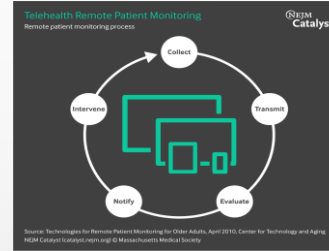


Early Developments in Telehealth in the United States as a Result of COVID-19 in March 2020



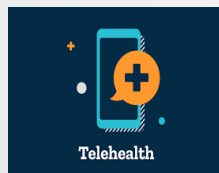
Prepared by :
Dr. Paridhi Khandelwal
(Roll no. 0793)



Introduction



COVID-19



Telehealth



Telemedicine

Timeline of major global events

Dec. 31, 2019



China alerts World Health Organization (WHO) to several cases of pneumonia with no known cause in Wuhan. The disease goes on to be named COVID-19.

Jan. 7



WHO officials announce they have identified a new virus named SARS-CoV-2 that causes COVID-19. It belongs to the coronavirus family, which includes viruses that cause SARS, MERS and the common cold.

Jan. 11



China announces the first death linked to COVID-19.

Jan. 13



WHO reports the first case outside of China in Thailand.

Feb. 26



National Institutes of Health (NIH) begin the first clinical trial in the U.S. for a potential COVID-19 treatment, remdesivir, an antiviral drug originally developed to treat Ebola.

Feb. 29



The FDA took steps to expand novel coronavirus testing to hospital clinical microbiology laboratories.

Mar. 11



WHO declares COVID-19 a pandemic, with more than 100,000 cases and 4,000 deaths in 114 countries.

Apr. 2



Confirmed cases of COVID-19 top 1 million worldwide.

Apr. 10



Global deaths due to COVID-19 top 100,000.



Rationale

The COVID-19 outbreak has not only affected the people who got infected with the disease, but also other individuals and aspects of the society. Telehealth has emerged as a powerful and the safest possible way to continue providing the basic healthcare services without putting the healthcare provider or the patient at risk. Therefore, this study aimed to focus on a few key developments in the healthcare delivery service in the US, that have taken place in the wake of COVID-19, such as the expanded usage of telehealth during the global lockdown. Consultations and treatments are considered an essential service and telehealth looks like the most promising solution around this communicable disease.





RESEARCH QUESTIONS

- 1) How has telehealth emerged with the rise of COVID-19?
- 2) Which health specialties, hospitals, or healthcare settings have utilized telehealth the most and what is its scope in the future?



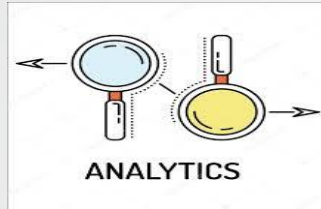
OBJECTIVES

The objectives of this study were:

- To evaluate the role of telehealth and new developments in the telehealth industry in the US during the COVID-19 pandemic (till March 2020) and predict the post-COVID-19 role of telehealth
- To evaluate the acceptance of telehealth and the most common reasons of opting for telehealth among the patients and doctors in the US before and during the COVID-19 era
- To understand the benefits, concerns, and challenges faced by the patients in the US while using telehealth and compare telehealth with in-person consultations and treatments



