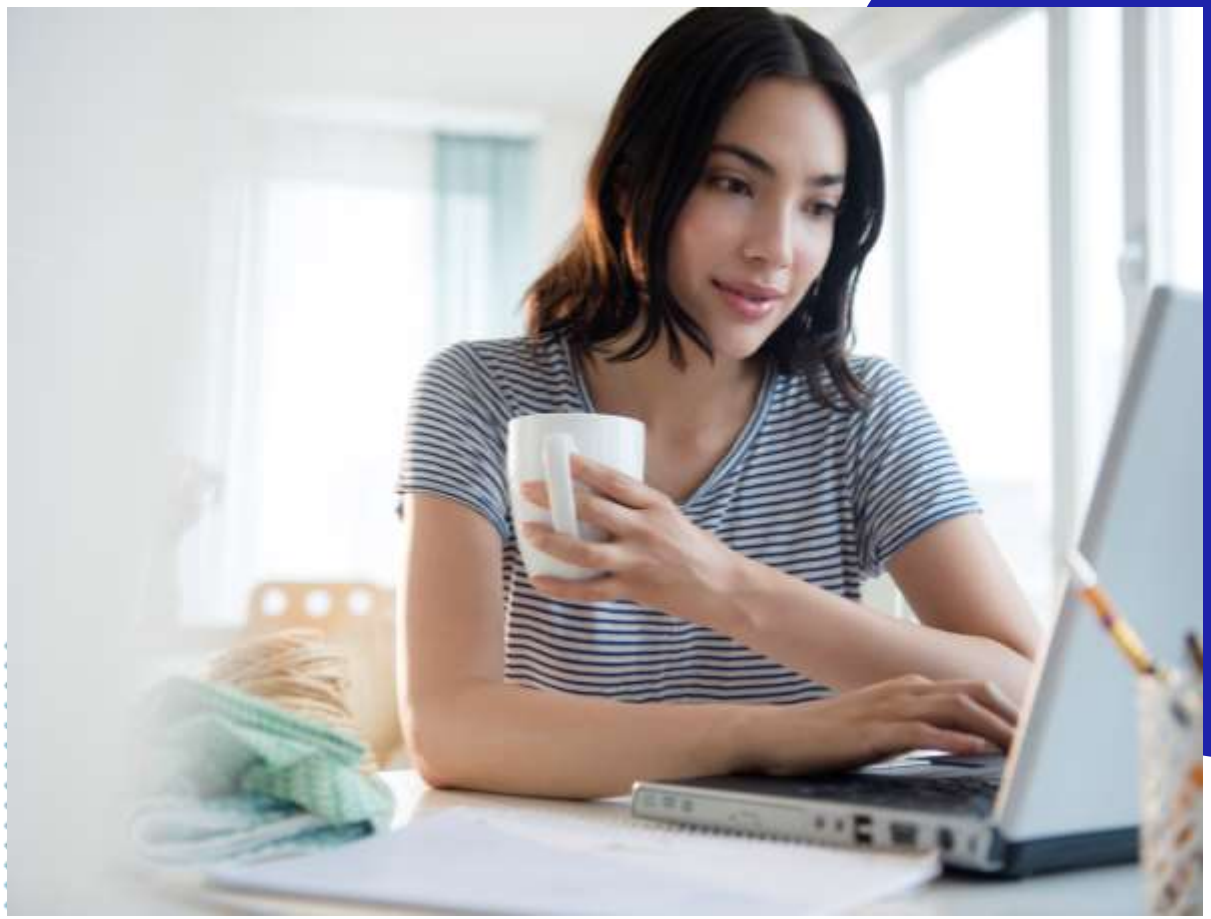
HIMSS Innovation Community Webinar: a Project Management Series

- The event will begin at the top of the hour.
- Visit the HIMSS Innovation Community at www.himss.org/innovation

