



	A Deep Dive into Telehealth
The purpose of this call	The purpose of this <i>investor education training</i> is to help you make higher quality investment decisions in the emerging <i>"Crowdfunding Capital Markets."</i>
	On this call, we'll limit the discussion to any and all investment opportunities using the exemptions outlined within the JOBS Act of 2012 (and subsequent updates) to raise capital.
Who is this training for?	This call is designed for anyone who wants to learn more about investing in <i>Telehealth and Remote Patient Monitoring</i> deals.
	It doesn't matter if you're a Wall Street Insider or you're brand new to investing, this training is for you.
	Regardless of your prior investing experience, we'll assume you are brand new to the Crowdfunding Capital Markets .
	The Crowdfunding Capital Markets operate by a different set of rules than the <i>Public Capital Markets</i> .
	With this in mind, the process you're about to learn will help you invest in alignment with the current rules and regulations set by the Securities and Exchange Commission (SEC).
	As always, all investing activity carries some sort of risk. <i>"Early Stage Companies"</i> and <i>"Emerging Growth Companies"</i> should be considered high risk and speculative in nature. Please do not invest with funds you cannot afford to lose.





What will I learn how to do?	In this private workshop, we'll talk about
	 The main "Mega Trend" driving one of the most exciting sectors in BioTech today
	 How we here at Equifund think about investing into these types of companies
	 An overview of recent deal activity in the Telemedicine and Remote Patient Monitoring niche
	 A list of current offerings listed on other crowdfunding portals
	 And how you can participate in the ongoing "Crowd Diligence" we'll be hosting this month inside our community
What kind of	By federal law, we cannot legally promise (or otherwise guarantee) that
results should I expect?	you will make any money using this workbook. Nor can we guarantee you will avoid poorly-performing investments.
•	That being said, if you don't currently have a well-defined due diligence process like the one described in this call, you'll almost certainly benefit by implementing what you learn today.
Additional Resources	Equifund Basic Due Diligence Tool
	Disclaimers
Before we begin	Nothing in this training should be considered as professional advice or individualized advice. Please consult your financial professionals before making any investment.



	All investments carry some be considered a risky asset	sort of risk. Regulation Crowdfunding should class with a high rate of failure.
	Please don't risk any capita cannot afford to lose.	you need immediate access to, or otherwise
	Key Concepts, Ter	ms, and Definitions
Mega Trend	Not surprisingly, COVID der healthcare here in America. For most of human history, f "quarterback" for patient car But now, the "family doctor" at warp speed	nanded we change the way we think about the primary care provider has been the re. is being unbundled by digital health services $30 \frac{10}{2018} \frac{10}{2019}$
	 Overall patient volume following the impleme 	2018 2019 TELEHEALTH TECHNOLOGY AND PRACTICE ADOPTION IN RESPONSE TO COVID-19 Telemedicine increased to 49 percent usage in 2019 from just 11 percent in 2018, according to McKinsey and Company. https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/telehealth-a- guarter-trillion-dollar-post-covid-19-reality#



	novel Coronavirus in 2020 (<u>Neurology</u>).
	 Healthcare practitioners now provide 50 to 175 times the number of telemedicine visits in 2020 than they did in previous years (<u>McKinsey</u>).
	 As a result of Coronavirus, up to \$250 billion of US healthcare spend could come from virtual medicine (<u>McKinsey</u>).
	 In 2019, the global telemedicine market accounted for \$45.5 million and is projected to account for \$175.5 million by 2026 (<u>Statista</u>).
Market Cap	<u>Telehealth/Telemedicine Market by Component (Software & Services,</u> <u>RPM, Real-Time), Application (Teleradiology, Telestroke, TeleICU),</u> <u>Hardware (Glucose Meters), End-User (Provider, Payer, patient), Delivery</u> (<u>On-Premise, Cloud) Global Forecast to 2025</u>
	The global telehealth and telemedicine market is expected to grow at a CAGR of 37.7% during the forecast period, to reach USD 191.7 billion by 2025 from an estimated USD 38.7 billion in 2020.
	Growth in the telehealth and telemedicine market is mainly driven by factors:
	 The growing population and the need to expand healthcare access. The rise of chronic diseases and conditions. The shortage of medical staff. Advancements in telecommunications. Government support. The increase of patient awareness.





	Vision Fund and telehealth company Ro's \$200 million series C funding round led by existing investor General Catalyst. Telehealth visits have skyrocketed during the pandemic. By one estimate based on Epic electronic health record data, telehealth visits comprised 69% of total ambulatory visits in the U.S.—office and telehealth—in April. That dropped to 21% of total visits by July. "We are quite certain that when telemedicine utilization rates do settle, they will be higher than rates in the past," wrote Rock Health CEO and Managing Director Bill Evans in the report. "Investor dollars and consumer adoption signal a shift towards a new normal, with models of virtual care emerging as a central part of care delivery."
Origin	When did this Mega Trend begin?
	Americans' Perceptions of Telehealth in the Era of COVID-19 Telehealth technology, while originally designed to give access to care in areas where there is a shortage of specialty care providers, is now being examined as a way to screen and diagnose patients without risking the spread of disease through personal contact. However, use of telehealth has historically been challenged by a variety of factors, including cost of the equipment, inconsistent regulation across geographies, reimbursement issues, patient access to high-speed internet and biases toward having in-person visits to physicians.
	But, with increased reporting of a surge of telehealth visits and a boost in mental health app usage in the midst of a global pandemic, we wanted to better understand how people all over the U.S.

perceive virtual health care, what they're hopeful about and what they're skeptical about, in this new era of COVID-19.

Why telemedicine has been such a bust so far (June 30th, 2018)

The next big thing in health care? For more than a decade, it was supposed to be telemedicine.

Billions of investment dollars have been poured into apps and websites that offer this virtual consultations with physicians, ranging from Doctor on Demand to American Well.

The theory behind them is that millennials would opt for a digital alternative to an in-person physician's visit, if the option were available. And patients in remote, rural areas who are miles away from the nearest doctor would have few alternatives.

But telemedicine is still far from mainstream. Even a study sponsored by a telemedicine provider from late 2017 still found that 82 percent of U.S. consumers do not use it.

How Common Was Telemedicine Pre-Coronavirus?

- From 2016 through 2019, the use of telehealth in some medical specialties doubled from 14% to 28% (<u>AMA</u>).
- In the five years preceding 2019, telemedicine had grown by 44% (<u>GlobalMed</u>).
- In 2019, 66% of consumers were willing to try virtual health exams, 8% already had, and two-thirds were using personal health monitoring devices (<u>American Well</u>).
- In 2019, 22% of practitioners used telemedicine to examine patients versus only 5% in 2015 (<u>Ziegler</u>).



	 In 2019, the US Department of Veteran's Affairs reported a 17% increase of telehealth services to veterans over the prior fiscal year (VA).
Trend Drivers	How did we get to this moment in time? What are the converging forces that have created the Opportunity?
	The Technology of Telehealth
	Is Modern Telehealth Tech Secure and Dependable?
	 40% of telehealth encounters have reported technical challenges (<u>Neurology</u>).
	 In some cases, poor audio (19%), poor video (13%), and audio interruption (9%) have a negative impact on the reliability of virtual healthcare visits (<u>Neurology</u>).
	 Only 20% of telemedicine practitioners have in-house security officers and typically rely on external security vendors (<u>AMA</u>).
	 Technical barriers to telehealth include lack of bandwidth (19%) and cybersecurity (15%) (<u>HealthTech</u>).
	 Only technology that meets HIPAA standards for security and privacy may be used in telemedicine in the US (<u>AHIMA</u>).
	Driver: Technology adoption in the wake of COVID-19
	The demand for healthcare services and technologies reached an all-time high in the wake of the pandemic.
	Technologies such as telemedicine, and chatbots, robots, are being deployed to help gather information, reassure the population, treat patients, make diagnoses, and even prepare future vaccines.
	The potential of telehealth has been been emphasized, given a global shortage in hospital beds and healthcare workers. Players operating in the

telehealth market are focusing on providing innovative solutions on COVID-19 to support hospitals and healthcare providers.

Opportunity: AI and Analytics

Big data analytics can process data collected from telehealth modalities, including both objective (vital signs, ambient environment) and subjective data (symptoms, patient behavior), along with historical data to enable risk prediction and management.

Moreover, federal agencies, public payers, and large commercial insurers have expanded telehealth access amid the pandemic. The majority of them are struggling to ensure that telehealth is being applied to the right patients for the right healthcare needs, increasing efficacy and efficiency in care delivery.

In that regard, there appears to be significant potential in analytics, AI, and machine learning, as care delivery adapts to the extensive use of telehealth. Data-driven analytics thus forms an important component of ensuring efficacy and efficiency of telehealth.

