Growth of direct-to-customer telemedicine and implication to the life insurance industry

A RESEARCH REPORT

The telemedicine industry has been growing rapidly in recent years, driven by multiple factors including remarkable technological advancement, expanding medical needs, increasing acceptance from both patients and healthcare providers, favorable regulatory changes, effective telemedicine company marketing and, most recently, a push to use telemedicine services due to the limitation of in-person medical services during the COVID-19 pandemic.

Telemedicine companies interact with patients via telephone, text, chat and video and remotely capture biometrics and other measurements via digital devices. Telemedicine companies store this data in their own electronic health record (EHR) platforms and have the ability share this data with the patient via proprietary patient portals and through electronic transmission to provider and hospital EHR platforms. However, EHRs are not shared with providers in all instances and provider EHR platforms have limited capabilities and are unable to receive text, chat, video and remote device data. Currently, there are no EHR aggregators or solutions available to life insurance carriers to access telemedicine EHRs. This fragmented patient medical record and lack of access solution is currently a small gap in patient medical history but could prove to be significant as telemedicine adoption and usage increases.

It is imperative for life insurance carriers to have the full patient medical history for a complete and accurate underwriting risk assessment. Medical records traditionally offer relevant data for underwriting assessment of chronic conditions as well as act as a tool to identify relevant missing history in a life insurance application. The gap and potential widening gap between the medical records created by telemedicine companies and the ones transmitted, stored and available in the electronic medical record (EMR) / electronic health record (EHR) of hospitals and providers could, therefore, negatively impact a carrier's block of business.

This research report illustrates the background, types and range of services of telemedicine as well as a growth forecast of the market. It then dives into the telemedicine business and describes how and why patient data does not always flow seamlessly into a provider EHR system.

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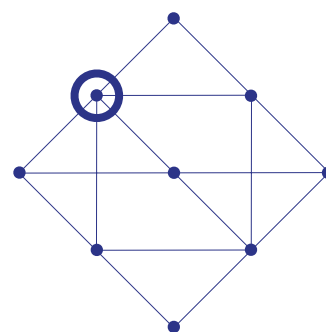
1. INTRODUCTION

The COVID-19 pandemic has brought many changes to our life. The way we access healthcare services is one of them. Telemedicine / telehealth is one of the major enablers that are transforming us to the new era of patient care. Telemedicine has never been so widely recognized and used among the general public than it is now.

But will this trend continue? What does the future telemedicine industry look like? How is patient data stored and managed? What does it mean to the life insurance industry? This report analyzes the telemedicine / telehealth market, patient heath data management and its implications to the life insurance industry.
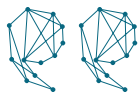
2. DEFINITION AND HISTORY OF TELEMEDICINE

"Telemedicine" refers to the "practice of medicine using technology to deliver care at a distance," according to American Association of Family Medicine. It is a tool designed to make healthcare more accessible and cost effective through technology, enabling an increase in patient engagement. The words "telehealth" and "telemedicine" are widely used interchangeably in today's industry, and this report will use both terms following this practice. There is, however, a distinct difference in their original meanings. Telemedicine is a subsegment of telehealth, which is a broader category that involves electronic and telecommunications technologies and services used to provide remote care and services.

According to the American Telemedicine Association, telemedicine services in today's environment can be categorized into four types as described below:

1. Live videoconferencing (synchronous): Offers direct physician-to-patient healthcare services including real-time online visits through videoconferencing, remote monitoring, electronic consults and wireless communications.

2. Store-and-forward (asynchronous) telemedicine: Helps healthcare providers share medical information such as lab reports and coordinate care with other health professionals using Electronic Data Interchange (EDI).

3. Remote patient monitoring: Can monitor patient health and clinical signs remotely using technological devices.

4. Mobile health (mHealth): Medical and health information services for consumers to obtain specialized health information and online discussion groups.

Telemedicine technology used as a form of healthcare delivery first appeared in the late 1960s. The modern telemedicine industry started in the 2000s and has been growing steadily ever since, attracting more clients with its convenience, cost effectiveness and flexibility. The current COVID-19 pandemic has accelerated the speed of telemedicine growth, driven by the demand for remote medical services, as well as the government's action to broaden access to telehealth services.

This report focuses on telemedicine, virtual healthcare delivery to patients.

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3. TYPES OF TELEMEDICINE PROVIDERS

There are several forms of delivery for telemedicine in the industry. Below are three major categories:

1. Services provided by a telemedicine company through partnership with a provider or hospital: Healthcare professionals utilize partner telemedicine company's services (doctors, nurses, etc.) as an extension of their practice

2. Services offered by the provider or hospital utilizing telemedicine technology: Provider/Hospital contracts utilize the telemedicine company's technology/platform to service the patients.

