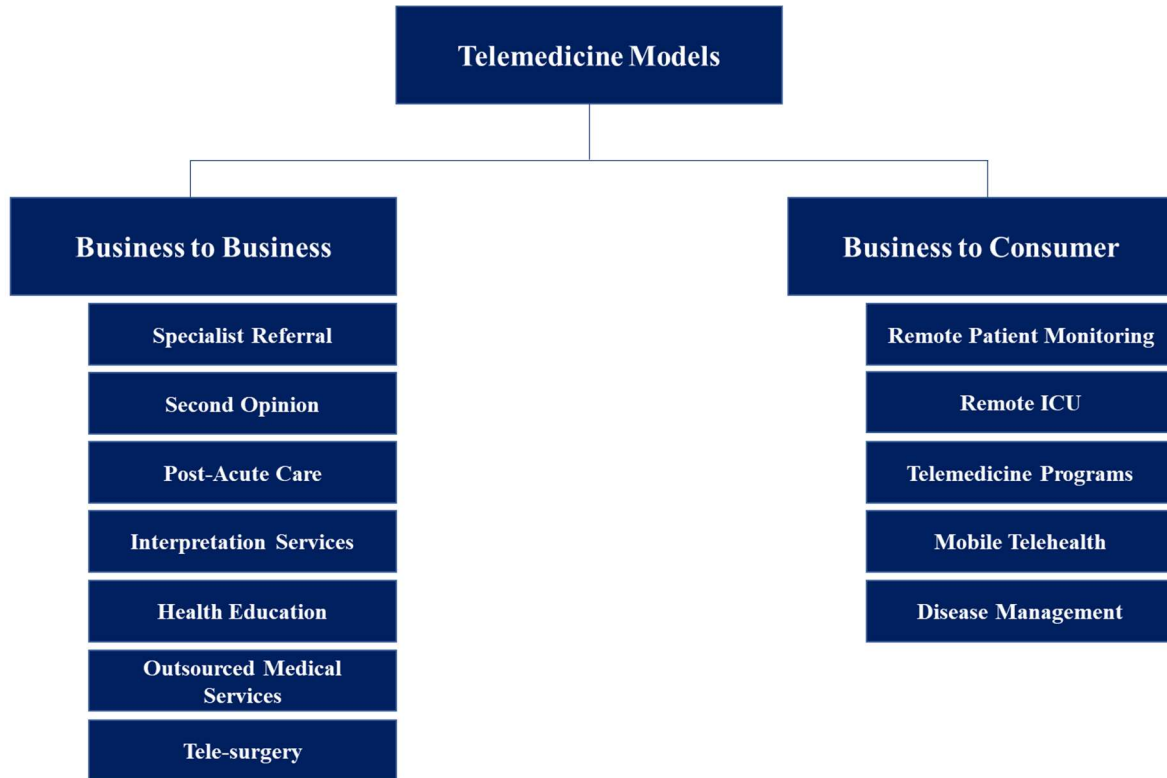
Types of Telemedicine Models

Currently, there are two types of telemedicine models: primary care and specialist care.

Business-to-Business/Specialist Care Model: The telehealth market for specialist physicians is newly emerging and growing quickly. With specialist physicians, the market is a B2B, or business to business type of transaction, with the specialist doctors consulting with patients through the primary care physician. The specialist model has a large upside potential, with the acute lack of access to specialists in many smaller markets and underserved urban areas. TM2U has created a model to build out access to specialist care in a way that allows access and better management of the physician resources across the regions served. The telemedicine market for specialist physicians is just emerging, with only a few players in this market and those companies typically small, regional and focusing on only 1-2 specialties. Current providers include Specialists On Call, Aligned Telehealth and TM2U. These providers tend to be enabled by existing technology infrastructure minimizing their investment in intellectual property.