Principal telehealth domains and use cases

- Live Videoconferencing (Synchronous): Live, two-way interaction between a person and a healthcare provider using audiovisual telecommunications technology.
- **Store-and-Forward (Asynchronous):** Transmission of a patient's medical information through an electronic communications system to a care provider without a real-time interaction.
- **Remote Patient Monitoring (RPM):** Personal health and medical data collection from an individual in one location via electronic communication technologies, which is transmitted to a provider (hospitals, clinics, living facilities, etc.) in a different location for use in care and related support.









	the hospital and \$19 to \$120 per visit to patients (<u>Health Leaders</u>).
	 Telehealth technologies are projected to save the US healthcare industry \$305 billion annually (<u>FCC</u>).
	 Remote health monitoring in one diabetes cohort resulted in better outcomes and estimated cost savings of \$3,855 per patient per year (<u>FCC</u>).
	 Banner Health's Ambulatory Care program, which involves telehealth, reduced overall costs by 34.5% in the first year (FCC).
	The Politics of Telehealth
The Center for Connected Health Policy (CCHP)	CCHP is a nonprofit, nonpartisan organization working to maximize teleheath's ability to improve health outcomes, care delivery and cost effectiveness.
	Established in 2008 with funding from the California Health Care Foundation, The Center for Connected Health Policy (CCHP) is a program under the Public Health Institute and is dedicated to integrating telehealth virtual technologies into the health care system through advancing sound policy based on objective research and informed practices.
	CCHP's mission is to advance state and national telehealth policies that promote better systems of care, improved health outcomes, and provide greater health equity of access to quality, affordable care and services.
	Originally focused exclusively on California telebealth policy. CCHP



	In 2012, CCHP's scope grew to include national telehealth policy issues as it became the federally designated National Telehealth Policy Resource Center (NTRC-P) through a grant from the Health Resources and Services Administration (HRSA). In this capacity CCHP serves as an independent center of excellence in telehealth policy providing technical assistance to twelve federally funded regional Telehealth Resource Centers (TRC), state and federal policy makers, national organizations, health systems, providers, and the public.
Issues with Licencing	CROSS STATE LICENSING
	The introduction of technology-enabled health care over secure, high-speed broadband connections has made it possible for consultations to occur over distances.
	While this can contribute significantly to improving access to care, professionally licensed providers in most cases are limited to practicing in the state(s) where they are licensed.
	Typically, during a telehealth encounter the originating site (the location of the patient) is considered the "place of service", and the distant site provider must adhere to the licensing rules and regulations of the state in which the patient is located, even if the distant site provider is not a resident of the patient's state.
	The policies governing telehealth and physician licensure vary widely across the country. Some states provide exceptions to allow for cross-border delivery of health care in limited circumstances, while others ban it entirely.
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Many telehealth proponents have cited licensing as one of the most significant barriers to the ubiquitous use of telehealth. Currently, medical licensing falls under the purview of each state, leading to the need to secure individual state licenses for multi-state practices.

This endeavor can not only be time consuming, but expensive. Providers may find themselves limiting their potential practice areas to a few states, possibly furthering unequal distribution of expertise in the nation.

Current Activities Related to the Cross-State Licensure Barrier Federal Legislation

State licensing requirements have been identified as a key policy barrier in telehealth. Over the years, several pieces of federal legislation have been introduced to address this.

Some legislation attempted to re-define the "place of service" from the originating site (site of the patient) to the distant site (site of provider delivering care). This would resolve the licensing barrier because a provider would then only need to be licensed in the state in which they are physically located in, as opposed to the state of the patient.

However, none of these bills have successfully made it through the legislative process and into law.

Veterans Administration

In 2018, the Department of Veterans Affairs published its final rule to expand the ability of telehealth to more evenly distribute VA providers across regions by preempting state licensing requirements.

Under the final regulation, VA health care providers may provide telehealth services, within their scope of practice to VA beneficiaries, irrespective of the State or location within a State where the health care provider or the

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	beneficiary is physically located. The rule does not apply to VA
	contractors.
	COVID-19 Related Licensing Exceptions
	Some states have provided licensing waivers or exceptions as a result of the COVID-19 public health emergency in order to provide greater access to care.
	These waivers are sometimes made in executive orders that apply to a multitude of health care professionals, and other times are waivers for only specific professionals (such as physicians or psychologists).
	The federation of state medical boards is tracking the COVID-19 licensing exceptions and telehealth-specific licensing waivers through two charts available on their website. Providers should also inquire with the professional board in the state the patient is located to see if there are additional waivers or requirements.
	Interstate Compacts
	In order to ease the burden of cross-state licensing, some professions have created interstate licensing compacts to make it simpler for professionals to practice across state lines. For a state to participate in a compact, they would need to enact standard legislative language that sets out the ground rules for the Compact.
	There are currently six compacts that CCHP is tracking:
1. Nurse Licensure Compact (NLC)	Nurse Licensure Compact (NLC): Allows nurses to have one license viable in other compact member states, allowing for a nurse to practice in both their home state and other states which have signed on to the compact.



2. Interstate Medical Licensure Compact	Interstate Medical Licensure Compact: This particular Compact creates an expedited medical licensure process with the goal of allowing physicians to become licensed in multiple states more easily, while protecting patient safety.
	Origin of Interstate Medical License Compact
	In recent years, the growth of telemedicine and other technologies has created new opportunities to increase access to health care for patients in underserved or rural areas and to allow them to more easily connect with medical experts. Physicians are increasingly able to use telemedicine to practice in multiple states.
	In an effort to maximize the potential of these new health care advances, state medical boards in 2013 began actively discussing the idea of creating an interstate physician licensure compact that could help expand access to health care for patients by streamlining traditional medical-license application processes.
	The idea was embraced by a diverse range of state boards, and over the next several years the groundwork was laid for the creation of the Interstate Medical Licensure Compact. With assistance from the Federation of State Medical Boards, a group of state medical board executives, administrators and attorneys drafted a model compact – which was introduced publicly in the fall of 2014. State legislatures soon began adopting it, and in early 2017, the Compact became operational.
	More than half of U.S. states, the District of Columbia and the Territory of Guam are now participating in the Compact, and other states are in the process of introducing legislation to adopt it.

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	over which the participating states maintain control through a coordinated legislative and administrative process.
	Coordination through a compact is not the same as superseding state authority. The Compact does not change in any way a state's Medical Practice Act, or a state's full authority in administering its duties of oversight. The Compact simply creates another pathway for licensure.
3. The Physical Therapy Compact:	The Physical Therapy Compact: Under the Compact, a physical therapist or physical therapist assistant needs to obtain a "Compact Privilege" (the authorization to work in a Compact member state other than the PT or PTA's home state) in each member state.
	Nerverse at one Werk
4. The	The Psychology Interjurisdictional Compact (PSYPACT): Gives
Psychology Interjurisdictional Compact (PSYPACT):	psychologists in PSYPACT member states the authority to practice interjurisdictional telepsychology in other PSYPACT states.
	PSYPACT PARTICIPATING STATES
	 Arizona – AZ HB 2503 (Enacted on 5/17/2016) Colorado - CO HB 1017 (Enacted 4/12/2018) Delaware - DE HB 172 (Enacted 6/27/2019) Georgia - GA HB 26 (Enacted 4/23/2019) Illinois - IL HB 1853 (Enacted 8/22/2018)



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5. The Recognition of EMS Personnel Licensure Interstate CompAct (REPLICA):	 The Recognition of EMS Personnel Licensure Interstate CompAct (REPLICA): A multi-state compact that extends a privilege for EMS personnel to practice on a short-term, intermittent basis in another member state under certain circumstances. The Recognition of EMS Personnel Licensure Interstate CompAct (REPLICA) is the only national multi-state compact for the Emergency Medical Services profession.
	Once the EMS Compact is operational (anticipated early 2020), qualified EMS professionals licensed in a "Home State" would be extended a "Privilege To Practice" in Remote States for qualified circumstances. State Requirements
	 To become a member of the EMS Compact, states must pass the model legislation and meet the following requirements: Compact states must utilize the National Registry of EMTs certification examination for EMTs and Paramedics



