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Who and How: Telemedicine Eligibility and Participant Guidelines in the Ambulatory Setting

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INNOVATION HIGHLIGHT

Who and How: Telemedicine Eligibility and Participant Guidelines in the Ambulatory Setting

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Introduction: Telehealth use has dramatically increased due to the COVID-19 pandemic. Yet there are significant gaps in evidence regarding the clinical appropriateness of synchronous visits for ambulatory telemedicine that are under the umbrella of telehealth and defined as video appointments between patients and providers. As a result, there are few sensible guidelines for day-to-day practice, resulting in a lack of standardization and risk of suboptimal care.

Methods: We developed patient inclusion/exclusion guidelines for use in ambulatory telemedicine. Complementary tools included guides on patient preparation, telemedicine physical exam, and provider etiquette. We analyzed telemedicine use by practice type and surveyed a subset of MaineHealth ambulatory practices regarding the applicability of the guidelines.

Results: Volume and specialty distribution data show that although telemedicine volume increased significantly, use varied by specialty. Behavioral health providers used telemedicine the most, followed by primary care, medical specialties, and, finally, surgical specialties. Stratification intensified as restrictions on in-person care declined.

Discussion: We observed the expected pattern of use by specialty type, given our inclusion/exclusion criteria. Although these criteria may be conceptually straightforward, implementation is not. We operationalized these concepts to ensure individual practices can adapt and implement these insights in a reproducible and predictable way, leading to increased standardization across the health system.

Conclusions: Clinical teams need help determining how to best use telemedicine tools. Here, we provide practice-level guidelines focused on practical implementation. We hope this communication advances the effort to develop standards of care for telemedicine indications.

Keywords: Telemedicine, Ambulatory Care, Telehealth

Telehealth has been used since the mid-twentieth century, but never with the breadth, depth, and scale that we have seen resulting from the COVID-19 pandemic. At MaineHealth, the monthly mean number of ambulatory telemedicine visits increased 16-fold during the pandemic, including 321 736 encounters from March 28, 2020 through August 31, 2021. This increase reflects telehealth's rise from "niche" care to mainstream medicine.

Moderate evidence exists regarding telehealth's benefit. Historically, ambulatory telemedicine has been used for chronic disease management, provision of treatment or rehabilitation, evaluation of non-urgent concerns, patient education, and specialist consultation.¹⁻³ The evidence produced from these encounters demonstrates, generally in an underpowered fashion, that ambulatory telemedicine results in high patient satisfaction attributed to reduced travel and waiting times^{2,4}, easier attendance in those with mobility or driving limitations and shorter visit times.⁵ Similar clinical outcomes occurred between in-person and telemedicine encounters for a variety of chronic

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conditions, including mental health, cardiovascular and respiratory diseases.² The limitations of telemedicine include restricted physical examination capabilities, privacy and safety issues, as well as concerns regarding ease of use, reliability, and access to technology.⁵⁻⁷ However, this evidence still has large gaps. Patient volumes are small with heterogeneous interventions, patient populations, outcomes, and levels of quality.^{1,3} These factors limit generalizability across patient groups and clinical settings.

As a result, practical guidelines for the appropriate use of telemedicine in ambulatory care are in nascent form; yet, indications are greatly needed. In 2020, Greenhalgh et al. reported the urgent need to revisit traditional definitions of good clinical practice and establish more contemporary ones that account for telehealth modalities.⁸ Practical telemedicine guidelines will assist with developing a standard approach to assessing clinical outcomes, encourage further research to refine the use of telemedicine in clinical care, and support reimbursement of this visit type.

Suggested telehealth guidelines include visit types that might be appropriate for telemedicine interaction, such as counseling services, administrative purposes, and chronic disease management.^{5,7} Practical considerations include interest in having a telemedicine visit, access to privacy, and access to the technology needed for the visit. Clinical considerations include co-morbidities, need for a detailed physical exam, altered mental status, English as a Second Language, and medical factors limiting travel to the clinic.^{5,7} Despite these suggestions, there is an opportunity for refinement. Our group aimed to develop consensus guidelines and practical recommendations for telehealth implementation across MaineHealth ambulatory practices.

METHODS

At MaineHealth, the ability to select appropriate patients for a telemedicine visit has been discussed extensively, as we provide care for a large and rural state with many barriers to in-person care. We established a telehealth committee with primary and specialty care providers to address telemedicine patient selection. Through a deliberate process involving several sessions of discussion and review

of literature, the committee developed a package of guidelines for our practices and providers. This package includes a list of telemedicine indications/contraindications and tips on addressing patient expectations, improving provider telemedicine etiquette, and performing a physical exam.