3. Direct-to-consumer (DTC) services offered to patients with no affiliation to providers or hospitals: Patients have direct access to the telemedicine company doctors and nurses, and there is no contract or partnership with a provider or hospital. Some telemedicine vendors can act in the capacity of a primary doctor.

The following sections will focus on categories 1 and 3 to discuss the services and potential data sharing challenges of the telemedicine companies.

4. MAJOR TELEMEDICINE SERVICES OFFERED

Along with the telecommunication and data technology advancement, telemedicine has expanded its range of offerings to cover various patient needs. Below are major services currently offered by telemedicine companies:

1. Virtual primary care: Delivery of a live, interactive consultation between primary care providers and patients. It includes virtual video/phone/messaging medical consultation, diagnosis, prescription and online consultation with doctors from multiple specialties.

2. Advisory service by online chats: Allows online chat to help diagnose and direct non-critical medical cases to the next step for patients as well as providing follow-up assistance from doctors and care teams.

3. Mental and behavioral health services: Provides virtual counseling sessions to patients for mental and behavioral health care.

4. Medical expert advice: Includes both first opinion and second opinion services provided by medical experts on a patient's medical condition, diagnosis, treatment and surgery.

5. Wellness and prevention advice: Registered dietitians provide a phone or video conference advising healthy lifestyle for patients with diabetes, high blood pressure and other health issues.

6. Lab test order: Offers mail-in lab tests.

As telemedicine models have gained larger portions of the healthcare delivery system, the range of telemedicine services has evolved from one-time urgent visits to omnichannel care models that deliver a large portion of office visits virtually or near virtually, combining in- person care and telehealth service. This future model will enable healthcare providers to better manage patients with chronic conditions.
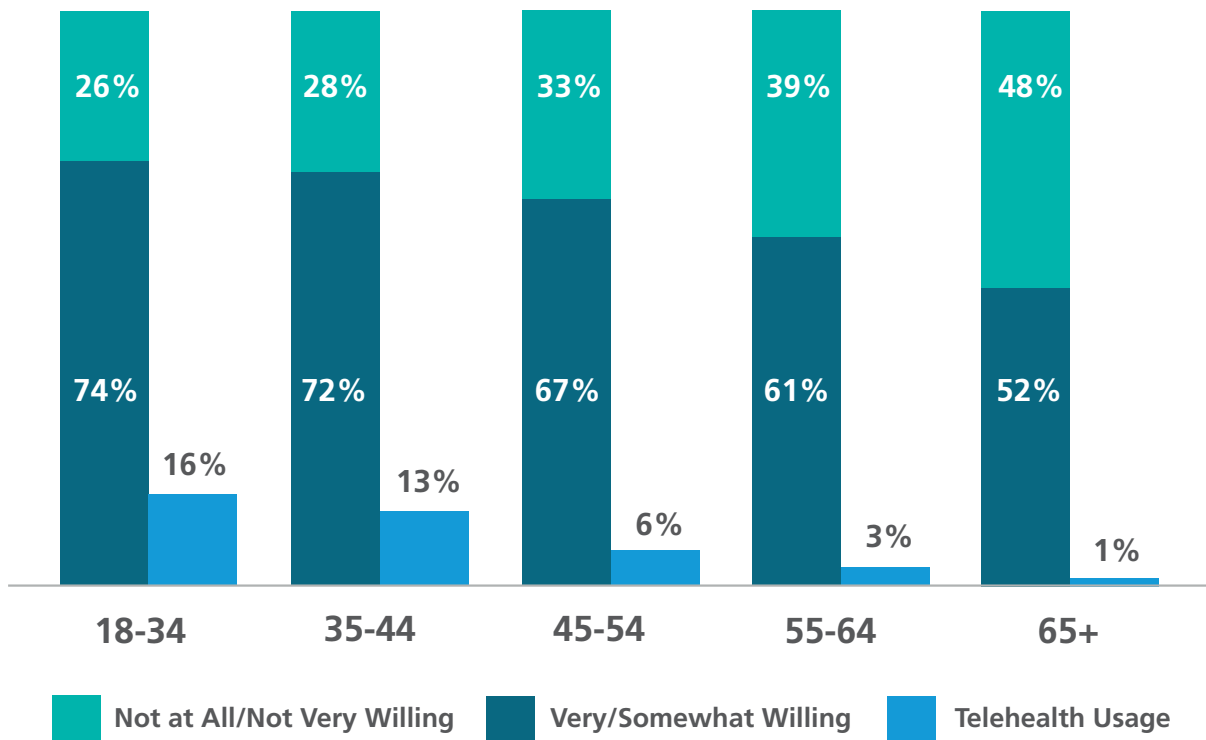
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5. CONSUMER/PROVIDER ACCEPTANCE OF TELEMEDICINE