	 Authorizes both telehealth and in-person practice across state lines in ASLP-IC states.
	 Is similar in form and function to occupational licensure compacts for nursing, psychology, medicine, physical therapy and emergency medical services.
	ASLP-IC is operational when 10 states enact the legislation for the compact.
	 Audiologists and speech-language pathologists licensed in their home state apply for a privilege to practice under the ASLP-IC. State lines are a barrier no more!
	ASLP-IC states communicate and exchange information including verification of licensure and disciplinary sanctions.
	ASLP-IC states retain the ability to regulate practice in their states.
	A Brief Timeline Of Federal Telehealth Legislation
February 17	American Decessory and Deinssector and Act of 2000
2009	American Recovery and Reinvestment Act of 2009
2009	American Recovery and Reinvestment Act of 2009 As a part of the American Recovery and Reinvestment Act, all public and private healthcare providers and other eligible professionals (EP) were required to adopt and demonstrate "meaningful use" of electronic medical records (EMR) by January 1, 2014 in order to maintain their existing Medicaid and Medicare reimbursement levels.
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2009 February 17, 2009	American Recovery and Reinvestment Act of 2009 As a part of the American Recovery and Reinvestment Act, all public and private healthcare providers and other eligible professionals (EP) were required to adopt and demonstrate "meaningful use" of electronic medical records (EMR) by January 1, 2014 in order to maintain their existing Medicaid and Medicare reimbursement levels. Since that date, the use of electronic medical and health records has spread worldwide and shown its many benefits to health organizations everywhere. The Health Information Technology for Economic and Clinical Health (HITECH) Act



	the HITECH Act was signed into law on February 17, 2009, to promote the adoption and meaningful use of health information technology.			
	Before the HITECH Act was passed into law, only 10 percent of hospitals in 2008 had switched from paper files to EHRs. The primary reason why so few healthcare organizations were using electronic records was due to the high expense of changing over. Once the act was passed, the included incentives encouraged healthcare organizations and providers to make the switch to electronic health records.			
March 23, 2010	The Patient Protection and Affordable Care Act (aka "Obamacare")			
	Signed into law by President Barack Obama on March 23, 2010, the act mandated the inclusion of preventive healthcare – like immunizations, mammograms, and wellness visits – by the insurance providers at no added cost.			
	Obamacare's free preventive services help to put the focus on wellness, early detection, and prevention, instead of treatments and cures.			
	[Note: "Obamacare" did not include any specific provisions for RPM]			
March 6, 2020.	MEDICARE TELEMEDICINE HEALTH CARE PROVIDER FACT SHEET			
	EXPANSION OF TELEHEALTH WITH 1135 WAIVER: Under this new waiver, Medicare can pay for office, hospital, and other visits furnished via telehealth across the country and including in patient's places of residence starting March 6, 2020.			
	Medicare beneficiaries will be able to receive a specific set of services through telehealth including evaluation and management visits (common office visits), mental health counseling and preventive health screenings.			
	This will help ensure Medicare beneficiaries, who are at a higher risk for			



	COVID-19, are able to visit with their doctor from their home, without having to go to a doctor's office or hospital which puts themselves and others at risk. There are three main types of virtual services physicians and other professionals can provide to Medicare beneficiaries: Medicare telehealth visits, virtual check-ins and e-visits.
July 16, 2020	Telemedicine for Cancer Care in the Time of COVID-19
	On March 30, 2020, the US Centers for Medicare & Medicaid Services (CMS) released an interim final rule that capped off a dizzying month of temporarily loosening regulations to give health care professionals maximum flexibility in responding to the coronavirus disease 2019 (COVID-19) pandemic.
	A primary goal of this regulatory flexibility, enabled by the President's declaration of a national emergency and the declaration of the Secretary of the Department of Health and Human Services (HHS) of a public health emergency, is the promotion of virtual medicine by expanding coverage for telehealth services to Medicare beneficiaries.
	Telehealth may facilitate US citizens' access to essential health benefits while respecting physical distancing, an essential disease spread mitigation strategy for COVID-19.2 With a vulnerable patient population, these changes have already had a widespread effect on the delivery of oncology services during the pandemic and may yet have unforeseen effects.
	Telemedicine in the Time of COVID-19

There were 3 primary federal stimulus packages addressing the COVID-19 pandemic enacted in March 2020:

- 1. The Coronavirus Preparedness and Response Supplemental Appropriations Act (CPRSA),
- 2. The Families First Coronavirus Response (FFCR) Act, and
- 3. The Coronavirus Aid, Relief, and Economic Security (CARES) Act.

The CPRSA was an \$8.3 billion emergency funding bill that included \$500 million to expand Medicare telehealth coverage during emergencies.

The FFCR Act was a relief package focused on expanding COVID-19 testing, supporting Medicaid, and enhancing unemployment benefits. It included a technical change to the CPRSA to further expand Medicare beneficiaries' telehealth access.

The CARES Act was a sweeping \$2.2 trillion economic stimulus package that provided a variety of direct economic support measures. It further expanded coverage and loosened the definitions of Medicare telehealth services.

In addition, CMS issued clarifications further detailing the regulatory waivers and rules. These clarifications, in concert with the emergency declarations and stimulus packages, effectively unshackled telemedicine, resulting in its rapid adoption through the following features.

Geographic Restrictions

The CMS previously covered telehealth only when a patient was receiving care at a facility in a nonurban area or an area with a health professional shortage. Lifting this restriction during emergency circumstances (the

COVID-19 pandemic) has effectively permitted the delivery of telehealth services directly to a patient's home or elsewhere.

Eligible Patients

Medicare previously required that telehealth recipients have a prior established relationship with a particular health care professional; however, during the public health emergency, CMS agreed to a state of nonenforcement. This has effectively enabled patients to be cared for by new physicians remotely (eg, new patient consultations).

Eligible Services

The CMS expanded telehealth coverage to more than 80 additional services. This effectively allowed the primary face-to-face patient–oncologist encounters (consultations, follow-ups, and, for radiation oncologists, on-treatment visits) to be conducted entirely virtually.

Delivery Platforms

Privacy regulations, such as the Health Insurance Portability and Accountability Act (HIPAA), restrict the remote communication technologies allowable for telehealth. During the COVID-19 public health emergency, the HHS will exercise enforcement discretion and not impose penalties for noncompliance with HIPAA regulatory requirements during the good-faith provision of telehealth.

Effectively, this allowed health care professionals to use widely available remote audiovisual communication platforms (eg, Zoom Video Communications) for patient appointments. Audio-only communication is now allowable in certain instances, with CMS acknowledging that audio and video may not always be available.

Supervision Requirements

The CMS sets physician supervision requirements for specific covered services as a condition for payment. For example, certain oncology services provided in the physician office setting may require direct supervision, meaning the physician must be "immediately available to furnish assistance and direction" during the service delivery

During this crisis, CMS is allowing real-time audiovisual technology to satisfy the direct supervision requirement. It has also loosened the supervision requirements for diagnostic services, such as image-guided radiation therapy. Effectively, this permits remote supervision of many oncology services.

Eligible Health Care Professionals

The CMS has loosened the resident physician supervision requirements for services rendered, such that they can be satisfied through direct supervision with interactive telecommunications technology.

Additionally, CMS allows supervision requirements to be met when the resident physician is furnishing telehealth services while the teaching physician is also practicing direct supervision of the service via interactive telecommunications technology. Effectively, this virtual supervision of resident physicians, when the service is being delivered in person or via telehealth, increases latitude for resident physicians in the delivery of care during COVID-19.

Reimbursement

The CMS clarifications specifically state that telehealth services paid under the Physician Fee Schedule will be the same amount as in-person services.

Limitations of Loosened Telemedicine Rules



A caveat to these expansions is that they apply to Medicare beneficiaries—a federal domain. Many barriers to widespread adoption of telemedicine before the COVID-19 pandemic, such as credentialing and commercial payers' and Medicaid reimbursement, are typically regulated by individual states, which have their own payment policies. ⁶ However, many private payers (eg, some Blue Cross Blue Shield companies) have also announced expanded coverage of services during the public health emergency; this remains in flux.
H.R.6074 - The Coronavirus Preparedness and Response
<u>Supplemental Appropriations Act (CPRSA)</u>
This bill provides \$8.3 billion in emergency funding for federal agencies to
respond to the coronavirus outbreak.
DIVISION ACORONAVIRUS PREPAREDNESS AND RESPONSE SUPPLEMENTAL APPROPRIATIONS ACT, 2020
Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020
This division provides FY2020 supplemental appropriations for the Department of Health and Human Services (HHS), the State Department, and the Small Business Administration to respond to the coronavirus outbreak.
The division funds programs that address issues such as
 developing, manufacturing, and procuring vaccines and other medical supplies;

• grants for state, local, and tribal public health agencies and organizations; loans for affected small businesses; evacuations and emergency preparedness activities at U.S. embassies and other State Department facilities; and • humanitarian assistance and support for health systems in the affected countries. The supplemental appropriations are designated as emergency spending, which is exempt from discretionary spending limits. https://www.medicare.gov/coverage/telehealth Your costs in Original Medicare You pay 20% of the Medicare-approved amount for your doctor or other health care provider's services, and the Part B deductible applies. For most telehealth services, you'll pay the same amount that you would if you got the services in person. Due to the Coronavirus (COVID-19) Public Health Emergency, doctors and other health care providers can use telehealth services to treat COVID-19 (and for other medically reasonable purposes) from offices, hospitals, and places of residence (like homes, nursing homes, and assisted living facilities) as of March 6, 2020. Coinsurance and deductibles apply, though some healthcare providers are reducing or waiving the amount you pay for telehealth visits. If you have coverage through a Medicare Advantage Plan, you won't

have to pay out-of-pocket costs (called cost-sharing) for COVID-19 tests. They may also offer more telehealth services than what was included in their approved 2020 benefits.

What it is

Medicare telehealth services include office visits, psychotherapy, consultations, and certain other medical or health services that are provided by a doctor or other health care provider who's located elsewhere using interactive 2-way real-time audio and video technology.

