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GENERAL HOSPITAL

EMERGENCY MEDICINE
TELEHEALTH

Using Telehealth to Help Keep Patients Safely in Their Own Communities

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Disclosures

No financial conflict of interest

DOCTORS

The New Language of Telehealth

Telemedicine is teaching us new ways to communicate with our patients.

By Marjorie S. Rosenthal, M.D.

May 5, 2020

As I wait for the interpreter to call the mother and then connect me into our three-way call, I berate myself for how bad my Spanish has become. I imagine it will continue to get worse. But what I am also realizing in this 30 seconds of dead airtime is that my overall communication skills are dwindling, too. I realize that in normal, non-Covid times, I do a lot of nonverbal communication with my patients. That I can't do over the telephone.

Virtually Perfect? Telemedicine for Covid-19

Judd E. Hollander, M.D., and Brendan G. Carr, M.D.

Recognizing that patients prioritize convenient and inexpensive care, Duffy and Lee recently asked whether in-person visits should become the second, third, or even last option for meeting patient needs.¹ Previous work has specifically described the potential for using telemedicine in

to communicate 24/7, using smartphones or webcam-enabled com-

el coronavirus causing Covid-19, is coordination of testing. As the

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ries. Automated screening algorithms can be built into the intake process, and local epidemiologic information can be used to standardize screening and practice patterns across providers.

NEJM.ORG APRIL 30, 2020
... and...
medicine workflows.

More than 50 U.S. health systems already have such programs. Jefferson Health, Mount Sinai, Kaiser Permanente, Cleveland Clinic, and Providence, for example, all leverage telehealth technology to allow clinicians to see

Rather than expect all outpatient practices to keep up with rapidly evolving recommendations regarding Covid-19, health systems have developed automated logic flows (bots) that refer moderate-to-high-risk patients to nurse triage lines but are also permitting patients to schedule video visits with established or on-demand providers, to avoid travel to in-person care sites. Jefferson Health's

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Telemedicine, Once a Hard Sell, Can't Keep Up With Demand

The new coronavirus outbreak is testing the industry's capacity, sending companies scrambling for doctors and new services



By [Parmy Olson](#)

April 1, 2020 5:47 am ET

SYSTEMATIC REVIEW

The Practice of Emergency Medicine

Telehealth use in emergency care during coronavirus disease 2019: a systematic review

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Abstract

Objective: The coronavirus disease 2019 pandemic has presented emergency departments (EDs) with many challenges to address the acute care needs of patients. Many EDs have leveraged telehealth to innovatively respond to these challenges. This review describes the landscape of telehealth initiatives in emergency care that have been described during the coronavirus disease 2019 pandemic.

Methods: We conducted a comprehensive, systematic review of the literature using PubMed, supplemented by a review of the gray literature (ie, non-peer reviewed), with input from subject matter experts to identify telehealth initiatives in emergency care during coronavirus disease 2019. We categorized types of telehealth use based on purpose and user characteristics.

Results: We included 27 papers from our review of the medical literature and another 8 sources from gray literature review. The vast majority of studies (32/35) were descriptive in nature, with the additional inclusion of 2 cohort studies and one randomized clinical trial. There were 5 categories of ED telehealth use during the pandemic: (1) pre-

Jaffe TA, Hayden E, Uscher-Pines L, Sousa J, Schwamm LH, Mehrotra A, Zachrisson KS. Telehealth use in emergency care during coronavirus disease 2019: a systematic review. *J Am Coll Emerg Physicians Open*. 2021 May 1;2(3):e12443.

Telehealth in EM

- Pre-ED
- Within ED
- Post-ED
- Care continuum

Telehealth in EM

- Pre-ED
- **Within ED**
- Post-ED
- Care continuum

Impetus for TeleEM

Community hospitals would like to retain patients

- Care teams are very capable of caring for these patients
- Patients remain near their homes, support network, and regular providers
- Opportunity for hospital to capture additional Inpatient revenue when patients are admitted locally

Impetus for TeleEM

MGH would like to help community hospitals retain patients

- Opportunity to work more closely together as the MGH Family to serve patients outside of the brick-and-mortar MGH ED
- Given capacity challenges, ensure resources are available to care for patients from OSH and other institutions who need them

