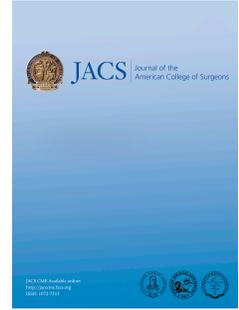


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**Implementation Guide for Rapid Integration of an Outpatient Telemedicine Program during the COVID-19 Pandemic**

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**Short title:** Telemedicine Program Integration

**Abstract:**

**Objective:** In the novel coronavirus disease (COVID-19) pandemic, social distancing has been necessary to help prevent disease transmission. As a result, medical practices have limited access to in-person visits. This poses a challenge to maintain appropriate patient care while preventing a significant backlog of patients once stay-at-home restrictions are lifted. In practices that are naive to telehealth as an alternative option, providers and staff are experiencing challenges with telemedicine implementation. We aim to provide a comprehensive guide on how to rapidly integrate telemedicine into practice during a pandemic.

**Methods:** We built a toolkit that details 8 essential components to successful implementation of a telemedicine platform: Provider and staff training, patient education, an existing electronic medical record system, patient and provider investment in hardware, billing and coding integration, information technology support, audiovisual platforms, and patient and caregiver participation.

**Results:** Rapid integration of telemedicine in our practice was required to be compliant with our institution's COVID-19 Taskforce. Within 3 days of this declaration, our large specialty-care clinic converted to a telemedicine platform and we completed 638 visits within the first month of implementation.

**Conclusions:** Effective and efficient integration of a telemedicine program requires extensive staff and patient education, accessory platforms to facilitate video and audio communication, and adoption of new billing codes that are outlined in this toolkit.

**Keywords:** Telemedicine, COVID-19, Coronavirus, Billing, Coding, Pandemic

## Abbreviations

APP	Advanced Practice Provider
AUA	American Urological Association
CMS	The Centers for Medicare and Medicaid Services
EMR	Electronic Medical Record System
HIPPA	Health Insurance Portability and Accountability Act
RVU	Revenue Value Unit

**Introduction:**

Telemedicine was previously touted as an opportunity to expand healthcare access to rural<sup>1,2</sup> and underserved populations<sup>3</sup> but has urgently been adopted as a safer means of providing medical care during the novel coronavirus disease (COVID-19) pandemic<sup>4</sup>. The Centers for Medicare and Medicaid Services (CMS) rapidly facilitated this change through the 1135 Waiver, allowing clinicians to provide telemedicine services in broader circumstances<sup>4,5</sup>.

In addition to reducing the potential risk of infectious disease transmission, telemedicine visits have achieved similar health outcomes compared with in-person patient visits in several primary care studies<sup>6</sup>, and have ancillary benefits of reducing travel costs and time away from work<sup>7</sup>. Subspecialists across multiple disciplines have also used telemedicine to increase access for patients seen in rural clinics. This has been associated with high levels of satisfaction among both patients and their primary care physicians<sup>7</sup>. In a study from the Veterans Administration, patients seeking care from the Greater Los Angeles area rated their satisfaction as “very good” to “excellent” in 95% of cases<sup>8</sup>. On average, patients saved 277 miles driven, \$67 in travel-related expenses, and \$126 in missed opportunity costs per telemedicine appointment<sup>8</sup>. Thus, this approach affords potential benefits to the environment and the economic well-being of patients, many of whom may have reduced earning potential in the wake of a pandemic. Medical specialties have recognized the growing need and potential of telemedicine for use in the outpatient setting, telesurgery, and telerounding. While some specialties have initiated telehealth visits successfully<sup>8-14</sup>, the issue of reimbursement has been noted to be the major barrier to implementation for many<sup>15</sup>. Amidst the COVID-19 pandemic, however, facilitating healthcare access in a safe setting became a priority as cities promoted social distancing. Telemedicine regulatory restrictions have been eased in the US in an effort to promote safety for patients, their

family members, and healthcare professionals, and to avoid health care service delays that may compromise future health. As a result, many practices are now finding themselves forced to acclimate to the sudden and broad implementation of telemedicine platforms, and the learning process can frustrate patients, providers, support staff, and the healthcare system.