You can get certain Medicare telehealth services without being in a rural health care setting, including:

- Monthly End-Stage Renal Disease (ESRD) visits for home dialysis.
- Services for diagnosis, evaluation, or treatment of symptoms of an acute stroke wherever you are, including in a mobile stroke unit.
- Services to treat a substance use disorder or a co-occurring mental health disorder in your home.

Things to know

Starting in 2020, Medicare Advantage Plans may offer more telehealth benefits than Original Medicare. These benefits can be available in a variety of places, and you can use them at home instead of going to a health care facility. Check with your plan to see what additional telehealth benefits it may offer.

Medicare made these changes to telehealth in 2020:

- You can get Medicare telehealth services at renal dialysis facilities and at home.
- You can get Medicare telehealth services for certain emergency department visits at home.



	 You can get certain physical and occupational therapy services at home. Medicare covers some services delivered via audio only devices. Medicare also covers virtual check-ins and E-visits. 			
	The Coronavirus Aid, Relief, and Economic Security (CARES) Act.			
	The CARES Act was a sweeping \$2.2 trillion economic stimulus package that provided a variety of direct economic support measures. It further expanded coverage and loosened the definitions of Medicare telehealth services.			
Dec 01, 2020	Trump Administration Finalizes Permanent Expansion of Medicare Telehealth Services and Improved Payment for Time Doctors Spend with Patients			
	On Dec 01, 2020, CMS released a press release stating			
	This final rule delivers on the President's recent Executive Order on Improving Rural Health and Telehealth Access by adding more than 60 services to the Medicare telehealth list that will continue to be covered beyond the end of the public health crisis (PHE), and we will continue to gather more data and evaluate whether more services should be added in the future.			
- Social / Cultural	The Adoption Rates of Telehealth			
	 How Do People View Telemedicine and is it Effective? 74% of millennials prefer telehealth visits to in-person doctor exams (<u>GlobalMed</u>). 			

 Over the next five years, consumers expect to make greater use of virtual healthcare opportunities (<u>Bain</u>).
 Up to 89% of patients are willing to accept telemedicine as a sufficient form of medical care (MDPI).
 85% of patients who receive telemedicine services are satisfied with their medical care (MDPI).
 When compared with in-office visits, virtual healthcare visits were regarded by 62.6% of patients and 59% of clinicians to be just as effective as in-office care (<u>ResearchGate</u>).
 52.5% of clinicians report more effective treatment with virtual healthcare visits vs in-office treatment (<u>ResearchGate</u>).
 93% of clinicians believe that telehealth is an "acceptable" method and 60% believe it is a "very effective" method of patient care overall (<u>Neurology</u>).
 89% of clinicians report telemedicine as at least a satisfactory method of follow-up care for patients (<u>Neurology</u>).
 5% of virtual healthcare visits result in the need for an in-person examination (<u>Neurology</u>).
 In some cases, telemedicine has better outcomes than in-person healthcare visits (<u>OECD</u>).
 Banner Health's Ambulatory Care program, which involves telehealth, reduced hospitalizations by 49.5% and 30-day readmissions by 75% in the first year (FCC).

	 The Veteran's Administration has administered over 2.29 million telemedicine interactions to over 782,000 veterans (FCC).
	 Virtual health visits implemented with veterans led to 25% fewer days spent in inpatient care and 19% fewer hospital admissions (<u>FCC</u>).
	 93% of telepsychiatry patients feel that they can present the same information over the phone as they can at a face-to-face visit (<u>PubMed</u>).
	 96% of telepsychiatry patients are satisfied with virtual mental healthcare (<u>PubMed</u>).
	 85% of telepsychiatry patients are comfortable with their ability to share with a mental health professional in a virtual environment (<u>PubMed</u>).
	 Implementing a telehealth platform can increase patient recruitment and retention by 81.5% (<u>Avera eCare</u>).
	 82% of consumers view digital options as the best way to monitor health (<u>McKinsey</u>).
4	As Office Visits Fall, Telehealth Takes Hold
	Recent data show that, while overall visit volumes have decreased dramatically since the beginning of the COVID-19 pandemic in the United States, telehealth visits overall have increased 300-fold.

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8/10/2020).

- The list includes 12 unicorns (companies valued at \$1B+) focused on a diverse range of digital health solutions. One unicorn on the list is <u>Ro</u>, a telehealth platform that provides remote care and medication delivery services. Another is <u>Oscar Health</u>, which builds a tech-enabled health insurance platform. Meanwhile, unicorn <u>CMR</u> <u>Surgical</u> develops a robotic surgical system that assists surgeons during procedures.
- The list includes a number of early-stage (seed/angel and Series A) startups, such as <u>Onera Health</u>, which develops diagnostics solutions for sleep disorders. Another early-stage startup is <u>Folx</u>
 <u>Health</u> a telehealth service specifically for the LGBTQ community founded by the co-founder of Optum Ventures. Psychedelic medicine company <u>Mindbloom</u>, also an early-stage startup, is forging an emerging category through its online-offline guided psychedelic therapies.
- A number of startups have formed partnerships with key industry players. <u>Happify Health</u>, which develops digital therapeutics in mental health, has partnerships with the American Heart Association, Sanofi, and Cigna. Private health insurer <u>Bright Health</u> has teamed up with key healthcare players such as Mount Sinai Health System, Mercy Health, and Arizona Care Network as it continues to expand.

The 2020 Digital Health 150 list is representative of many of the key thematics and trends we've observed across healthcare in the past year. Below, we highlight some of these along with examples from this year's cohort.

Demand for telehealth services has skyrocketed amid the global Covid-19 pandemic. As a result, many brick-and-mortar platforms have recently added telehealth offerings.

On this year's list, a total of 62 startups — 41% of the selected companies — offer remote healthcare services. The most prevalent subcategories in this group include:

• Telemedicine platforms: <u>Heartbeat Health</u>, <u>Doctor On Demand</u>, and <u>Livi</u>.

TELEMEDICINE IS THE TOP TELEHEALTH

- Remote monitoring & diagnostics: <u>Oura, Element Science</u>, and <u>Dental Monitoring</u>.
- Therapy & coaching: <u>Omada Health</u> and <u>Virta Health</u>.



Mental & behavioral health has become a bigger priority in the healthcare industry in recent years, especially amid the current climate. In Q1'20, <u>mental health startups raised a record \$575M+</u> in equity funding. In this year's cohort, 10 companies are creating solutions to deliver more accessible, personalized mental health services. Key examples include:

- Teletherapy platforms: Lyra Health, Meru Health, Mindbloom, and Mindstrong.
- Addiction management platforms: <u>Axial Healthcare</u> (substance use), <u>CureApp</u> (nicotine), and <u>Pear Therapeutics</u> (substance use).

ON-DEMAND CONSULTATIONS

Startups in this space have adopted business and care models that cater specifically to consumers' preference for on-demand or à la carte care — even if that means foregoing the 1:1 patient-physician relationship that's typical for primary care.

- Virtual care platforms like <u>Doctor on Demand</u> allow individuals to request, schedule, and complete live video visits with licensed physicians anywhere, anytime. This approach is especially useful in urgent care situations, helping patients get diagnosed and treated more quickly while also avoiding the costly expenses associated with an ER visit.
- <u>Dispatch Health</u> also delivers on-demand urgent care, but instead of through traditional brick-and-mortar clinics or purely virtual interfaces, it dispatches medical professionals to patients' homes. By being physically present, Dispatch's care providers can assess a wider range of urgent care concerns while still helping patients avoid long wait times and high costs.

 <u>Carbon Health</u> and <u>Heal</u>, on the other hand, have adopted hybrid in-person/virtual models for on-demand care delivery. Carbon Health operates brick-and-mortar clinics but also allows patients to schedule on-demand video visits through its mobile app. Heal began as an on-demand house call service (similar to Dispatch) but has since expanded into on-demand virtual visits (similar to Doctor on Demand).

REMOTE PATIENT MONITORING

Family doctors generally have limited information about how their patients are doing beyond what is observed or collected during clinical interactions.

For example, a PCP caring for a prediabetic patient may have no insight into how physically active that patient is or how their blood glucose levels are trending between visits. The doctor can only base decisions off information reported and data collected during intermittent visits. That means the doctor risks missing the opportunity to proactively intervene if the patient's condition begins to decline before the next scheduled visit.

This also impacts physicians' ability to monitor patients with chronic illnesses and patients undergoing post-acute or post-surgical care transitions. Further, it hinders their ability to detect and diagnose conditions with sporadic symptoms (e.g. cardiac arrhythmias).

Remote monitoring solutions, however, can dramatically improve PCPs' ability to keep tabs on these populations without overwhelming their capacity or existing workflow.

 As it relates to post-acute or post-surgical care transitions, <u>Current</u> <u>Health</u> and <u>Nanowear</u> have developed full-stack remote monitoring solutions (including both hardware and software), while <u>PhyslQ</u> has developed a device-agnostic software solution.