Consumer acceptance of telemedicine is growing rapidly. In the US, according to American Well's 2019 Consumer Survey, 66% of Americas are willing to use telehealth. The actual usage rate, however, had been relatively low prior to COVID-19 at only 8%. The number is expected to increase to between 15% to 25% in 2020, as Center for Medicare & Medicaid Services (CMS) is now allowing physicians to be paid for their telehealth usage. According to the University of Michigan National Poll on Healthy Aging in August 2020, more than one in four (26%) older age (50 to 80 years) Americans had a virtual medical visit in the first three months during the pandemic. This is a jump from 6% prior to March 2020.

Convenience and cost are major factors of consumers' high acceptance of telemedicine. Millennials are most motivated, with 74% of 18- to 34-year olds and 72% of 35- to 44-year olds saying they are willing to use the technology. Seniors feel favorable to telemedicine as well, with 53% of them willing to try telehealth. The major reasons to use telehealth include prescription renewals, chronic disease management, in-patient follow-up and mental health.

The number of healthcare providers and hospitals who are utilizing telemedicine platforms and technology is also rising steadily. According to a Healthcare Information and Management Systems Society (HIMSS) analysis, US healthcare providers' telemedicine adoption rate was 71% as of 2017, up from 54% in 2014. For virtual video visits, 22% of physicians have used telehealth in 2019, up from 5% in 2015, per the American Well Telehealth Index 2019 Physician Survey.

Telehealth willingness and usage by demographic

	18-34	35-44	45-54	55-64	65+
Not at All/Not Very Willing	26%	28%	33%	39%	48%
Very/Somewhat Willing	74%	72%	67%	61%	52%
Telehealth Usage	16%	13%	6%	3%	1%

Source: AmWelll Telehealth Index 2019 Consumer Survey

6. TELEMEDICINE MARKET OUTLOOK AND GROWTH PERSPECTIVE

The recent coronavirus pandemic has triggered an explosive growth in telemedicine. Although the total number of telemedicine cases used in the US are not known yet, many hospitals and telemedicine companies reported exponential growth since March 2020.

At a telemedicine seminar in September 2020, the President of Doctor on Demand said her company experienced a surge in telemedicine needs and had to hire hundreds more doctors to accommodate the rapid growth. Doctor on Demand is one of the Big Four direct-to-consumer telemedicine organizations.

Frost & Sullivan's recent analysis estimates the telehealth market will increase at a compound annual growth rate (CAGR) of 38.2% by 2025. The growth for 2020 alone is expected to be 64.3%. The major driver for this upturn will come from virtual visits and remote patient monitoring, according to the analysis. Teladoc, the market leader who reportedly has 75% market share, reported a 203% gain in total visits in 2Q 2020 (144% growth YTD), as shown.

The US telemedicine market should expand from $19.5 billion in revenue in 2018 to $64 billion in 2025, at a CAGR of 18.5% for 2019-2025, according to GlobeTrade. The web/mobile delivery segment accounted for a significant portion of the US telemedicine market, holding maximum revenue of more than $11.9 billion in 2018.

The number of startups and investors coming into the telehealth industry is also increasing. According to a report by Crunchbase, the market is seeing large amount of funding, ranging from multimillion dollar to more than a billion dollars into telehealth startups. The areas of the startup service are diverse, including digital health clinics, metabolic telemedicine, AI-enabled health care, mental health telemedicine, at-home tests and more.