Business-to-Consumer/Primary Care Model: To date, the telemedicine market has primarily provided remote access to primary care physicians on a B2C, or business to consumer basis, with the majority of interactions happening direct with patients via phone or internet. In addition, most of the growth in this primary care telemedicine market has come from access to not only physicians, but also nurses and other clinicians. Current providers in this market include Teledoc, MDLive, American Well and Doctor onDemand, MeMD, First Stop Health, Telethrive and AmeriDoc. This model tends to be technology intensive as it is complex to make a connection from patient to provider seem easy. As a result, these companies have significant investment in intellectual property.

The following table shows the types of services provided by B2B and B2C telehealth providers:



Source: BCC Research

Growth Drivers

Telemedicine has the potential to reduce the cost of healthcare in the United States through improved chronic disease management. As such, the industry is being embraced by private payors, CMS, providers and patients leading to exceptional growth potential. Some of the key market drivers are:

Efficient Care Delivery: Many categories of healthcare professionals are currently, or potentially, in short supply. This shortage results in overstressed healthcare personnel and underserved patient populations. Telemedicine can alleviate these problems by increasing the number of patients a professional can treat, or consult, and in doing so, provide patients in underserved regions (inner cities, prisons and rural areas) with greater access to specialists.

Strong Value Proposition: Specialty care telemedicine can lower cost while improving and care quality as it enables the PCP to maintain control of patient care and potentially eliminating in-person specialty visits. Further, the PCP can charge a facility fee per visit while maintaining and potentially increasing the number of patients requiring specialty care. Further, in many cases a telemedicine consultation will eliminate the cost of transferring a patient to an alternate care site. In many cases, transporting patients to where specialists are located is expensive and time consuming and often impacts the acuity of the patient condition. **Providing virtual access to specialists via audio/video conferencing in a clinical setting increases timely access to a specialist and a diagnosis and reduces cost required to transport the patient. More importantly, patients remain in the local community and under their primary physician's care.**

Greater Access to Specialist: Through the use of telemedicine, general practitioners can expand their services to include specialty care. This makes it easy for PCPs to consult with specialists on patient cases and for patients to see specialists no matter their location. Further, since the patient is seen in the PCP's office, the PCP enjoys increased patient engagement.

Higher Quality Care: Telemedicine allows for greater interaction between the specialist and patient, enabling more extensive monitoring and follow-up, resulting in lower ED visits and re-admittance cases.

Growing Reimbursement Parity: Currently, 29 states and the District of Columbia have passed telemedicine parity laws, requiring private payers to reimburse for telemedicine for the same amount as the comparable brick and mortar medical service. Many private payers in other states are adopting parity.

Increasing Patient Acceptance: Patients are quickly adopting telemedicine. According to a recent study conducted by the American Hospital Association; (i) 74% of US consumers would use telehealth services; (ii) 76% of patients prioritize access to care over the need for human interaction with their healthcare provider; and (iii) 70% of patients are comfortable communicating with their healthcare providers via secure, real time audio-video conferencing.

Strong Support from Washington: CMS expanded the range of telehealth activities reimbursable under Medicare in 2010, 2012, 2014, and 2015. In 2017, the CHRONIC Care Act received a favorable review from the Congressional Budget Office and unanimous support from the Senate Finance Committee. This act expands telehealth coverage under Medicare Advantage Plan B beginning in 2020 and gives Accountable Care Organizations more flexibility to use telehealth services. CBO estimated that increasing spending in telehealth would be offset by several savings, making this bill budget neutral.

Industry Projections

The market is segmented into three markets: (i) telemedicine communications equipment; (ii) telemedicine based home care and monitoring; and (iii) telemedicine services for hospitals/clinics. The Company competes in the last one. As shown in the table below, BCC Research that the global and North American markets for telehospital/clinic will grow at CAGRs of 12.7% and 13.8%, respectively.