First, the patient inclusion/exclusion criteria were grouped according to the following categories: (1) technical and regulatory factors; (2) patient setting and consent, and access to care; and (3) medical and clinical considerations (Table 1). Some criteria are relatively straightforward, such as having the technology and connection to perform a telemedicine visit, as well as consent and location. Other socioeconomic and health factors may shift the balance toward either an in-person or telemedicine visit, such as capacity to attend an in-person visit due to geography, financial and physical hardships of travel, or medical restrictions on driving. Additional considerations may include multiple participants needed for the visit, weather, minor illness of the patient or the provider preventing in-person care, and frequency of visits. Ultimately, the decision on the appropriateness of a telemedicine visit depends on the provider knowing the patient, the patient's ability to participate in a telemedicine visit, and knowledge of the above considerations.

Second, both the patients and the providers need to know what will be expected of them for a successful telemedicine encounter, as detailed in Supplements 1 and 2. These supplements include tips regarding the optimal environment for a telemedicine visit. Third, a guide to performing a physical exam via telemedicine is included. Without using of specialized equipment (eg, electronic stethoscope), the telemedicine exam is constrained. However, a more detailed and thorough physical exam can be performed than many assume, as visual and auditory observations constitute the foundation of any physical exam. Some tactile portions of the physical exam can be performed by the patient, such as palpation of the facial sinuses for tenderness. Providers need to possess a baseline competency in telemedicine physical exam to apply the inclusion criteria such that salient portions of the physical exam can be completed via telemedicine (Supplement 3).

Table 1: Ambulatory Telemedicine Visit Inclusion/Exclusion Criteria

INCLUSION	EXCLUSION
TECHNICAL CAPACITY, CONNECTIVITY, and REGULATORY	
Patient has access to appropriate technology, devices and connectivity	Patient does not have appropriate connectivity or device
Consideration of state licensure requirements, location of patient, and malpractice coverage	Visit would be counter to local regulatory and insurance requirements
PATIENT ID, CONSENT AND SETTING	
The patient consents to having a telemedicine visit	Patient does not consent to a telemedicine visit
Patient takes responsibility to attend on time in a private, safe space with minimal interruptions and inclusion of additional necessary participants	Patient does not have access to a safe, private environment for the visit or individuals necessary to participate cannot attend simultaneously
The patient has a full face photo in the EMR or confirms name and date of birth	Provider cannot confirm identity of the patient
Patient would forego care altogether in absence of a telemedicine visit	
MEDICAL AND CLINICAL CONSIDERATIONS	
Patient’s reason for visit suggests they do not have an emergency medical condition	Patient’s reason for visit + circumstances suggest possibility of emergency medical condition
Patient does not have cognitive, mental health, or audiovisual barriers to providing history OR patient has knowledgeable caregiver at bedside who can provide history	Patient has significant cognitive or mental status barriers to providing history (e.g. dementia) AND has no knowledgeable caregiver at the bedside
Salient portions of physical exam can be completed with visual and auditory observation AND tactile portions of physical exam can be completed with patient participation	Salient portions of physical exam include palpation, auscultation, or tactile interactions which cannot be completed with patient participation, or patient is unable to participate
Patient does not require in-person testing	Patient requires in-person testing, such as bloodwork or testing that uses in-office equipment

To analyze the use of telemedicine within MaineHealth ambulatory care, we identified all outpatient visits based on billing identifiers for telehealth visits with our electronic medical record (Epic). These visits were sorted by specialty type to evaluate adherence to the guidelines. One year after guideline implementation, the largest group of providers within MaineHealth, Maine Medical Partners in Southern Maine, completed a survey regarding appropriate use of the guidelines. As

this information was obtained from aggregate, de-identified data, we did not require Institutional Review Board approval for this study.

RESULTS

At the outset of the pandemic, all specialty types dramatically increased their use of telemedicine encounters (Figure 1). However, even when restrictions on in-person care were at their maximum, stratification by specialty type was apparent.