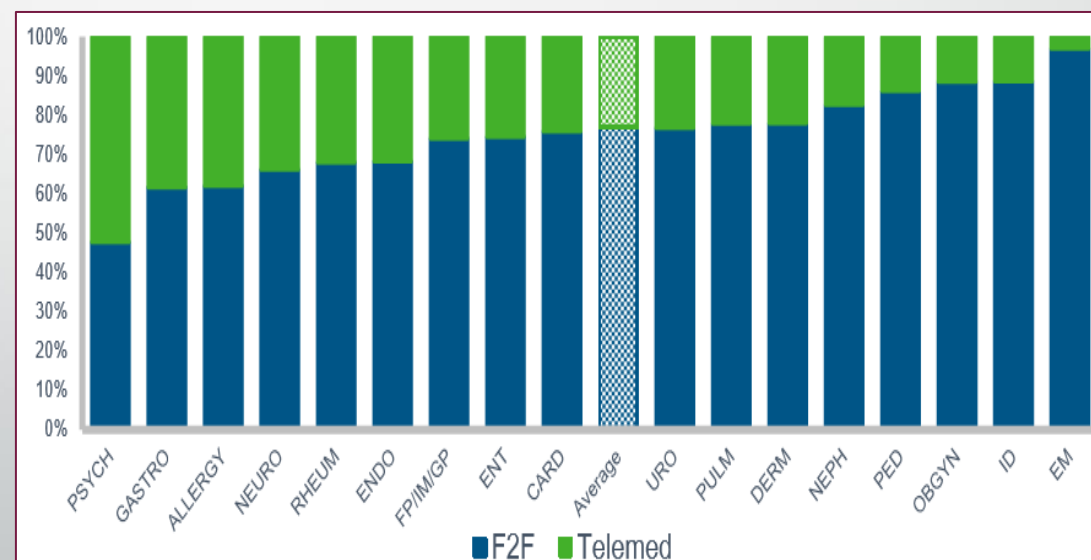
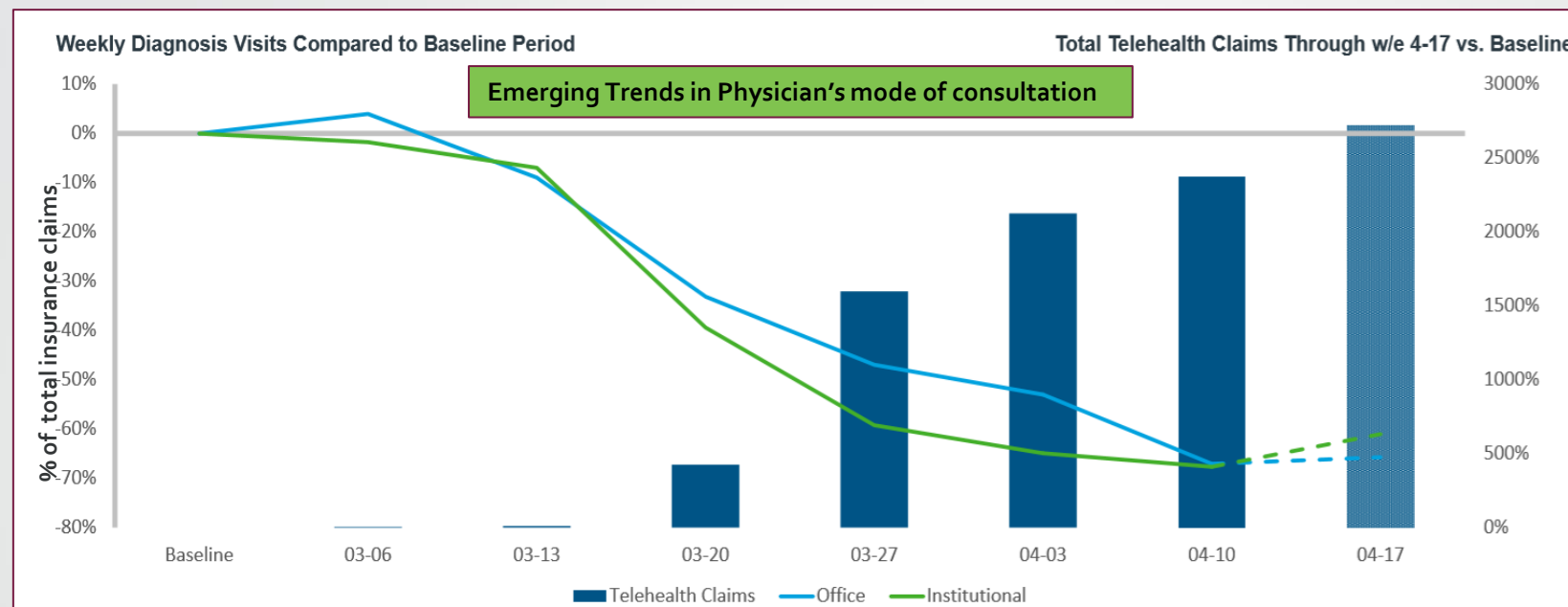
METHODOLOGY



- **Research Design:** Exploratory study
- **Type of Data:** Secondary
- **Data Collection:** The data for secondary research was collected from journals, articles, reports, and general internet searches.
- **Data Analysis:** MS Excel



Emerging Trends in Telehealth in March 2020



Trends of physician v/s Telemedicine interactions in the last week of March ending on April 3rd