TeleEM Overview

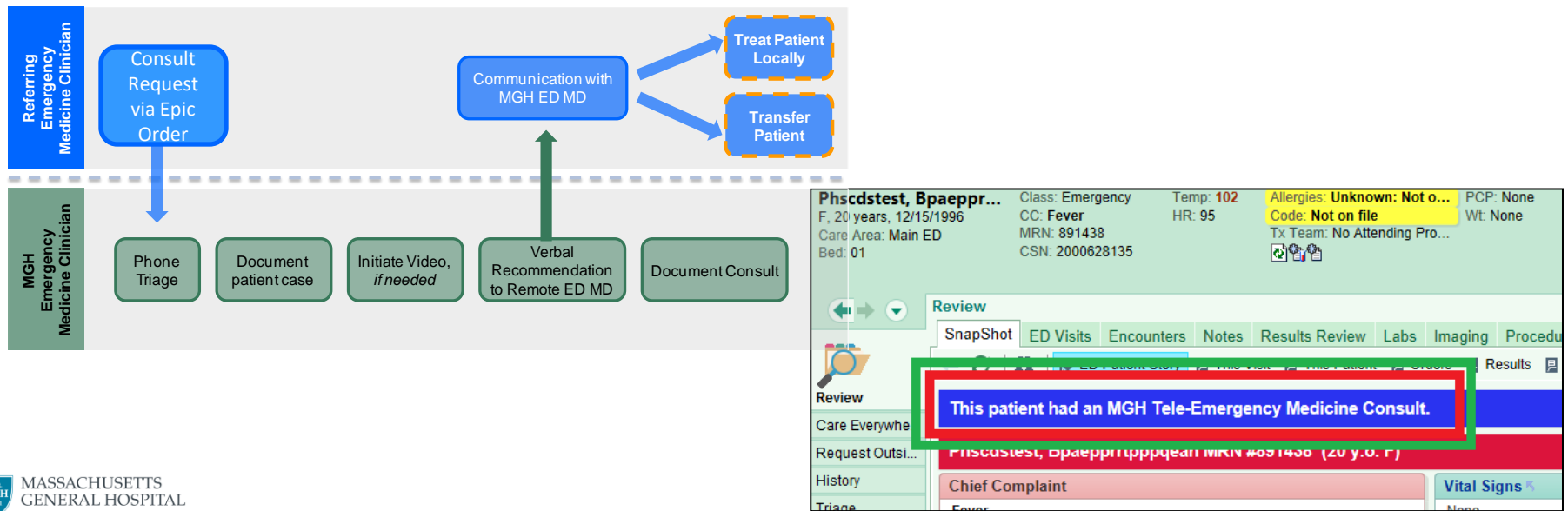
Guidance and collaboration regarding transfers via virtual consults between MGH EM attendings and community hospital clinicians

- Scope and nature of the consult may serve different functions depending on the patient's clinical condition and medical severity

Goal: Keep clinically appropriate patients local

TeleEM Workflow

- OSH team enters TeleEM consult order in Epic
- MGH EM physician receives automated page
- MGH EM physician connects with OSH team by phone (and video if helpful), provides recommendation regarding transfer, documents via consult note in patient's OSH chart
- OSH team makes disposition decision



Other EM Transfer Coordination



Avel eCare Emergency Stats

Since the launch of Avel eCare Emergency in 2009, board-certified ER physicians have delivered immediate, supportive care to emergency departments at 137 hospitals across the country.

Within the last 12 months, we've experienced:

- \$3.5 million in cost savings
- 700+ potential patient transfers avoided
- 7,700+ video encounters
- 21 minute reduction in door to physician, when local ER providers aren't immediately available.

Barriers

- Licensure
- Credentialing
- Technology
- Training
- Reimbursement

What is the Evidence?

SPECIAL CONTRIBUTION

Telehealth in emergency medicine: A consensus conference to map the intersection of telehealth and emergency medicine

Emily M. Hayden MD, MHPE¹  | Christopher Davis MD² | Sunday Clark MPH, ScD³ | Aditi U. Joshi MD, MSc⁴  | Elizabeth A. Krupinski PhD⁵ | Neel Naik MD³ | Michael J. Ward MD, PhD, MBA⁶ | Kori S. Zachrison MD, MSc¹  | Erica Olsen MD⁷  | Bernard P. Chang MD, PhD⁷  | Elizabeth Burner MD, MPH⁸ | Kabir Yadav MDCM, MS, MSHS⁹ | Peter W. Greenwald MD, MS³  | Shruti Chandra MD, MEHP⁴  | the Society for Academic Emergency Medicine 2020 Consensus Conference[†]

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Hayden EM, Davis C, Clark S, Joshi AU, Krupinski EA, Naik N, Ward MJ, Zachrison KS, Olsen E, Chang BP, Burner E, Yadav K, Greenwald PW, Chandra S; Society for Academic Emergency Medicine 2020 Consensus Conference[†]. Telehealth in emergency medicine: A consensus conference to map the intersection of telehealth and emergency medicine. *Acad Emerg Med*. 2021 Jul 10. Epub ahead of print.

SAEM 2020 Consensus Conference

- Educational Needs and Outcomes
- Healthcare Access
- Quality and Safety
- Research Facilitation
- Workforce

Averted Transfers in Rural Emergency Departments Using Telemedicine: Rates and Costs Across Six Networks

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Conclusions: In a large cohort of teleED cases, 39% of nontransfer cases were averted transfers (20% of all teleED cases). Importantly, 43% of these patients were routinely discharged rather than being transferred. Averted transfers saved on average \$2,673 in avoidable transport costs per patient, with 63.6% of these cost savings accruing to public insurance.

Keywords: emergency medicine, telemedicine, teletrauma, telehealth, policy

Introduction

Rural hospital emergency departments (EDs) often have low volumes and as such face multiple challenges, including limited medical equipment, technology, and other structural resources.¹⁻³ In addition, because of chronic health care workforce shortages in rural

Telemed J E Health. 2021 May;27(5):481-487.

Averted Transfers

- 39% of non-transfers were due to TeleED
 - 43% were discharged rather than transferred
- \$2,673 of transport costs saved per averted transfer

Ward MM, Carter KD, Ullrich F, Merchant KAS, Natafqi N, Zhu X, Weigel P, Heppner S, Mohr NM. Averted Transfers in Rural Emergency Departments Using Telemedicine: Rates and Costs Across Six Networks. *Telemed J E Health*. 2021 May;27(5):481-487. doi: 10.1089/tmj.2020.0080. Epub 2020 Aug 24. PMID: 32835620.

How do we want to shape the future of EM?

ABEM holds the interests of patients and their families in the highest standing, particularly with regard to the provision of the safest and highest-quality emergency care. ABEM addresses its commitment to patients by supporting the physicians who provide care to the acutely ill and injured, and by working to transform the specialty of Emergency Medicine.



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