 Several startups are working on solutions that help providers remotely monitor patients with chronic diseases. Glooko, for one, has an exclusive focus area (diabetes), while others like optimize.health can be adapted to a wider range of chronic conditions. Wearable ambulatory cardiac monitors like <u>Preventice Solutions</u>' BodyGuardian can be prescribed for patients with suspected — but not yet diagnosed — conditions. The continuous data collected from the device can help physicians detect symptoms that may not have presented during an in-person exam (e.g. atrial fibrillation). **MEDICATION ADHERENCE** PCPs have a responsibility to educate their patients about prescribed treatment plans and to promote adherent behavior so they have the best chance of success. Unfortunately, PCPs typically have little insight into how patients are adhering to treatment on an ongoing basis, and therefore have little chance to intervene when patients fall behind. A number of startups are trying to overcome this problem — either by enhancing the provider's ability to continually monitor and intervene or by offloading some of their responsibility. • <u>Pillsy</u> and <u>RxAnte</u> offer enterprise platforms that allow providers to not only monitor when patients take their medications but also support their adherence through reminders and interventions. Medisafe has developed what it calls the "digital drug companion," a mobile app that can be customized by biopharmaceutical manufacturers and offered alongside specific prescription





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	 medications. The app educates patients about treatment, encourages compliance, and monitors progress through interactive surveys. Other companies have developed direct-to-consumer solutions. <u>MedMinder Systems</u> offers a digital pillbox that helps elderly patients stay on track with prescribed regimens by sending reminders and sharing status updates with seniors' loved ones. <u>AireHealth</u> and <u>Health Beacon</u> have developed solutions for patients that require specific types of treatments: AireHealth's connected nebulizer helps those with respiratory conditions, while HealthBeacon's Injection Care Management System aids patients requiring self-injections.
	Rules of the Game
Key Differentials between EMR and EHR	ELECTRONIC HEALTH RECORDS VS. ELECTRONIC MEDICAL RECORDS
Technology Platforms	It's important to understand the nuances between EMRs and EHRs. Many in the industry use the terms interchangeably, as we do here in our reviews, but there are subtle differences that are important to note. Electronic medical records, or EMR systems, were previously considered to be digitized versions of traditional medical records.
	They are superior to paper records in that they create an easily accessible, centrally located document that can track data over time and generate important reports to help healthcare providers offer better care to their patients.

	EMRs represent an important departure from the analog medical world into the digital, but they are not the modern standard of healthcare information technology.
	Electronic health records, or EHR systems, are what is generally referred to today, by both terms.
	However, EHR software technically differs from EMR systems in that EHRs can communicate with one another and transmit important data – such as patient records, prescriptions and lab orders – between different parts of the healthcare ecosystem.
	EMRs technically can't do that, even though many in the industry sometimes refer to their solutions as EMR software.
	All the solutions we reviewed are interoperable EHRs that can order labs and prescriptions, communicate with patients, and provide a 360-degree view of a practice's operation
	What is the main difference between EMR and EHR?
	It's easy to remember the distinction between EMRs and EHRs, if you think about the term "medical" versus the term "health." An EMR is a narrower view of a patient's medical history, while an EHR is a more comprehensive report of the patient's overall health
<u>Regulatory</u> Requirements for	The FDA defines a medical device as:
<u>Device Listing</u>	 "an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article, including a component part or accessory which is: recognized in the official National Formulary, or the United States Pharmacopoeia, or any

supplement to them,

- intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, in man or other animals, or
- intended to affect the structure or any function of the body of man or other animals, and which does not achieve its primary intended purposes through chemical action within or on the body of man or other animals and which is not dependent upon being metabolized for the achievement of any of its primary intended purposes."

Registration and listing

Establishments that are involved in the production and distribution of medical devices intended for commercial distribution in the United States are required to register annually with the FDA. Most establishments that are required to register are also required to list the devices and the activities performed on those devices at that establishment.

Premarket submissions

Some medical devices require premarket submissions depending on use and classification:

• Premarket Notification (510(k))

A 510(k) is a premarket submission made to FDA to demonstrate that the device to be marketed is safe and effective, and substantially equivalent to a legally-marketed device that is not subject to Premarket Approval. Visit our <u>Premarket Notification</u> 510(k) page for more information.

Premarket Approval (PMA)

This is the FDA's process of scientific and regulatory review to evaluate the safety and effectiveness of Class III medical devices. Visit our <u>Premarket Approval page</u> for more information.

To determine if your device requires a 510(k) or PMA submission, you can search the Product Classification Database. Back to top

How does FDA verify premarket submissions?

When a product requires premarket submission, the FDA will verify the declared 510(k) or PMA by comparing the submitted information to CDRH's data systems. If the 510(k) or PMA information and number is not supplied, or is incomplete or inaccurate, it may delay the review of your entry.

If the information submitted matches the CDRH data system, then compliance is verified; if the information does not match, the FDA may gather additional information or may detain the product. If the product requires a PMA or 510(k) and does not have one, it will be subject to refusal.

How do I obtain information on premarket submissions for specific products?

The FDA maintains public 510(k) and PMA databases. You can <u>search the</u> releasable 510(k) and <u>PMA databases</u> to obtain 510(k) and PMA information for a specific product. <u>Back to top</u>

Medical device classification

Currently medical devices fall into one of three medical device classifications: Class I, Class II, and Class III.

Class I includes devices with the lowest risk and Class III includes those with the greatest risk. For more information please visit the <u>Classify Your</u> <u>Medical Device page</u>. In some circumstances devices are unclassified.

	For more information review the <u>Medical Device Classification Product</u> <u>Codes Guidance for Industry and FDA Staff</u> . This document also includes information regarding section 513(g) of the Act, which provides a means to obtain the FDA's view regarding the classification and regulatory requirements that may be applicable to a particular device. The FDA has issued EUAs for certain remote or wearable patient monitoring devices to help increase the availability of monitoring and treatment of patients and to help address reduction of healthcare provider exposure to SARS-CoV-2 during the COVID-19 pandemic.Jun 25, 2020
	FDA Basic Classification Structure
	The FDA regulates medical devices sold in the United States to assure their safety and effectiveness.
	Medical devices range from simple tongue depressors and hospital gowns to complex programmable pacemakers and robotic surgical systems. Our <u>Medical Device Product Classification database</u> lists over 6,000 types of medical devices regulated by FDA's Center for Medical Devices and Radiological Health (CDRH) and the classification assigned to each type.
	Depending on the device classification, along with other factors, federal regulations (such as the <u>Code of Federal Regulations, Title 21</u>) define requirements that must be fulfilled for CDRH to approve or clear devices sold in the United States.
Potential Issues	Potential Issues with RPM Devices
with RMP Devices	A challenge with consumer RPM devices is the potential for unsolicited patient data. Patient-Generated Health Data ("PGHD") refers to data generated by a patient, such as biometric data collected on an Apple Watch.

However, patients and physicians may differ as to what's important information, and patients may send data without thinking about what the influx of it will do to the organization and management of their EMR.

Additionally, physicians may feel skeptical about the reliability of PGHD as it is collected in nonstandard ways, by nonprofessionals. Also, PGHD must be systematically processed and analyzed before it can confidently be used. However, providers should establish standard protocols for what information should be added to the patient's EHR, keeping information used for the patient's diagnosis or treatment.

Providers must review the PGHD thoroughly, even if it seems irrelevant. There may be legal consequences if inadequate review of received unsolicited health information creates ill-informed medical decisions or missed diagnoses.

Providers may consider ordering new or additional testing if they are questioning the reliability or accuracy of the PGHD.

Since RPM is still a rapidly growing industry, there are limited standards and guidelines available for the appropriate utilization and monitoring of wearable technology.

Also, no medical malpractice suits have been filed yet, but will surely be forthcoming. Therefore, it is important to be aware of the potential liability risks and to ensure correct implementation of RPM technology. Here are five key tips from a risk management and compliance perspective to keep in mind with RPM:

Consider the Security

Before starting, consider the RPM system's security. RPM uses a variety of devices, applications, and communication technologies to connect the RPM device to the provider's office.

These complex communication systems may also require using the vendor's system, incorporating more vendors and suppliers. This complex, multistep process increases the risk for a potential cyberattack on the RPM system.

Ensure that the vendor you choose to work with and related third parties maintain a sound security posture to limit vulnerabilities in the host system and other interconnected systems.

Keep the Anti-Kickback Statute In Mind

Analyze whether the Anti-Kickback Statute, the Physician Self-Referral Prohibition law (Stark), and the Civil Monetary Penalty law apply. Ensure that whatever RPM device company you select, your healthcare professionals do not have any sort of financial interest in the business.

Keep HIPAA In Mind

HIPAA compliance and patient data security still apply. Ensure the RPM device company has HIPAA compliant processes, such as encrypting patient information both when the device is at rest and when the information is in transit. Also, ensure that you and the RPM business have a Business Associate Agreement (BAA) in place before you share protected health information of any patients.