Results



New-age use of telehealth in the rise of COVID-19



- **Forward Triage** - Jefferson Health, Mount Sinai, Kaiser Permanente, Cleveland Clinic, and Providence, leverage telehealth technology to allow clinicians to see patients who are at home. Outsource : Teladoc Health or American Well
- **Provider-in-triage Model** - Aurora Health
- **Via Tablet**
- **Electronic Intensive Care Unit (e-ICU) Monitoring Programs** - Mercy Virtual Care Center, Sutter Health, and Sentara Healthcare
- **Houston's Project ETHAN** - Emergency Telehealth and Navigation - Avera Health
- **Rapid Access To Subspecialists-Eg. Stroke** - Jefferson Health, Cleveland Clinic, and the University of Pittsburgh provide virtual emergency neurologic care to several hospitals, Mount Sinai leverages specialists at eight hospitals and more than 300 sites to provide virtual emergency consultations
- **ED Tele-intake Or Direct-to-consumer Care**
- **Converting Scheduled Office Visits To Telemedicine Visits**- Jefferson Health
- **Pre And Post-surgery Consultations**



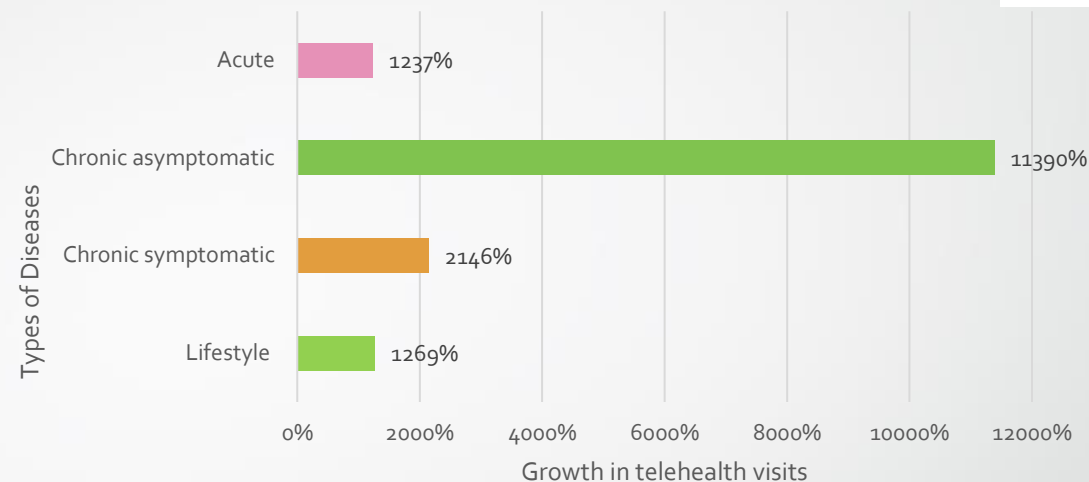
Results



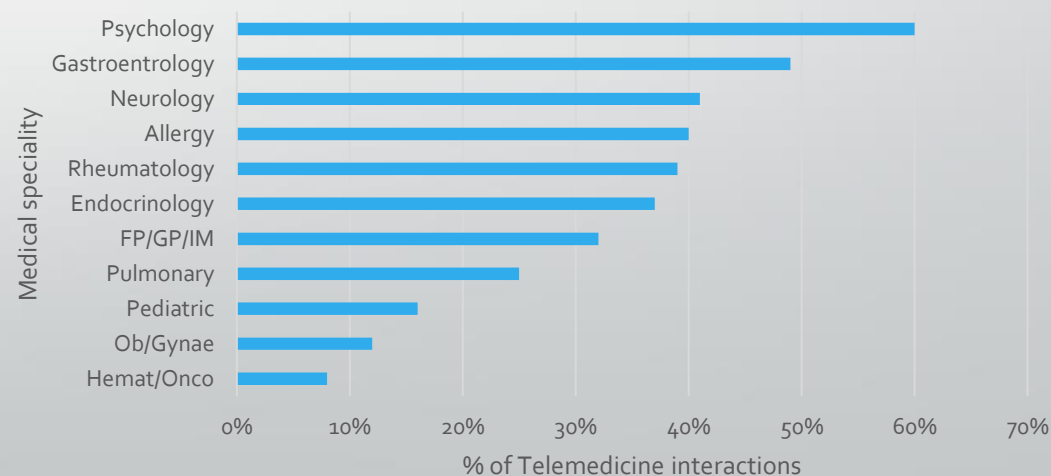
Reasons for telehealth visit

S. No.	Pre-COVID-19 Era	COVID-19 Era
1	Anxiety	Hypertension
2	Depression	Cholesterol
3	ADHD	T2 Diabetes
4	Insomnia	Respiratory infection
5	Bipolar Disorder	Allergic Rhinitis
6	PTSD	Cough
7	Mood Disorder	GERD
8	-	Hypothyroidism
9	-	Chronic Pain
10	-	Sleep Apnea

Growth of Telemedicine in March week 3 v/s Pre-COVID Baseline



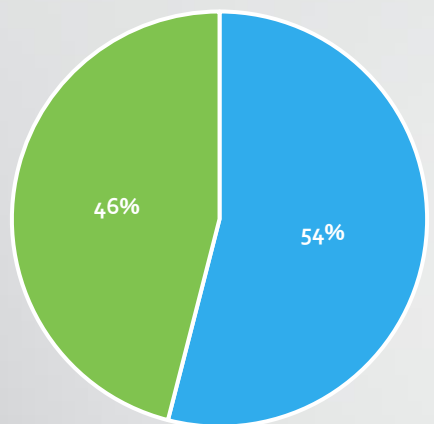
% of Telemedicine interactions from total in March week 3 v/s Pre-COVID Baseline





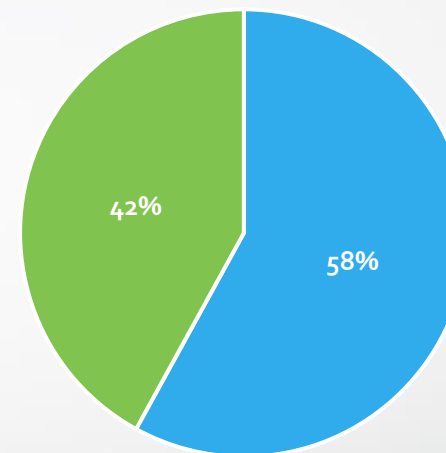
Results contd.

Usage of Telehealth among Wyoming Physicians



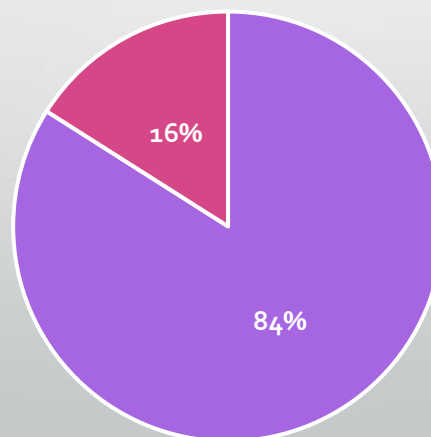
- currently using Telehealth
- currently not using Telehealth

Physician's encouragement towards Telehealth



- Encouraged patients to use telehealth
- Did not encourage patients to use telehealth