In this paper, we offer an implementation guide to share the resources that have allowed us to rapidly integrate telemedicine across all of our divisions in an academic specialty practice through the use of Epic® electronic medical record system (EMR), the MyChart® (powered by Epic®) application, and video calling services such as FaceTime by Apple, Inc; Google Duo by Google LLC, Doximity, and Skype by Microsoft®. It can serve as an effective resource for staff and provider training.

### **Telehealth program implementation**

There are 8 necessary elements for telemedicine integration: an existing electronic medical record system infrastructure, audiovisual platforms, institutional information technology (IT) support, provider and patient investment in hardware, provider and staff training, patient education, patient and caregiver participation, and coding/billing integration (Figure 1).

### **Existing electronic medical record infrastructure**

At our institution, the Epic® EMR platform (*Epic Systems* Verona, Wisconsin) has been in use since 2012. Epic® is used in over 250 health care organizations in the US, and 45% of the population has at least some of their medical records in an Epic® system<sup>16</sup>. Epic® is particularly dominant in larger hospitals and health organizations, and in 2018 had 28% market share of the 5,447 acute care hospitals in the US<sup>17</sup>. MyChart® is a HIPAA-protected patient access portal that is included in Epic®. It allows patients to access their charts to view medical records, lab and imaging results, share their records with other providers, update their conditions, schedule

appointments, and message providers<sup>18</sup>. Patients can access this portal with their personal Apple<sup>®</sup> or Android<sup>™</sup> devices, tablets, desktop or laptop computer, and is free of charge. Having access to this portal is essential for both e-visits and video visits to be properly conducted. If this or a similar portal is not available, however, alternative audiovisual platforms can be used to meet the requirements for a video telemedicine visit.

### **Alternative audiovisual platforms**

As HIPAA violation penalties against healthcare workers have temporarily been waived, widely available video calling services such as FaceTime<sup>®</sup>, Skype<sup>™</sup>, Doximity, WhatsApp, and Google Duo are alternative options<sup>19</sup>. If an institution has not integrated audiovisual capabilities into the existing EMR system, these platforms are attractive options for conducting telemedicine visits. If MyChart video visit capability is incorporated into your Epic EMR system, the commercially available video conferencing software should be used as a last resort. Initiation of video calls using these platforms from personal devices, however, may disclose personal numbers and addresses. Doximity, an online networking service for medical professionals, has a feature (Doximity Dialer) that permits substitution of whatever telephone number is needed, such as the provider's general clinic, to appear on the recipient's device

**([https://www.doximity.com/download/general?c=web\\_mast\\_logged\\_out&pid=internal marketing](https://www.doximity.com/download/general?c=web_mast_logged_out&pid=internal_marketing).)** A new video feature was recently added to their application. It is free for Doximity users and enables communication between Apple<sup>®</sup> and Android<sup>™</sup> devices. Through this application, a text message is sent to any smartphone device and contains a video link that permits easy video connectivity. In our experience, this is the easiest way to connect with patients outside of approved portals and is especially useful if patients are enrolled in programs such as MyChart so they can receive printed after-visit instructions.

**Institutional IT support**

System overload is a common problem when utilizing HIPAA-protected electronic medical record services such as MyChart. It is necessary to have IT support to ensure adequate bandwidth and a secure connection to allow for proper operation of this system.

**Provider and patient investment in hardware**

Beginning a telehealth practice requires some investment in hardware. Most offices are equipped with desktop computers, laptops, and smartphones. For telehealth visits, older computers may need external webcams or speakers. In the US, 81% of the adult population owns a smartphone and 13% own a mobile phone without smartphone capabilities<sup>20</sup>. Approximately 89% of US households have computers<sup>21</sup>. With such widespread accessibility, we have found that a large majority of our patients already have access to the necessary hardware.

**Provider and staff training**

In our experience, it takes at least 1 hour of in-person provider and staff training to learn how to implement telehealth visits. We created educational handouts and then conducted a group trial run of a mock telemedicine encounter. This was very helpful to demonstrate the myriad of potential obstacles and solutions to video visits through the patient portal. While telemedicine is currently built as a physician platform, we included our front desk and nursing staff within our telemedicine model to mimic a standard in-person encounter. For the first week, we limited the scheduling of all telemedicine visits to 30 minutes for both new and return patient visits. Once familiarity and competence was demonstrated, providers could then choose to increase their templates to accommodate a larger number of patients per day.