Ensure Correct Billing

Before you begin implementing RPM, explore the reimbursement options in your practice area and with each payor so that implementing RPM provides financial value for your organization. Ensure that any providers or

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	coding start in your practice familiarize themselves with the frequently used codes for billing RPM services as well as the requirements for these codes.	
	When In Doubt, Bring Them In	
	If you are unsure of the patient's diagnosis or if there are indicators reported from the patient's device, for example, spikes in blood pressure or heart rate, consider bringing the patient in for a visit. Also, continue with your documentation standards, and ensure that you fully document your patient's concerns on a timely basis.	
	RPM, when appropriately implemented, offers many benefits for both clinicians and patients. RPM can help reduce the number of hospitalizations, inpatient re-admissions, and the lengths of stay in hospitals, ultimately improving the quality of care while also minimizing costs. Although RPM is still a growing field, follow these steps to ensure compliance and to contain potential risks for your healthcare practice.	
Reimbursement	 Reimbursement and Financing Payer reimbursement for RPM can be fee-for-service (FFS) reimbursement or indirect subsidization via population-based payments. Fee-for-Service Remote Physiologic Monitoring Codes: The ongoing surveillance and interpretation of a patient's physiologic data, digitally transmitted by the patient and/or caregiver to the provider, using a device that is defined by the FDA as a medical device, which is wirelessly synced where the provider can evaluate the data. Self-Measured Blood Pressure Monitoring Codes: Assessment of a patient's self-reported readings from regular use of a personal blood pressure monitoring device to assess and record blood pressure 	

across different points in time outside of a clinical setting, typically at home.

- Continuous Glucose Monitoring Codes: The ongoing surveillance and interpretation of a patient's glucose levels, digitally transmitted via a sensor inserted under the patient's skin.

• Population-Based Payments

- Care Management Fees: Providers may choose to leverage available population-based care management fees or other infrastructure funding to implement RPM, although such funding is generally not specifically tied to RPM.

Not all providers and hospitals conducting RPM are yet taking full advantage of FFS reimbursement for RPM, but Medicare and other payers have recently expanded reimbursement. The following figure summarizes Medicare reimbursement codes for RPM.

Remote Physiolog	gic Monitoring	Self Measured Blood Pressure Monitoring	Continuous Glucose Monitoring
99454: Device supply; ~\$60 each 30 days or 	99091: Collection and interpretation of data; ~\$60 minimum of 30 minutes, each 30 days	99473: Initial setup and education; ~\$10 one time per patient per episode of RPM <u>99474</u> : Collection of data and communication with patient; ~\$10 minimum of 12 readings, each 30 days	95249: Initial setup and education (patient provided equipment);95250: Initial setup and education (office provided equipment);°\$55, minimum 72 hours, one time95250: Initial setup and education (office provided equipment);°\$160, minimum 72 hours, up to once/month
ne time per patient er episode of RPM			<u>95251</u> : Analysis, interpretation, and report of data; ~\$40, minimum of 72 hours worth of data, each month
communication with patient; ~\$30, facility first 20 minutes, each 30 days; collecting	 During the COVID-19 PHE, CMS has temporarily permitted clinicians to provide RPM: 1) to both new and established patients; 2) to patients who have only one, rather than multiple, chronic conditions (for remote physiologic monitoring); and 3) for less than 16 days of data collection in a month (for remote physiologic monitoring). 		
days	 RPM must be conducted by a "Qualified Health Professional" but codes 99457 and 99458 can be conducted under general supervision of the QHP by other staff members of the care team (incident to billing). CMS requires Medicare Advantage plane to cover the same talebaalth carriers including RPM as Medicare 		
<u>99458</u> : Interactive communication with	FFS. Paimbursement values listed here reflect facility-based national averages for Medicare EFS		
patient; ~\$30 each additional 20 minutes, each 30 days	*i.e., Physicians, physician assistants, nurse midwives, certified nurse anesthetists, clinical psychologists, clinical social workers, registered dieticians, and nutrition professionals.		



 Objectives and Strategies 	Creating "Win-Win" Outcomes For All Ecosystem Participants	
- Overview	Healthcare In The Post-Covid World: 16 Ways Telehealth Could Transfor	
	While telehealth has boomed during Covid-19, the trend was already taking off before the pandemic. From reduced costs to increased access, here's how telehealth could improve the healthcare system.	
	Due to Covid-19, in-person healthcare visits have been reduced or eliminated — but the doctor's office has been ripe for disruption for years.	
	Primary care and specialist visits in the US can be expensive, difficult to book, and often require wait time. For patients who are ill, the inconvenience of actually finding, booking, and going to the doctor is significant. For someone who is undiagnosed, a trip to the doctor may not even be relevant in the end.	
	Telehealth, which spans from video consultations to remote patient monitoring, has the potential to make healthcare more convenient and accessible while cutting costs and increasing revenue for providers and payers. The industry itself is worth an estimated \$81B.	



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elderly, and those with disabilities who may face difficulties reaching a physician.

The convenience and accessibility of telehealth have played a critical role in delivering care during the Covid-19 pandemic, which has rendered in-person visits for non-urgent care difficult or impossible.

Faster care delivery

In the US, long wait times and overcrowded clinics pose obstacles to timely healthcare access.

The average wait time to see a physician for the first time was 24 days in 2017, a 30% increase from 2014. This problem may only get worse given an aging population — with the number of seniors in the US set to reach 80M by 2040 — and a shortage of doctors. It's estimated that this shortage will grow to 122,000 physicians by 2032, according to the Association of American Medical Colleges (AAMC).

Telehealth has drastically cut wait times to see a primary care physician, in some cases turning weeks into minutes. Telehealth providers can improve the speed of care delivery through online primary care, faster emergency triage, and online specialist access.

More equitable care

The rising cost of healthcare and a shortage of healthcare professionals are fueling health disparities in the US.

Total healthcare expenditure in the US reached \$3.6T in 2018, and is projected to grow at a rate faster than the overall GDP.

As preventative care and treatments become more expensive, the gap between the health of higher- and lower-income Americans may widen further.

A nationwide shortage of health professionals is disproportionately affecting rural residents. Rural Americans have less access to health

professionals and are more likely to die from preventable causes than urban Americans.

Telehealth can pave the way for more equitable care by improving affordability and access. Telehealth visits and remote patient monitoring can reduce the final bill for patients, while outsourced telespecialty can help patients access high-quality care quickly and regardless of geography.

Reduced risk of infection

Covid-19 has demonstrated how infectious outbreaks can overwhelm hospitals and expose patients and healthcare providers to danger.

During the height of the pandemic, patients with Covid-19 symptoms formed long lines in front of hospitals, increasing the risk of transmission. Facilities experienced a shortage of ICU beds, personal protective equipment (PPE), ventilators, and staff. Widespread testing shortages left communities in the dark about infection rates, allowing for rampant spread.

Telehealth provides a contactless solution to diagnose, triage, and potentially treat patients during an outbreak. Practices implemented in response to Covid-19 could provide a model for how to contain outbreaks in the future.

Improved chronic disease management

Chronic disease management is one of healthcare's biggest challenges.

Chronic diseases constitute 4 of the 5 leading causes of death in the US and drive nearly 75% of total healthcare spending. Nearly half of Americans have at least 1 chronic condition, and this situation is projected only to get worse. Effective chronic disease management is therefore a priority to save lives while keeping costs from spiraling out of control.

Because chronic diseases progress slowly over time, patients require ongoing care and support from physicians, specialists, and caretakers to



		manage their conditions, respond to anomalies, and take appropriate steps to improve their health.		
		Telehealth enables more efficient team-based care, which can lead to more effective chronic disease management. Telehealth also empowers patients to actively manage their conditions by giving them on-demand access to guided therapies and educational resources.		
-	Payers & Providers	How telehealth benefits payers and providers		
		Healthcare providers and insurers are taking a hit amid the pandemic, with high costs and stagnant revenue streams. This isn't new — the precarious financial situation has caused many rural hospitals to close over the past few years, and many more to reduce their services.		
		This is further exacerbated by costs like hospital readmissions and appointment no-shows.		
		Telehealth has the potential to curtail unnecessary spending and recoup lost revenue by making some processes more convenient and effective. It can also create new revenue streams by reaching a wider audience and unlocking new offerings.		
		Ultimately, these efforts can help providers and payers improve their bottom line.		
		Reduced costs and enhanced efficiency		
		Inefficient healthcare practices cost the healthcare system billions of dollars each year, in turn driving up healthcare costs for patients. Avoidable readmissions cost Medicare \$17B annually, and unnecessary ED visits cost <u>UnitedHealth Group</u> , the world's largest health system by revenue, \$32B each year.		
		Research shows that over 20% of hospital beds are being misused, draining hospital resources and exposing patients to higher risks.		

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Factors associated with avoidable readmissions among patients with stroke and other cerebrovascular disease.

Telehealth can enable efficient care coordination essential to eliminating these avoidable costs.

The convenience of televisits and guided therapy apps allows patients to get the information they need to manage their condition and avoid in-person visits.