Coverage of Telehealth in insurance plans

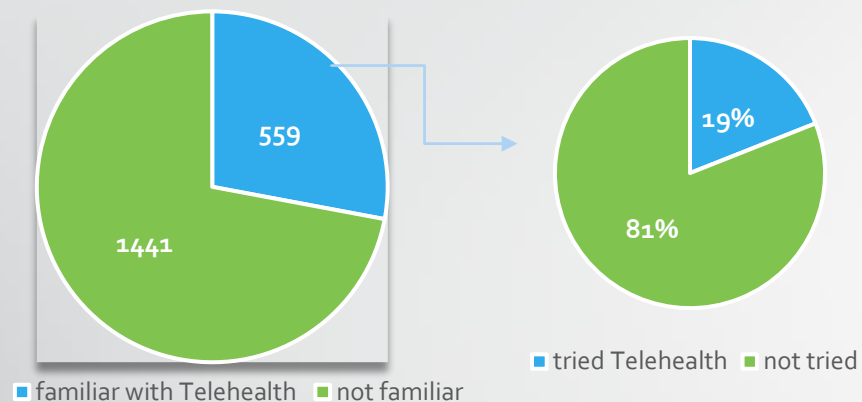


- Covers of telemedicine services
- Doesn't cover telemedicine services

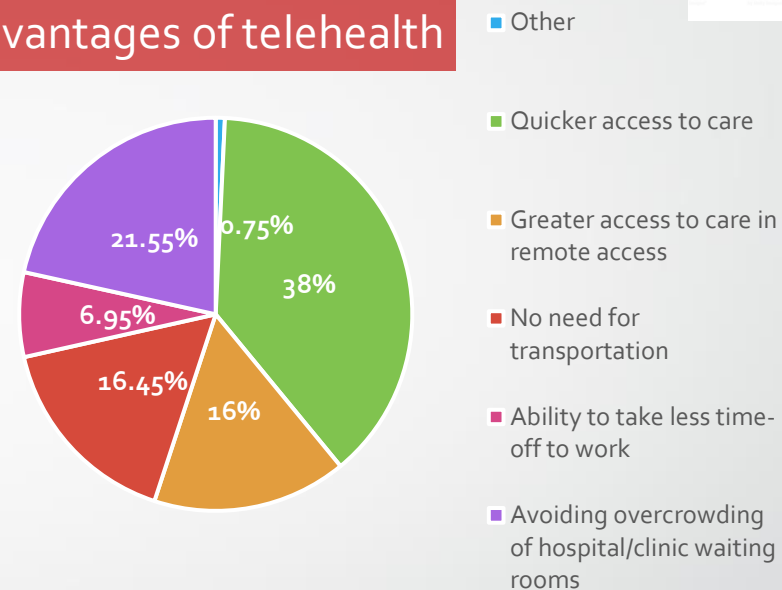


Results contd.

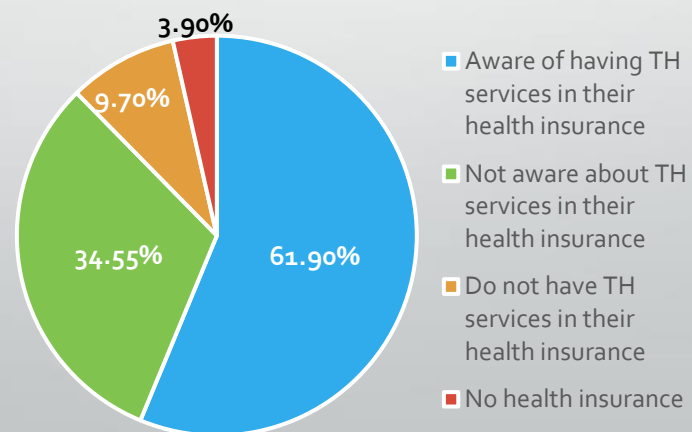
Familiarity with telehealth in the US.



Advantages of telehealth



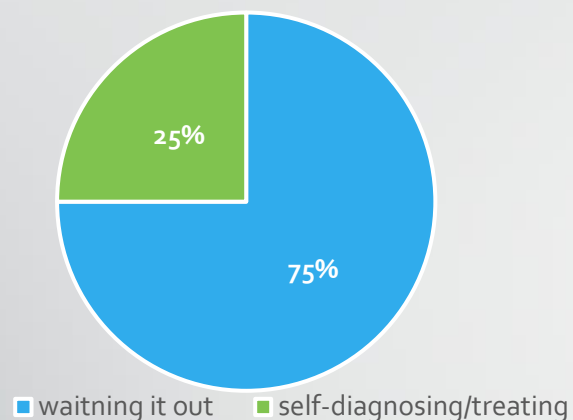
Telehealth accessibility in the US.



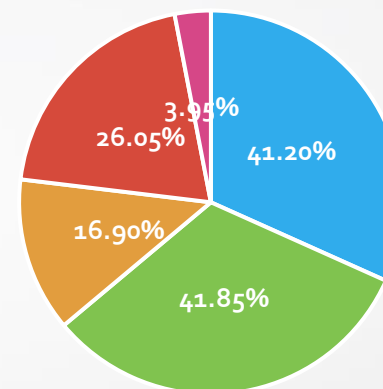


Results contd.