GLOBAL MARKET FOR TELEHOSPITAL/CLINIC

<i>(\$ in Millions)</i>	<u>2015</u>	<u>2016</u>	<u>2021</u>	<u>% CAGR*</u>
North America	\$ 5,188	\$ 5,937	\$ 11,316	13.8%
Rest of World	<u>5,879</u>	<u>6,552</u>	<u>10,690</u>	10.3%
TOTAL	\$ 11,066	\$ 12,490	\$ 22,007	12.0%

*- CAGR from 2016 to 2021
Source: BCC Research

Conclusion

The telemedicine services offer solutions to many of the issues the healthcare industry faces including: improving the providers efficiency and increasing access to care resulting in earlier diagnoses, it has incredible potential to bend the cost curve in healthcare spending. As a result, telemedicine has gain significant interest from the investment community as evidenced by the following:

TeleDoc: The “founding father” of the sector is public and trades at a valuation in excess of 10 times run rate revenues

Best Doctors: raised \$65 million in private equity in two tranches in 2011 and 2012. In July, it announced a sale to TeleDoc for \$440 million, which is an implied valuation of 4.5 and 40 times run-rate revenues and EBITDA, respectively.

Other Private Companies: Four of the private companies listed in the Appendix have raise over \$500 million.

If you would like to learn more about the sector, please do not hesitate to contact me at jburklund@rivercorpadvisor.com or Roberta at rhurst@rivercorpadvisor.com.

Appendix – Select Telemedicine Companies

The following table provides a description of select telehealth companies including the total amount of capital investing in each.

	TeleMed2U	Teledoc	MDLive	American Well	Doctors on Demand	Specialist on Call	MeMD
Description	Founded in 2011, TeleMed2U, Inc. is a high growth technology-enabled multispecialty physician service, providing patient access to specialists via audio/video conference into clinical settings including primary care clinics, rural hospitals and prisons	Teladoc is the nation's largest telehealth platform, delivering on-demand health 24/7, via mobile devices, the Internet, secure video and phone. It has a network of more than 3,000 board-certified, state-licensed physicians and behavioral health professionals who provide care for a wide range of non-emergency conditions.	Founded in 2006, MDLIVE, formerly MDLiveCare, is a leading telehealth provider of online and on-demand healthcare delivery services and software that benefit patients, hospitals, employers, payers, physician practice groups and accountable care organizations.	American Well is a company based connects users instantly with doctors over video feed. The company's mobile and web service connects doctors with patients for live, on-demand video visits over the internet and handles all the administration, security, and record keeping services.	Largest and fastest growing Virtual Medical Practice, allowing patients to connect via Video Visit to board-certified MDs via mobile or web	Specialists On Call is an emergency telemedicine consultant that provides hospitals with immediate access to board-certified specialists.	MeMD™ connects patients in need of immediate care with certified urgent care providers via a secure, web-based webcam. Through MeMD, patients can be examined, diagnosed, and treated, including prescriptions (if needed), online. Most patients are seen and treated in thirty minutes. We have the nation's most comprehensive network of urgent care providers.
Type of Docs Used for Care	Specialists	Nurses/Primary Care Docs	Nurses/Primary Care Docs/Mental health specialists	Nurses/Primary Care Docs	Nurses/Primary Care Docs/Mental health specialists	Mental health specialists/critical care/neurologists	Nurses/Primary
Type of Care Provided	B2B: specialist to primary care physicians	B2C: primary care only	B2C: primary care	B2C: primary care only	B2C: primary care	B2B & B2C	B2C: primary care
# of Medical Specialties	23 medical specialties	1 specialty: mental health	1 specialty: mental health	1 specialty: mental health	1 specialty: mental health	3 specialists: critical care; neurology; psychiatry	None
How Physicians are Employed	Contracted	Contracted and Directly employed	Contracted and Directly employed	Contracted and Directly employed	Contracted and Directly employed	Contracted and Directly employed	na
Current Geographic Markets	CA/AK/DE/ME/CT/MD	National	National	National	National	12 states	na
Total Funding to Date	na	\$606 MM	\$73.6 MM	\$141.0MM	\$90.0MM	\$161.55MM	na
Founded	2011	2002	2009	2006	2012	2006	2015