Remote patient monitoring can be used to transfer stabilized patients out of the hospital more quickly without compromising the level of care.

Lost revenue recovery

Patient attrition, network leakage, and no-shows represent areas of missed opportunities that could boost hospital revenues by millions each year.

Hospitals and clinics lose on average 17% of their customers per year. Cutting down attrition rates can help boost revenues while saving on acquisition costs.

Reducing no-shows can also amount to significant savings: Missed appointments cost the industry up to \$150B a year.

Patient leakage, which occurs when patients go out-of-network, costs providers and payers around 10% of annual revenue.

Many of these missed revenue opportunities occur because in-person visits are inconvenient — they involve long wait times, travel, and other expenses that can discourage patients from attending. This is especially true for lower-income patients and patients in rural areas.

Telehealth can help hospitals and clinics capture these instances of lost revenue by improving the experience of a healthcare visit.

Telehealth can help to improve the patient experience — thus boosting patient retention — and the appointment follow-up process, thus reducing no-shows. It can also make the referral process quick and simple, improving the chance the patient will stay in network.



New revenue streams

Hospitals and clinics need to innovate and create new revenue streams in order to survive decreasing margins and an uncertain market brought on by Covid-19.

Average operating margins for health systems have been trending down due to rising costs and falling revenues.

In 2017, health systems made most of their profit margins from non-operating income through investment vehicles rather than patient care — but this revenue channel, too, is jeopardized by current economic conditions.





	Hospitals and clinics can create new offerings that reach broader groups of customers by integrating innovative telehealth services, in turn generating additional sources of revenue.		
Public Companies	 <u>Fitbit Health Solutions,</u> <u>Medtronic</u> <u>Livongo Health</u> <u>Dthera Sciences</u> <u>Resmed, Inc. (Propeller Health),</u> 		
Private Companies	 <u>2MORROW</u> <u>Pear Therapeutics,</u> <u>Omada Health</u> <u>Welldoc, Inc.,</u> <u>Canary Health Inc.</u> <u>Noom, Inc.,</u> <u>Mango Health Inc</u> <u>Virtshealth</u> <u>Akili Interactive</u> <u>Happify Health</u> <u>Cognoa</u> <u>2MORROW</u> 		
Mergers & Acquisitions	2020's Top 20 Digital Health M&A Deals Totaled \$50B Teladoc Health and Livongo Merge		

The combination of Teladoc Health and Livongo creates a global leader in consumer-centered virtual care. The combined company is positioned to execute quantified opportunities to drive revenue synergies of \$100 million by the end of the second year following the close, reaching \$500 million on a run-rate basis by 2025.

Price: \$18.5B in value based on each share of Livongo will be exchanged for 0.5920x shares of Teladoc Health plus cash consideration of \$11.33 for each Livongo share.

Siemens Healthineers Acquires Varian Medical

On August 2nd, Siemens Healthineers acquired Varian Medical for \$16.4B, with the deal expected to close in 2021. Varian is a global specialist in the field of cancer care, providing solutions especially in radiation oncology and related software, including technologies such as artificial intelligence, machine learning and data analysis. In fiscal year 2019, the company generated \$3.2 billion in revenues with an adjusted operating margin of about 17%. The company currently has about 10,000 employees worldwide.

Price: \$16.4 billion in an all-cash transaction.

Gainwell to Acquire HMS for \$3.4B in Cash

Veritas Capital ("Veritas")-backed Gainwell Technologies ("Gainwell"), a leading provider of solutions that are vital to the administration and operations of health and human services programs, today announced that they have entered into a definitive agreement whereby Gainwell will acquire HMS, a technology, analytics and engagement solutions provider helping organizations reduce costs and improve health outcomes.

Price: \$3.4 billion in cash.

Philips Acquires Remote Cardiac Monitoring BioTelemetry for \$2.8B

Philips acquires BioTelemetry, a U.S. provider of remote cardiac diagnostics and monitoring for \$72.00 per share for an implied enterprise value of \$2.8 billion (approx. EUR 2.3 billion). With \$439M in revenue in 2019, BioTelemetry annually monitors over 1 million cardiac patients remotely; its portfolio includes wearable heart monitors, AI-based data analytics, and services.

Price: \$2.8B (\$72 per share), to be paid in cash upon completion.

WellSky Acquires CarePort Health from Allscripts for \$1.35B

WellSky, global health, and community care technology company, announced today that it has entered into a definitive agreement with Allscripts to acquire CarePort Health ("CarePort"), a Boston, MA-based care coordination software company that connects acute and post-acute providers and payers.

Price: \$1.35 billion represents a multiple of greater than 13 times CarePort's revenue over the trailing 12 months, and approximately 21 times CarePort's non-GAAP Adjusted EBITDA over the trailing 12 months.

Waystar Acquires Medicare RCM Company eSolutions

On September 13th, revenue cycle management provider Waystar acquires eSolutions, a provider of Medicare and Multi-Payer revenue cycle management, workflow automation, and data analytics tools. The acquisition creates the first unified healthcare payments platform with both commercial and government payer connectivity, resulting in greater value for providers.

Price: \$1.3 billion valuation

Radiology Partners Acquires MEDNAX Radiology Solutions

Radiology Partners (RP), a radiology practice in the U.S., announced a definitive agreement to acquire MEDNAX Radiology Solutions, a division of MEDNAX, Inc. for an enterprise value of approximately \$885 million. The acquisition is expected to add more than 800 radiologists to RP's existing practice of 1,600 radiologists. MEDNAX Radiology Solutions consists of more than 300 onsite radiologists, who primarily serve patients in Connecticut, Florida, Nevada, Tennessee, and Texas, and more than 500 teleradiologists, who serve patients in all 50 states.

Price: \$885M

PointClickCare Acquires Collective Medical

PointClickCare Technologies, a leader in senior care technology with a network of more than 21,000 skilled nursing facilities, senior living communities, and home health agencies, today announced its intent to acquire Collective Medical, a Salt Lake City, a UT-based leading network-enabled platform for real-time cross-continuum care coordination for \$650M. Together, PointClickCare and Collective Medical will provide diverse care teams across the continuum of acute, ambulatory, and post-acute care with point-of-care access to deep, real-time patient insights at any stage of a patient's healthcare journey, enabling better decision making and improved clinical outcomes at a lower cost.

Price: \$650M

Teladoc Health Acquires Virtual Care Platform InTouch Health

Teladoc Health acquires InTouch Health, the leading provider of enterprise telehealth solutions for hospitals and health systems for \$600M. The acquisition establishes Teladoc Health as the only virtual

care provider covering the full range of acuity – from critical to chronic to everyday care – through a single solution across all sites of care including home, pharmacy, retail, physician office, ambulance, and more.

Price: \$600M consisting of approximately \$150 million in cash and \$450 million of Teladoc Health common stock.

AMN Healthcare Acquires VRI Provider Stratus Video

AMN Healthcare Services, Inc. acquires Stratus Video, a leading provider of video remote language interpretation services for the healthcare industry. The acquisition will help AMN Healthcare expand in the virtual workforce, patient care arena, and quality medical interpretation services delivered through a secure communications platform.

Price: \$475M

CarepathRx Acquires Pharmacy Operations of Chartwell from UPMC

CarepathRx, a leader in pharmacy and medication management solutions for vulnerable and chronically ill patients, announced today a partnership with UPMC's Chartwell subsidiary that will expand patient access to innovative specialty pharmacy and home infusion services. Under the \$400M landmark agreement, CarepathRx will acquire the management services organization responsible for the operational and strategic management of Chartwell while UPMC becomes a strategic investor in CarepathRx.

Price: \$400M

Cerner to Acquire Health Division of Kantar for \$375M in Cash

Cerner announces it will acquire Kantar Health, a leading data, analytics, and real-world evidence and commercial research consultancy serving the life science and health care industry.

This acquisition is expected to allow Cerner's Learning Health Network client consortium and health systems with more opportunities to directly engage with life sciences for funded research studies. The acquisition is expected to close during the first half of 2021.

Price: \$375M

CompuGroup Medical Acquires eMDs for \$240M

CompuGroup Medical (CGM) acquires eMDs, Inc. (eMDs), a leading provider of healthcare IT with a focus on doctors' practices in the US, reaching an attractive size in the biggest healthcare market worldwide. With this acquisition, the US subsidiary of CGM significantly broadens its position and will become the top 4 providers in the market for Ambulatory Information Systems in the US.

Price: \$240M (equal to approx. EUR 203 million)

Change Healthcare Buys Back Pharmacy Network

Change Healthcare buys back pharmacy unit eRx Network ("eRx"), a leading provider of comprehensive, innovative, and secure data-driven solutions for pharmacies. eRx generated approximately \$67M in annual revenue for the twelve-month period ended February 29, 2020. The transaction supports Change Healthcare's commitment to focus on and invest in core aspects of the business to fuel long-term growth and advance innovation.

Price: \$212.9M plus cash on the balance sheet.