**Patient education and participation**

Patient education is a resource-intensive yet critical component of telemedicine success especially if HIPAA-approved systems such as MyChart are used. There is an initial investment of office staff time to effectively present the option of a telemedicine visit and then coach the patient through the necessary software for the first encounter. The patients are also advised of the potential advantages of the telemedicine visit, such as not postponing their healthcare needs while staying safely at home, having the ability to save travel and waiting times, and avoiding the expenses associated with transportation and parking. The nursing staff calls patients approximately 1 week ahead of their appointment to confirm their preferred method of audiovisual connection. Depending on the device, our staff will send instructions on how to download the necessary applications and access MyChart.com (see eDocument 1). Fifteen minutes before the telemedicine appointment time, a member of our nursing staff calls the patient to confirm connectivity and then completes a review of patient history, medications, and allergies. This information is entered into the chart exactly as during an in-person encounter. The provider is then fully equipped to initiate an efficient telemedicine visit at the scheduled appointment time.

### **Eligibility, coding and billing integration**

Telehealth implementation requires a comprehensive understanding of eligibility, terminology, and billing. Eligibility and documentation requirements differ for telemedicine visits according to their classification, and familiarity is essential for compliance with coding and billing. Virtual services include telehealth visits, virtual check-ins, and e-visits. The list below describes the visit type, eligibility requirements, and billing codes. These are organized from

lowest to highest time and complexity, and correlates to the revenue value unit (RVU) potential (Table 1).

1. E-Visits are secure, digital E/M services that patients initiate through an EMR. The patient must be established, enrolled, and active in the patient portal and have had an appointment in the past one year. These visits are not permitted to relay test results or schedule appointments. Billing is according to cumulative time accrued during a 7-day period: 99421 (5-10 minutes); 99422 (11-20 minutes); 99423 (> 21 minutes).

2. G2010 - This is a remote evaluation of recorded video and/or images submitted by an established patient that includes interpretation with follow-up with the patient within 24 business hours, not originating from a related E/M service provided within the previous 7 days nor leading to an E/M service or procedure within the next 24 hours or soonest available appointment.

3. G2012 - Virtual check-in is a brief (minimum of 5 minutes) established patient telephone check-in with a physician or advanced practice provider (APP) to decide whether an office visit or other service is needed. For example, a patient calls with complaints of an acute urinary tract infection. The provider empirically sends treatment to pharmacy and verbally advises the patient to schedule an appointment if symptoms don't respond in 48 hours. The origin for the virtual check-in visit cannot be from a E/M service within the previous 7 days, and cannot lead to an E/M service or procedure within the next 24 hours or soonest available appointment, and this has to be documented for each virtual check-in encounter. Additional documentation requirements include consent for the visit, confirmation of patient identity and established patient status, details of encounter to establish medical necessity, and total amount of time. One can only submit G2012 if a minimum of 5 minutes of direct communication was achieved.

4. Clinician phone visits are scheduled telephone-based encounters between patient and provider not originating from a related E/M service provided within the previous seven days nor leading to an E/M service or procedure within the next 24 hours or soonest available appointment, and are billed according to time spent in direct physician-patient telephone contact (Table 1). A very recent change permitted new and established patients to use this telehealth option and it is not necessary to be enrolled in the patient portal. For example, a patient requests a clinician phone appointment to discuss recurrent urinary tract infection symptoms. The provider calls to obtain the history, reviews the past medical history and prior culture results, and makes a decision regarding treatment. The total time documented was 15 minutes. After appropriate documentation of consent and all other elements detailed above, a 99442 code could be entered.

5. Telemedicine visits (also called 'video visits') allow clinicians and patients to interact through the necessary elements of both live interactive audio and video to avoid the need for an in-person appointment. This encounter can be used for both new and established patients as well as consults. Billing code selection is based on the same criteria and documentation requirements as for in-person encounters. Non-HIPAA compliant communications platforms are allowed during the COVID-19 pandemic as long as they are not public facing, such as Facebook.