Teladoc Total Cusotmer Visits
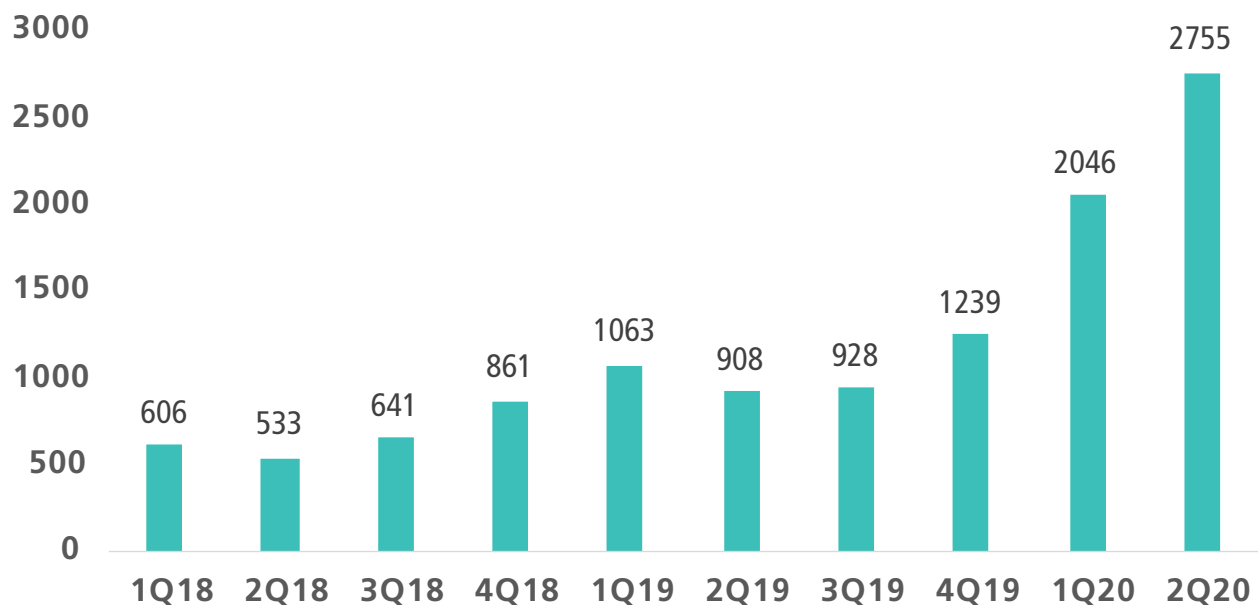
Source: Teladoc quarterly report

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7. DIRECT-TO-CONSUMER (DTC) TELEMEDICINE COMPANIES

There are more than 20 telemedicine companies currently in the US. Teladoc, MDLive, American Well (AmWell) and Doctor on Demand are regarded as the Top Four with significant presence in the market, according to industry experts. New insurtech companies are also making a splash in this space. A telehealth startup company Heal was voted a 2020 company to watch. Some telemedicine companies are purely dedicated to the Direct-to-Consumer (DTC) space and do not contract with hospitals and providers.

According to our proprietary research of traditional telemedicine companies, approximately 10% of their virtual visits are pure DTC. All service providers have extensive internal networks of doctors and healthcare professionals.

8. TELEMEDICINE VISIT TYPES AND MEDICAL CONDITIONS COVERED

Consumers use telemedicine for a variety of purposes, and telemedicine companies are expanding their range of offerings to accommodate their needs. Major types of telemedicine visits include primary care, chronic disease management, diagnosis, prescription fills and refills, limited urgent care, medical follow-up, mental and behavioral health, psychiatry, pregnancy care, physical therapy, pain management, wellness and prevention advice, nutrition counseling, pediatrics and women's health. Conditions they do not cover include traumatic brain injury, chest pain, coughing blood, unconsciousness, broken bones, severe burns and other conditions where an in-person exam is required.

While there is a limitation in the types of medical conditions telemedicine can cover at this time, the range of coverage is broader than many people think. It is expected to increase as patient comfort level increases, and as Medicare expands what is allowed. Doctors and practitioners through this service can offer treatment just like in-person doctors, including diagnosing a patient's medical conditions, referring for lab and diagnostic testing, prescribing medications, etc. As telemedicine gains usage and technological advancements increase to allow more virtual digital assessment and monitoring, the range of telemedicine service offerings will continue to evolve, to include types of care currently limited to in-person medical visits. Additionally, telemedicine insurtechs aim to be the primary care physician and offer their services for a small monthly fee.

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9. TELEMEDICINE PATIENT INFORMATION AND RECORD STORAGE

Questions arise as to where the virtual visit/encounter information is stored, and if it can be shared outside of the telemedicine company platform with external groups, such as a patient's primary care physician and insurance companies (including life insurers). Virtual telemedicine doctors can reference patient medical histories most of the time through the EHR platform of patient providers and hospitals or by contacting them directly to obtain the EMR in a PDF format. A patient's medical history data is stored on a telemedicine company's own server and can be shared with the provider or hospital with whom the telemedicine company is affiliated.