Walmart Acquires Medication Management Platform CareZone

Walmart acquires CareZone, a San Francisco, CA-based smartphone service for managing chronic health conditions for reportedly \$200M. By working with a network of pharmacy partners, CareZone's concierge services assist consumers in getting their prescription medications organized and delivered to their doorstep, making pharmacies more accessible to individuals and families who may be homebound or reside in rural locations.

Price: \$200M

Verisk Acquires MSP Compliance Provider Franco Signor

Verisk, a data analytics provider, announced today that it has acquired Franco Signor, a Medicare Secondary Payer (MSP) service provider to America's largest insurance carriers and employers. As part of the acquisition, Franco Signor will become part of Verisk's Claims Partners business, a leading provider of MSP compliance and other analytic claim services. Claims Partners and Franco Signor will be combining forces to provide the single best resource for Medicare compliance.

Price: \$160M

Rubicon Technology Partners Acquires Central Logic

Private equity firm Rubicon Technology Partners acquires Central Logic, a provider of patient orchestration and tools to accelerate access to care for healthcare organizations. Rubicon will be aggressively driving Central Logic's growth with additional cash investments into the business, with a focus on product innovation, sales expansion, delivery and customer support, and the pursuit of acquisition opportunities.

Price: \$110M - \$125 million, according to sources

INVESTOR INCUBATOR





 Accolade: The firm associated with helping employers navigate health benefits, debuted on the public markets in early July. (Link) **GoodRx:** Debuted to much success in late September, popping as high as \$57 per share in its initial day of trading. Interestingly, since the Amazon Pharmacy announcement, GoodRx has traded down to \$43. (Link) GoHealth: The tech enabled insurance enrollment platform raised more than \$913 million in its IPO in mid-July. (Link) **Oak Street Health:** Went public in early August to – as expected – much success. The firm raised more than three times what it intended as the IPO market stayed red-hot in the back half of the year. (Link) Outset Medical: successfully debuted on the public markets in late September. The portable dialysis firm is looking to capitalize on the recently finalized end-stage renal disease payment model that encourages at-home dialysis treatment. SOC Telemed: As a part of another SPAC deal, <u>SOC Telemed</u> joined the public markets early November under the ticker \$TLMD, valued initially at \$720 million. The firm provides telemedicine and other tech services to hospitals in almost every state and is taking advantage of the boom in remote health care. **Amwell:** <u>skyrocketed in its IPO</u> in late September. That same week, Teladoc hit Amwell with several intellectual property accusations, claiming that Amwell infringed on several of Teladoc's patents. Multiplan: Churchill Capital's SPAC took Multiplan, a healthcare solutions provider that partners with managed care companies,

	public at an \$11 billion valuation. (<u>Link</u>)		
	• Hims & Hers: Is expected to go public via SPAC with Oaktree Acquisition Corp. The unicorn will hold a value of about \$1.6 billic when the deal closes. (Link)		
	• Clover Health: The health-tech managed care firm was acquired by Social Capital Hedosophia Holdings Corp III in October, valuing Clover at about \$3.7 billion initially. (Link). Read this analysis of the Clover SPAC.		
	Other recently announced digital health IPOs.		
	 Eargo: The hearing aids tech co. raised \$141 million in its IPO in mid October. (<u>Link</u>) 		
	 UpHealth and Cloudbreak: In healthcare's latest SPAC deal, UpHealth and Cloudbreak are merging with blank-check company <u>GigCapital2</u> to become the latest digital health conglomerate unicorn on the public markets. The new combination is a fascinating PROFITABLE play into telemedicine, patient care management, medical interpretation, prescription drugs, and more. (Ticker: \$UPH). 		
	 CareMax Medical Group and IMC Medical Group: Healthcare SPAC Deerfield is merging with the two in order to bring the firms to the public markets. The combination will create what I imagine to be similar to Oak Street Health – medical clinics for seniors under value-based contracts. (Link) 		
Deals to Watch	Oscar Health		
vaton	Oscar Health's origins go back to 2012, when Harvard Business Classmates Mario Schlosser, Kevin Nazemi and Josh Kushner (the brother of Jared Kushner) had an idea to create a new kind of health insurance company based on cutting-edge digital		

technologies. The timing was spot-on, too, as Oscar Health would benefit from the rollout of the Affordable Care Act (ACA).
Schlosser and Kusnher had personal reasons for starting the company. Schlosser, had a bad experience with dealing with the hospital billing when his wife was pregnant. Kushner had a similar experience when he injured his ankle.
Oscar Health has raised more than \$1.5 billion since its founding. This capital was used to launch insurance products for families, small businesses and those with Medicare Advantage plans. The company also has had success with its telemedicine platform.
Overall, Oscar Health boasts roughly 420,000 members, who collectively have been positive about the service – no easy feat in this space. The company's Net Promoter Score is 36, which compares extremely favorably compared to the industry average of -12 across the ACA.
Another potential driver for growth was a strategic partnership with Cigna (<u>CI</u>) to provide insurance to small businesses, announced in early October.
Axios reported in September that the firm has hired investment underwriting banks to help it prepare for a 2021 offering.
Healthtech firm Accolade is buying telemedicine start-up 2nd.MD for \$460 million, sources say
Accolade, a health care technology company that helps employees navigate their medical plans, is buying telemedicine start-up 2nd.MD to bolster its ability to provide users with second opinions, CNBC has learned exclusively.

Accolade is close to announcing the acquisition of Houston-based Innovation Specialists, parent company of 2nd.MD, for about \$460 million, according to people with knowledge of the situation. The transaction will be half in cash and the rest in Accolade shares, a portion of which is contingent on revenue targets, and will close next month, said the people, who declined to be identified speaking about the deal.

The move is said to nearly double Accolade's addressable market to about \$46 billion by giving the company a provider of expert medical opinions from a network of U.S. doctors. Founded in 2011, 2nd.MD automates the process of getting second opinions so they happen within days over video or telephone, rather than taking weeks to schedule as is more typical.

MDLive plans to go public in early 2021 following the news of Teladoc-Livongo's mega-deal

The telehealth leader is planning to go public in early 2021 following unprecedented uptake of its services during the pandemic: Its behavioral health visits rose 89% in May compared with January's averages — and it now tallies 40 million members, marking 187% annual growth in its membership base. MDLive CEO Charles Jones noted that Teladoc's \$18.5 billion blockbuster acquisition of Livongo last week spurred the decision to move toward a public offering, per STAT.

The Teladoc-Livongo megadeal is already influencing virtual health players to make bold plays to keep pace — and we expect MDLive will do so by making a remote monitoring tech acquisition. We posited the sheer size of the Teladoc-Livongo megamerger would threaten other digital healthcare players — who would have to move quickly to diversify, or nab health tech partnerships to retain their competitive edge.



	New Legislation Could Be Coming	
December 2016	Creating High-Quality Results and Outcomes Necessary to Improve Chronic (CHRONIC) Care Act of 2017 Introduced in December 2016. The bill came to fruition from the help of patients, doctors, healthcare professionals, and advocacy groups, convincing politicians to make changes to the sensitive Medicare progra This bipartisan act signals an important shift in the government's recognition of the value of telehealth services, like virtual care or remote monitoring, as the Act offers significant flexibility to choose these service in place of, or in addition to, in-person care.	
Telemental Health Expansion Act (H.R. 5201)	The Telemental Health Expansion Act was introduced by Representatives Doris Matsui [D-CA] and Mike Johnson [R-LA] on November 21, 2019. This legislation waives geographic restrictions in Medicare's reimbursement guidelines for mental health services that are delivered through telehealth and includes the patient's home as an eligible originating site.	
KEEP Telehealth Options Act (H.R. 7233)	The KEEP Telehealth Options Act was introduced by Representatives Troy Balderson [R-OH] and Cindy Axne [D-IA] on June 18, 2020. This legislation instructs HHS and the Government Accountability Office (GAO) to study and report to Congress on the expansion of telehealth services during the COVID-19 outbreak, the uptake of those services by patients across the country, and GAO's recommendations for enhancing the quality of and access to these services.	
Summary	And according to a May 2020 McKinsey study:	



	 "With the acceleration of consumer and provider adoption of telehealth and extension of telehealth beyond virtual urgent care, up to \$250 billion of current US healthcare spend could potentially be virtualized" It's a brave new world for healthcare And we want you – our Equifund subscribers – to be prepared to take advantage of this exciting trend.
For Your Review	 A list of active telehealth/rpm deals on crowdfunding websites. Apotheka – integrates legacy electronic medical record systems and telehealth systems through blockchain Marux – A.I. interface monitor detects potential injury pattern (fall at home, car accident. predicts potential head trauma, risk of internal bleeding etc) and checks vitals (heart rate, ekg) before EMS arrives. Can help get patient to appropriate level of hospital care. Benevet – veterinary telehealth Medvector – telemedicine for clinical trials Care Angel – A.I. virtual nurse assistant and home monitoring Mental Happy – behavioral health and wellness app with peer support; access to licensed mental health professionals
	Q&A