Consent is required before initiation of all telehealth visits and documentation is required within each note. The US government has also waived the requirement of a patient co-payment during the COVID pandemic. Telehealth (video) visits can be billed by time or complexity. We recommend setting up an easily insertable smartphrase (eDocument 2) that will document the mode(s) of communication used as well as time spent. A modifier 95 is applied for telehealth visits. Some payers may have considerations for GT and GQ modifiers as well.

New and established patient office visits can be reported with the same in-person billing codes regardless of location as long as the visit is conducted using live audio and visual connection. Billing is entered according to face-to-face time or, for established patients, the same elements that are used for in-person encounters (See eTable 1).

### **Non-physician staff telehealth encounters**

Any non-physician healthcare professional (physical and occupational therapists, speech pathologists, clinical psychologists) may interact with established patients through a patient portal or through secure, encrypted email as directed using the codes outlined in Table 2.<sup>4</sup>

### **Discussion**

This toolkit facilitated provider and staff training and resulted in rapid implementation of a successful telemedicine program across all divisions within our subspecialty program over the course of three days. Within 1 month, we successfully completed 638 telemedicine visits which permitted continuation of outpatient services with minimal requirements for appointment cancellation. Access to healthcare services was preserved with the ability to discriminate more accurately which patients required an in-person visit. In addition, involvement of our nursing and office staff within the telemedicine visit structure was instrumental in maintaining 75% of employment hours for our staff. As staff members interface with patients on the telephone to convert in-person visits to telemedicine, they served as important ambassadors for programmatic success.

Although this rapid change has significantly disrupted our normal workflow, it has generally been very well received by patients and office staff. We are currently in the process of

objectively determining patient-specific barriers to telemedicine appointments as well as patient satisfaction using a validated telemedicine survey questionnaire<sup>22</sup>. Our anecdotal experience is that patients who are older and less educated require significantly more nursing or office staff instruction on how to connect via telemedicine and the recruitment of a younger family member can be very helpful. Flexibility in video connection options has been paramount although the majority have been able to successfully connect via a simple link sent through the Doximity video application function. Review of our Press Ganey scores have remained consistently high during this time especially with regards to patient satisfaction with ease of scheduling appointments, concern of nursing staff toward the patient's problem, satisfaction with his or her provider, and likelihood of recommending our practice to others. We attribute this success in large part to having a comprehensive toolkit which eased the transition for our staff.

In addition, our providers have expressed satisfaction with telemedicine as it has allowed us to continue to serve patients with non-emergent health complaints and plan future surgeries. For many surgical sub-specialties, a comprehensive history and review of referral records and available diagnostic data, including imaging, are enough to be able to schedule a surgery while delaying physical examination to a preoperative visit. For example, an audit of new patients seen by a provider in female pelvic health (CAM) demonstrated a 20-25% conversion rate of new telemedicine visits to incontinence and pelvic organ prolapse surgeries posted within the next 3 months.

A valid concern that patients, physicians, and healthcare systems may have when using commercially available video conferencing software is cybersecurity which could compromise sensitive patient information. During this pandemic, we have seen this issue with the popular service, Zoom, that became the victim of hacking, interrupting educational sessions<sup>23</sup>. While

these services are convenient, we recommend they be used as a last resort. We advocate for the use of a secure patient portal, such as MyChart, to conduct telemedicine visits which will be less vulnerable to cyber-attacks, and sensitive patient information will be stored on a secure server.

With telemedicine projected to be a \$48.8 billion industry by 2023,<sup>24</sup> many startup companies are developing platforms to gain market share by promoting convenience and cost savings compared with an in-person visit from the comforts of their own home<sup>25</sup>. Especially with men's and women's health, these companies are linking patients with on-demand telehealth physicians (usually family and internal medicine physicians and gynecologists), and prescribing medication such as erectile dysfunction medication, testosterone replacement, contraception, and male pattern baldness treatment through their online pharmacies. With no state or federal oversight of these prescription drug companies, they are not required to comply with the same standards as drug distributors<sup>25</sup>. In addition, with only a brief intake questionnaire, no physical exam, and very little, if any, follow-up, critical assessments of associated conditions and potentially dangerous side effects (examples: cardiovascular disease associated with erectile dysfunction and polycythemia as a side effect of testosterone replacement) which can further compromise patient care<sup>25</sup>. By instituting telemedicine into brick-and-mortar practices, patients can receive appropriate care and follow-up, and develop a relationship with a qualified provider especially during a pandemic.