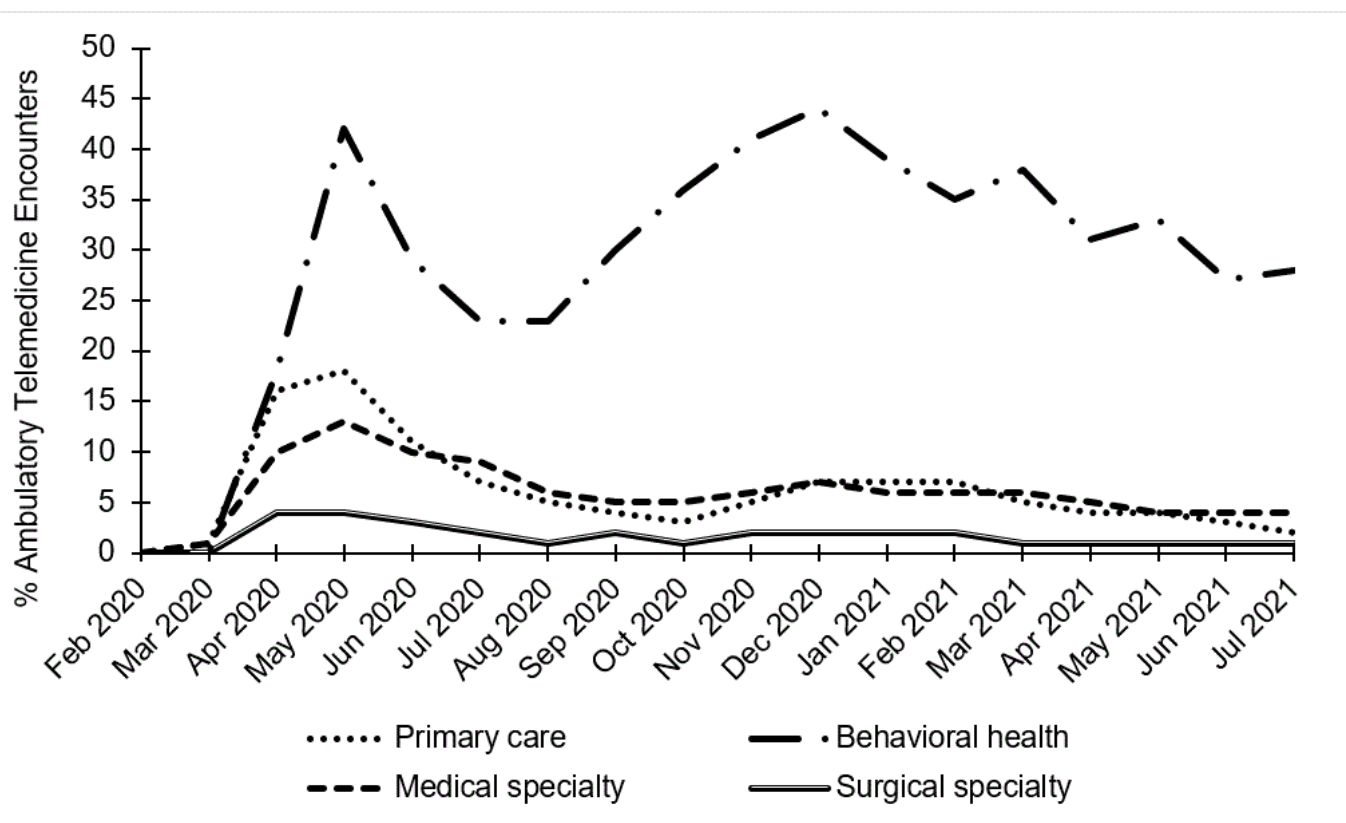


Figure 1. Percentage of Ambulatory Telemedicine Encounters versus All Encounters by Specialty Type, February 2020 to July 2021

For example, in May of 2020, 41.5% of all behavioral health visits were conducted via telemedicine, whereas the same is true of only 4.1% of surgical specialty visits, representing a 10-fold difference. Also, 18.4% of primary care visit and 13.3% of medical specialty visits were conducted via telemedicine. As the restrictions on in-person care declined, that pattern of stratification by specialty type intensified. In July 2021, 28.2% of all behavioral health visits were conducted via telemedicine, whereas the same is true of only 0.9% of surgical specialty visits; this is a 31-fold difference. Again, 2.1% of primary care visits and 3.7% of medical specialty visits were conducted via telemedicine.

We had a 52.8% (28/53) survey response rate resulting in feedback from 28 practices, predominantly primary care and medical specialties. All respondents felt they were using the inclusion and exclusion criteria appropriately.

DISCUSSION

The proposed patient inclusion/exclusion guidelines reflect and guide the observed pattern of use. Technical capacity, patient connectivity, regulatory

considerations, patient consent, and setting factors are likely similar across all specialty types, resulting in very little stratification across specialties by these factors. Therefore, most of the stratification can likely be accounted for by the need for a physical exam that cannot be completed via telemedicine and/or a need to use equipment in the office (eg, otoscope, cystoscope). Given these concepts, we would expect behavioral health practices to naturally gravitate toward telemedicine, whereas the more procedurally-based specialties (eg, the surgical specialties) would find telemedicine less useful. Indeed, we observed this pattern, which is also similar to what others found.⁹ Although this pattern may be conceptually straightforward, collation into applicable criteria and implementation across a variety of practice types and settings is not as straightforward. We operationalized these concepts such that individual practices can adapt and implement these insights in a reproducible, predictable way that both facilitates the practice workflow and leads to increased standardization across the health system.

Our study shows how these clinical guidelines can be implemented across diverse medical and surgical practices with a large number of visits

analyzed. Limitations of our study include its retrospective review of telehealth use, the lack of clinical outcomes, and that the practice survey respondents were concentrated in primary care and medical specialties, rather than surgical specialties. Further research will need to focus on the impact of telemedicine care on patient outcomes, as well as patient and provider satisfaction rates.

CONCLUSIONS

Clinical teams need help determining how to use telemedicine tools to have the most significant positive impact on their patients. A fundamental element is the need to provide guidance that allows them to identify clinical scenarios appropriate for synchronous telemedicine visits (ie, indications for use of this tool). We have provided practice-level guidelines optimized for practice implementation, and we hope this description advances the effort to develop standards of care for telemedicine indications.

Conflicts of Interest: None

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