Willingness of people to wait for telehealth appointments

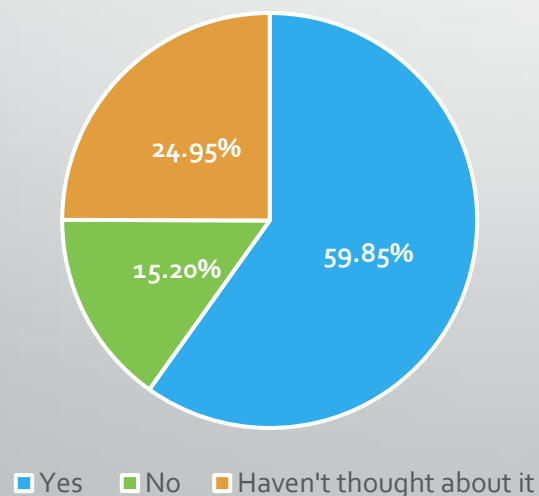


Advantages of telehealth perceived in the US

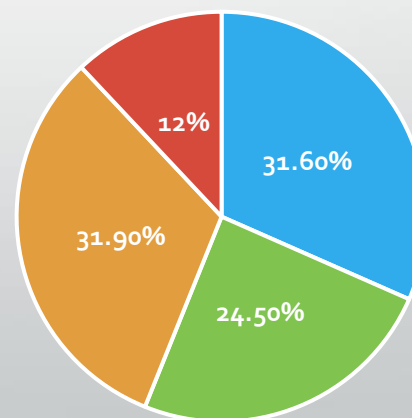


- I worry about quality of healthcare
- I'm not convinced whether a telehealth diagnosis can ever be truly accurate
- I don't want my appointment recorded
- I worry about the privacy of my personal health information
- Other

Impact of pandemic on people's willingness to opt telehealth in future



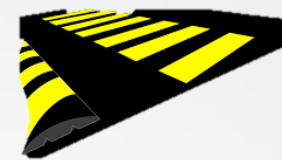
Is in-office care v/s telemedicine comparable



- Yes
- No
- No, but a good option
- Not Sure



CHALLENGES ,CONCERNS & BARRIERS



CHALLENGES

- Changes are unlikely to come from the federal level
- Commercial reimbursement
- Medicaid reimbursement and credentialing are the states' domain

CONCERNS

- Quality of care
- Accuracy of diagnosis
- Recording of appointment (patient privacy)
- Privacy of personal health information

BARRIERS

- People revert to what they are used to doing and the traditional ways
- Established relationship with physician is preferred
- Lack of awareness and accessibility

Health plans, employers, hospital systems & media outlets should work to overcome these barriers by:

- ✓ (1) Educating people - telemedicine is an effective and safer alternative
- ✓ (2) Expanding network reimbursement coverage
- ✓ (3) Awareness about telemedicine benefits and guide to access it
- ✓ (4) Encouragement for telemedicine usage by providers
- ✓ (5) Reducing cost barriers



Conclusions



Telehealth – way ahead !!



Accessibility factors

For telehealth to persist, several variables must line up for the practitioner and the patient:
Healthcare Provider's Part :

- Reimbursement dynamics
- Electronic medical record integration
- Ease of billing
- Access to patient tools and financial assistance

Patient's Part :

- Therapeutic area and disease state
- Therapy mode of administration
- Socioeconomic and demographic
- Need for diagnostic and/or procedure



Policies & behavioral shifts

Sustained HCP telehealth adoption will require policy and behavioral shifts across stakeholders:

- Broader, more lasting payment parity regulations and incentives,
- Integrated billing, expanded CPT codes, ease of insurance adjudication and payment
- Continued use and training with video-based technologies in support of diagnostics and maintenance care
- Initiatives by payers and health systems to drive awareness
- New investment and/or acquisition by large providers to expand network capacity
- Introduction of telemedicine-only doctor practices
- Better integration with patient e-health records, remote monitoring, diagnostics and mobile health apps
- More effective processes for sample management, co-pay, patient assistance programs



Adoption of Telehealth

Adoption will be variable based on :

- Therapeutic Area and Disease State
- Therapy Mode of Administration
- Socioeconomic and Demographic
- Need for Diagnostic and/or Procedure
- Therapeutic areas like oncology, pediatrics, surgery may be a challenge
- Severity, complexity and stage of disease
- Infused therapies, HCP administered products, vaccines and certain physical examinations will require in person visits
- Older patient populations & rural patients
- Internet access and technology aptitude
- Surgeries, labs & diagnostics will continue to bring patients to the office