## **Conclusions**

Rapid adoption of telemedicine ensures access to, and continuity of, patient care while limiting unnecessary exposure to infectious illnesses such as COVID-19. This toolkit provides the necessary guide for provider and patient education to successfully implement a telehealth

program and comply with billing documentation and coding requirements. As this is mostly uncharted territory for most practices, this practical guide should facilitate an easier transition to a telemedicine program.

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## References

1. Nesbitt TS, Marcin JP, Daschbach; MM, et al: Perceptions of Local Health Care Quality in 7 Rural Communities with Telemedicine. *The Journal of Rural Health* 2005; **21**: 79–85.  
Available at: <http://dx.doi.org/10.1111/j.1748-0361.2005.tb00066.x>.
2. Davis AM, Sampilo M, Gallagher KS, et al: Treating rural paediatric obesity through telemedicine vs. telephone: Outcomes from a cluster randomized controlled trial. *J. Telemed. Telecare* 2016; **22**: 86–95.
3. Atabaki S, Hatcliffe R, Ledda M, et al: Improving Access to Pediatric Sub-Specialty Care Using DTC Telemedicine by Addressing Barriers. In: *GW Research Days 2016 - Present*. 2018. Available at: [https://hsrc.himmelfarb.gwu.edu/gw\\_research\\_days/2018/SMHS/13](https://hsrc.himmelfarb.gwu.edu/gw_research_days/2018/SMHS/13), accessed April 7, 2020.
4. Anon: MEDICARE TELEMEDICINE HEALTH CARE PROVIDER FACT SHEET | CMS. Available at: <https://www.cms.gov/newsroom/fact-sheets/medicare-telemedicine-health-care-provider-fact-sheet>, accessed April 2, 2020.
5. Anon: Telehealth Benefits in Medicare are a Lifeline for Patients During Coronavirus Outbreak | CMS. Available at: <https://www.cms.gov/newsroom/press-releases/telehealth-benefits-medicare-are-lifeline-patients-during-coronavirus-outbreak>, accessed April 6, 2020.
6. Flodgren G, Rachas A, Farmer AJ, et al: Interactive telemedicine: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews* 2015.  
Available at: <http://dx.doi.org/10.1002/14651858.cd002098.pub2>.

7. Nesbitt TS, Hilty DM, Kuenneth CA, et al: Development of a telemedicine program: a review of 1,000 videoconferencing consultations. *West. J. Med.* 2000; **173**: 169–174.
8. Chu S, Boxer R, Madison P, et al: Veterans Affairs Telemedicine: Bringing Urologic Care to Remote Clinics. *Urology* 2015; **86**: 255–260.
9. Glassman DT, Puri AK, Weingarten S, et al: Initial Experience with Telemedicine at a Single Institution. *Urology Practice* 2018; **5**: 367–371. Available at: <http://dx.doi.org/10.1016/j.urpr.2017.08.004>.
10. Thelen-Perry S, Ved R and Ellimoottil C: Evaluating the patient experience with urological video visits at an academic medical center. *Mhealth* 2018; **4**: 54.
11. Cremades M, Ferret G, Parés D, et al: Telemedicine to follow patients in a general surgery department. A randomized controlled trial. *The American Journal of Surgery* 2020. Available at: <http://dx.doi.org/10.1016/j.amjsurg.2020.03.023>.
12. Haimi M, Brammli-Greenberg S, Baron-Epel O, et al: Assessing patient safety in a pediatric telemedicine setting: a multi-methods study. *BMC Med. Inform. Decis. Mak.* 2020; **20**: 63.
13. Sohn GK, Wong DJ and Yu SS: A Review of the Use of Telemedicine in Dermatologic Surgery. *Dermatol. Surg.* 2020; **46**: 501–507.
14. Wang RF, Trinidad J, Lawrence J, et al: Improved patient access and outcomes with the integration of an eConsult program (teledermatology) within a large academic medical center. *J. Am. Acad. Dermatol.* 2019. Available at: <http://dx.doi.org/10.1016/j.jaad.2019.10.053>.