Not all data captured by the telemedicine company can be exchanged and retained in the hospital or provider EHR. Patient information that traditional EHR platforms cannot store/support include video, text, chat messaging and digital remote monitoring device data. EHR service providers will need to build this capability so providers/hospitals can house, receive and share more complete patient data.

Most telemedicine companies give patients the option to share their visit results with their primary care physician. This opt-out option is an additional risk that patient's information will not be stored and available in existing healthcare system EHRs, thus creating a hole and/or gap in a patient's EHR record.

There is also a potential issue in how telemedicine patient data is being managed by healthcare providers. In many cases, telemedicine health clinical services and settings are fragmented, and data is siloed. Low-volume telemedicine services, such as those for specific locations or clinical specialties, may stand alone rather than being designed as part of a larger, more integrated system, according to the telehealth interoperability whitepaper produced by the American Telemedicine Association (ATA).

Establishing successful interoperable telemedicine initiatives where patient record transparency is maximized presents opportunities for better patient care and improved data management and availability. In the US, a challenge for building interoperability is that healthcare data resides primarily where it is created as opposed to a central data clearing house such as in other countries like China.

A bi-directional interface which deploys two-way communication would be a good solution. With this option, both the EMR/EHR and telemedicine company could send and receive data and ensure all patient data is consolidated in one place. Payers, such as government bodies like the Centers for Medicare and Medicaid Services, are driving efforts for an interoperable telemedicine system. Telemedicine companies such as Teladoc and American Well are supporting this initiative.

EHR platform limitations are well documented, and efforts are being made to address it. As one example, American Well is partnering with Epic to make video visits available through the patient portal. Integrating telemedicine into the existing EHR platform and patient portal is critical to have a complete patient health record.

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10. GAP OF EHR DATA AVAILABILITY

The size of the potential gap in patient medical history in EHRs is currently unknown due to lack of breakout reporting. However, we are aware gaps in medical data exists.

1. Traditional Telemedicine and Provider/Hospital Affiliation
   a. Provider/Hospital EHR platform unable to support multiple formats of data (video, text, chat messaging, digital monitoring device data, etc.)
   b. Patient opts-out of medical data sharing
   c. Telemedicine siloed records
2. DTC Telemedicine
   a. No affiliation with provider/hospital so no bi-directional interface
   b. No primary provider
   c. Patient opts-out of medical data sharing
   d. Telemedicine siloed records

As telemedicine usage continues to increase, naturally the gap will increase as well. Some factors that may minimize the gap include:

1. CMS creation of standards for telemedicine data gathering and storage
2. Development of guidelines for EHR service providers to help modernize EHR platforms so they can handle multiple types of data
3. Improvement in overall interoperability

11. IMPLICATIONS FOR LIFE INSURANCE

The gap in patient medical history data could pose a potential challenge to life insurance companies. Many life insurance companies have implemented accelerated underwriting programs as a part of their customer-centric digitalization initiatives. EHRs play an important role in accelerating this process as it provides critical medical records of the applicants in a digital format at the time of application rather than waiting for paramed exams and laboratory results and attending physician's statements (APS) as done in current practices.

The inability of life insurers to obtain critical and the most recent medical information of applicants recorded during telemedicine visits due to the disconnection between telemedicine and EHR platforms creates opportunity to miss ratable or declinable risk. It is imperative for life insurance carriers to have the full patient history for a complete and accurate underwriting risk assessment as well as claims handling. Missing information could lead to incorrect pricing, mortality slippage, unnecessary payment of claims and so on.

Underwriting programs that use additional third-party data such as prescription drug reports, medical claims data and clinical lab results may identify some missing history if billed to health insurance companies. Don't expect to see medical data on patient out-of-pocket solutions for telemedicine and prescriptions (i.e., GoodRx). It's crucial that carriers plan for this growing gap in medical history during the development of underwriting requirements optimization.

Life insurers currently acquire patient medical records today through attending physician's statement (APS) retrieval companies and EMR/EHR service providers and aggregators. The gap of telemedicine patient health data exists for both APSs and EMR/EHRs. One possibility to address this gap could be the addition of application programming interface (API) connections to telemedicine EHR patient portals. COVID has impacted the life insurance industry and forced it to be more dynamic and to consider new solutions. It's important that carriers be aware of the possible gaps in new data sources/solutions and build in stopgap measures.

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12. CONCLUSION

The current dramatic growth of telemedicine services is expected to continue beyond the current pandemic era. It will transform the healthcare industry and bring many benefits to society. But it could also pose potential risks such as medical history data management gaps. Life insurers need to closely monitor the development in this field and take proactive actions to minimize the potential risk as well as to take advantage of the development.

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