References

- Neville CW. Telehealth: A Balanced Look at Incorporating This Technology Into Practice. *SAGE Open Nursing*; 2018. DOI: <https://doi.org/10.1177/2377960818786504>
- IQVIA Report - The Impact of the COVID-19 Pandemic on Global Pharmaceutical Growth; April 6, 2020
- COVID-19 enhances reliance on tele medicine. *The Hindu*. Available from: <https://www.thehindu.com/news/national/tamil-nadu/covid-19-enhances-reliance-on-telemedicine/article31378946.ece>
- Bashir A, Bastola DR. Perspectives of Nurses Toward Telehealth Efficacy and Quality of Health Care: Pilot Study. *JMIR Med Inform*. 2018;6(2):e35. Published 2018 May 25. doi:10.2196/medinform.9080m
- Barnett ML, Ray KN, Souza J, Mehrotra A. Trends in Telemedicine Use in a Large Commercially Insured Population, 2005-2017. *JAMA*. 2018;320(20):2147-2149. doi:10.1001/jama.2018.12354
- Lee, Sungkyu, et al. "Factors Associated with Telehealth Service Utilization among Rural Populations." *Journal of Health Care for the Poor and Underserved*, vol. 30 no. 4, 2019, p. 1259-1272. *Project MUSE*, doi:10.1353/hpu.2019.0104.
- Portnoy J, Waller M, Elliott T. Telemedicine in the Era of COVID-19. *J Allergy Clin Immunol Pract*. 2020;8(5):1489-1491. DOI:10.1016/j.jaip.2020.03.008
- Smith AC, Thomas E, Snoswell CL, et al. Telehealth for global emergencies: Implications for coronavirus disease 2019 (COVID-19). *J Telemed Telecare*. 2020;26(5):309-313. doi:10.1177/1357633X20916567
- Hakim, Abraham A et al. "Implications for the use of telehealth in surgical patients during the COVID-19 pandemic." *American journal of surgery*, S0002-9610(20)30231-2. 21 Apr. 2020, doi:10.1016/j.amjsurg.2020.04.026
- Hong YR, Lawrence J, Williams D Jr, Mainous III A. Population-Level Interest and Telehealth Capacity of US Hospitals in Response to COVID-19: Cross-Sectional Analysis of Google Search and National Hospital Survey Data. *JMIR Public Health Surveill*. 2020;6(2):e18961. Published 2020 Apr 7. DOI:10.2196/18961
- Ohannessian R, Duong TA, Odone A. Global Telemedicine Implementation and Integration Within Health Systems to Fight the COVID-19 Pandemic: A Call to Action. *JMIR Public Health Surveill*. 2020;6(2):e18810. Published 2020 Apr 2. DOI:10.2196/18810
- Hollander JE, Carr BG. Virtually Perfect? Telemedicine for Covid-19. *N Engl J Med* 2020; 382:1679-1681. Published 2020 Apr 30. DOI: 10.1056/NEJMp2003539
- Primary Care & COVID-19: Week 3 Survey. *Primary Care Collaborative*. Available from: <https://www.pcpcc.org/2020/04/01/primary-care-covid-19-week-3-survey>
- IQVIA Report - Monitoring the Impact of COVID-19 on the Pharmaceutical Market; May 01, 2020. Available from: <https://www.iqvia.com/library/white-papers/monitoring-the-impact-of-covid-19-on-the-pharmaceutical-market>
- Survey: Wyoming Doctors Feeling Impact of COVID-19. UW Navigation. Available from: <https://www.uwyo.edu/uw/news/2020/04/survey-wyoming-doctors-feeling-impact-of-covid-19.html>
- Americans' Perceptions of Telehealth in the Era of COVID-19. Sykes. Available from: <https://www.sykes.com/reports/2020-telehealth-survey/>
- IQVIA Report - Monitoring the Impact of COVID-19 on the Pharmaceutical Market; April 10, 2020. Available from: <https://www.iqvia.com/library/white-papers/monitoring-the-impact-of-covid-19-on-the-pharmaceutical-market>
- IQVIA-Institute-Report- COVID-19-Impact-On-US-Healthcare; May 5, 2020. Available from: <https://www.iqvia.com/about-us/commitment-to-public-health/covid-19-resources>
- Google images



Get Ready Be Safe Stay Healthy