15. Badalato Gina M., Kaag Matthew, Lee Richard, et al: Role of Telemedicine in Urology: Contemporary Practice Patterns and Future Directions. *Urology Practice* 2020; **7**: 122–126.
16. Day JA: Why Epic | Johns Hopkins Medicine. 2016. Available at: [https://www.hopkinsmedicine.org/epic/why\\_epic/](https://www.hopkinsmedicine.org/epic/why_epic/), accessed April 3, 2020.
17. HealthLeaders: In EMR Market Share Wars, Epic and Cerner Triumph Yet Again. Available at: <https://www.healthleadersmedia.com/innovation/emr-market-share-wars-epic-and-cerner-triumph-yet-again>, accessed April 3, 2020.
18. Anon: Features | MyChart. Available at: <https://www.mychart.com/Features>, accessed April 3, 2020.
19. Office for Civil Rights (OCR): HIPAA, Civil Rights, and COVID-19. HHS.gov 2020. Available at: <https://www.hhs.gov/hipaa/for-professionals/special-topics/hipaa-covid19/index.html?language=es>, accessed April 2, 2020.
20. Anon: Smartphone Ownership Is Growing Rapidly Around the World, but Not Always Equally. Pew Research Center's Global Attitudes Project 2019. Available at: <https://www.pewresearch.org/global/2019/02/05/smartphone-ownership-is-growing-rapidly-around-the-world-but-not-always-equally/>, accessed April 4, 2020.
21. US Census Bureau: Computer and Internet Use in the United States: 2016. Available at: <https://www.census.gov/library/publications/2018/acs/acs-39.html>, accessed April 4, 2020.
22. Parmanto B, Lewis AN Jr, Graham KM, et al: Development of the Telehealth Usability Questionnaire (TUQ). *Int J Telerehabil* 2016; **8**: 3–10.

23. Hakim D and Singer N: New York Attorney General Looks Into Zoom's Privacy Practices. 2020. Available at: <https://www.nytimes.com/2020/03/30/technology/new-york-attorney-general-zoom-privacy.html>, accessed April 7, 2020.
24. Anon: Telemedicine Market to Generate Revenue Worth \$48.8 Billion by 2023. Available at: <https://www.psmarketresearch.com/press-release/global-telemedicine-market>, accessed April 7, 2020.
25. Houman JJ, Eleswarapu SV and Mills JN: Current and future trends in men's health clinics. *Transl. Androl. Urol.* 2020; **9**: S116.

**Table 1:** Classification of Virtual Services

<b>Virtual service, patient type, visit length</b>	<b>Billing code</b>	<b>RVU</b>
e-Visit, established		
5-10 mins	99421	0
11-20 mins	99422	0
>21 mins	99423	0
Remote evaluation of image/video, established		
NA	G2010	0.18
Virtual check-in, established		
5 mins	G2012	0.25
Phone visit, new or established		
5-10 mins	99441	0.25
11-20 mins	99442	0.5
21-30 mins	99443	0.75
Telehealth (video)		
New		
10 mins	99201	0.48
20 mins	99202	0.93
30 mins	99203	1.42
45 mins	99204	2.43
60 mins	99205	3.17
Established		
5 mins	99211	0.18
10 mins	99212	0.48
15 mins	99213	0.97

25 mins	99214	1.5
45 mins	99215	2.11

NA, not applicable; RVU, Relative Value Unit

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**Table 2:** Classification and Billing Codes for Nurse Telehealth Visits

<b>Visit type</b>	<b>Code</b>
Review of video or image, with interpretation and report	G2010
e-Visit	G2012
Nursing or staff online assessment of an established patient for up to 7 days, cumulative time 5-10 minutes	G2061
Nursing or staff online assessment of an established patient for up to 7 days, cumulative time 11-20 minutes	G2062
Nursing or staff online assessment of an established patient for up to 7 days, cumulative time 21 minutes or more	G2063

Figure 1: Elements of a telemedicine program. EMR, electronic medical record; IT, information technology; TME, telemedicine?

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**Precis**

Rapid integration of a telemedicine program to benefit patients requires extensive staff and patient education, accessory platforms to facilitate video and audio communication, and adoption of new billing codes outlined in this toolkit.

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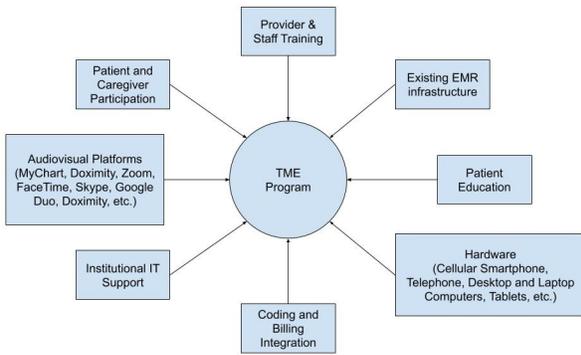
**eTable 1:** Elements Needed for Visit CPT Code

Visit type, CPT code	History			Exam	MDM	Total encounter time, mins
	HPI	ROS	PFSH			
Outpatient consultation*						
99241	1	N/A	N/A	1 OS	SF	15
99242	1	1	N/A	2-7 OS	SF	30
99243	4	2	1	D	Low	40
99244	4	10+	3	8 OS	Mod	60
99245	4	10+	3	8 OS	High	80
New patient visit*						
99201	1	N/A	N/A	1 OS	SF	10
99202	1	1	N/A	2-7 OS	SF	20
99203	4	2	1	D	Low	30
99204	4	10+	3	8 OS	Mod	45
99205	4	10+	3	8 OS	High	60
Established patient visit <sup>†</sup>						
99211	N/A	N/A	N/A	N/A	N/A	5
99212	1	N/A	N/A	1 OS	SF	10
99213	1	1	N/A	2-7 OS	Low	15
99214	4	2	1	D	Mod	25
99215	4	10+	2 of 3	8 OS	High	40

\*Must address 3 of 3 history/exam/MDM

<sup>†</sup>Must address 2 of 3 history/exam/MDM

D, detailed examination (requires at least 2 findings for at least 2 organ systems/body areas); HPI, history of present illness; MDM, medical decision making; MOD, moderate; N/A, not applicable; OS, organ system; PFSH, past family, social history; ROS, review of systems; SF, straightforward.



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**eDocument 1: Application Download and MyChart Access Instructions**

Please NOTE: If you are using a mobile device, you must download the ExtendedCare Virtual Care Room mobile app BEFORE starting your virtual visit.

Begin these steps at least 30 minutes before your scheduled appointment time.

From Mobile Phone/Tablet

1. Ensure mobile device is connected to WiFi. Cellular data is not recommended.
2. Open the App Store or Google Play Store.
3. Download the "ExtendedCare Virtual Care Room" app. (Telehealth Video Solution by STA Group, LLC)
4. Open/Download "MyChart" app by Epic. If this is your first time using the MyChart app, select "Wake Forest Baptist Health" as your healthcare provider.
5. In the MyChart app, click on the Appointments icon.
6. Select the appropriate appointment.
7. Click "Begin Visit." The ExtendedCare Virtual Care Room app will launch.

**eDocument 2.** Smartphrase Documentation

Today's visit was completed via a real-time telehealth (see specific modality noted below). A telehealth visit was used in order to decrease the patient's potential exposure to COVID-19 vs an in-person visit. The patient/authorized person provided oral consent at the time of the visit to engaging in a telemedicine encounter with the present provider at (HOSPITAL or CLINIC NAME). The patient/authorized person was informed of the potential benefits, limitations, and risks of telemedicine. The patient/authorized person expressed understanding that the laws that protect confidentiality also apply to telemedicine. The patient/authorized person acknowledged understanding that telemedicine does not provide emergency services and that he or she would need to call 911 or proceed to the nearest hospital for help if such a need arose.

Total time spent in the clinical discussion \*\*\* minutes.

Telehealth Modality: {Modality: # (39305= Audio; 39306=Audio and Visual)}