May 28, 2020



Telehealth Project Management: Unique Challenges and Critical Success Factors

Patrick Mattis, DNP, MSN, MSCS, RN-BC, CPHIMS, CNE

Chair and Professor at Lincoln University, and the Chief Nurse Administrator

HIMSS

Welcome

Agenda

- **Welcome**
- **HIMSS Innovation Community Updates / Announcements**
- **A word from the Project Management Work Group Chairs**
- **Presentation:**
  - Telehealth Project Management: Unique Challenges and Critical Success Factors
- **Live Q&A**
- **Wrap-Up / Next Steps**

Updates and Announcements

www.himss.org/h20digital


MIT COVID19 CHALLENGE
Presents
BEAT THE PANDEMIC
II
May 29-31 Virtual Event
Application Deadline: May 26
#MITCOVID19Challenge
covid19challenge.mit.edu
MIT HACKING MEDICINE
MARTIN TRUST CENTER FOR MIT ENTREPRENEURSHIP
MIT VMS Venture Mentoring Service
MIT GSC
Takeda
BAYER
MeHI
d-school
MassBio
BCG Digital Ventures
HIMSS
JOHNS HOPKINS MALONE CENTER for ENGINEERING in HEALTHCARE
Health Data Science & Analytics
McCarter English
AbelsonTaylor
dose
covid-19 policy alliance
Holland BIO
VA U.S. Department of Veterans Affairs
VHA INNOVATION Ecosystem
NL
NL Health~Holland
UHS
1upHealth
MC MASSCHALLENGE HEALTHTECH
MIT innovation initiative
MIT MANAGEMENT EXECUTIVE EDUCATION
DAVID M.C. JU FOUNDATION
Johnson & Johnson INNOVATION
HLTH CREATE HEALTH'S FUTURE
CAMBIA GROVE
LENS Strategy
OHSU
waze for cities
PRESCRIBE DESIGN
Cedars Sinai ACCELERATOR
TECH INCUBATOR @ Queens College
OHSU Invent-a-thon
SCHOOL OF DESIGN THINKING Hasso-Plattner-Institut Universität Potsdam
HPI
parexel
InterSystems Health | Business | Government
Berlin Partner for Business and Technology

Share. Have a COVID-19 related process or solution that's working well in your organization? Submit it.

Learn. Looking for ways to better manage COVID-19? Explore solutions from fellow healthcare professionals.

Ask. Have questions about a solution? Comment on it and engage in the discussion.

Project Management Work Group Co-Chairs

Niha Goyal

Sr. Program Manager, Perspecta
niharika.goyal@uspsector.com

Michele Mills

Director, ITS Program Management Office
University of Utah Health
michele.mills@hsc.utah.edu

Welcome

Patrick Mattis, DNP, MSN, MSCS, RN-BC, CPHIMS, CNE

Chair and Professor at Lincoln University, and the Chief Nurse Administrator

Project Management of Telehealth: Unique Challenges and Critical Success Factors

Patrick Mattis, DNP, MSN, MSCS, RN-BC, CPHIMS, CNE
Director & Chair /Professor Lincoln University

Speaker

Dr. Patrick Mattis

DNP, MSN, MSCS, RN-BC Informatics, CPHIMS, CNE

Director & Chair Department of Nursing

Professor Lincoln University

Objectives

- Explore the landscape of Telehealth
- Examine issues and challenges unique to Telehealth
- Gain Insights on Lessons-Learned and Best Practices for Successful Project Implementation

Telehealth

Telehealth *— the use of telehealth, mobile and consumer technology to deliver health-related services, such as remote healthcare provider consultations and patient monitoring — is enabling healthcare providers and payers to address the US healthcare industry's growing list of problems.*

Understanding Telehealth

Telehealth is used to support the delivery of, and improve access to, clinically appropriate care

Telehealth offers opportunities for consumers to become more involved in their care and in health service planning.

Patient-centered care model offering greater potential to improve health outcomes

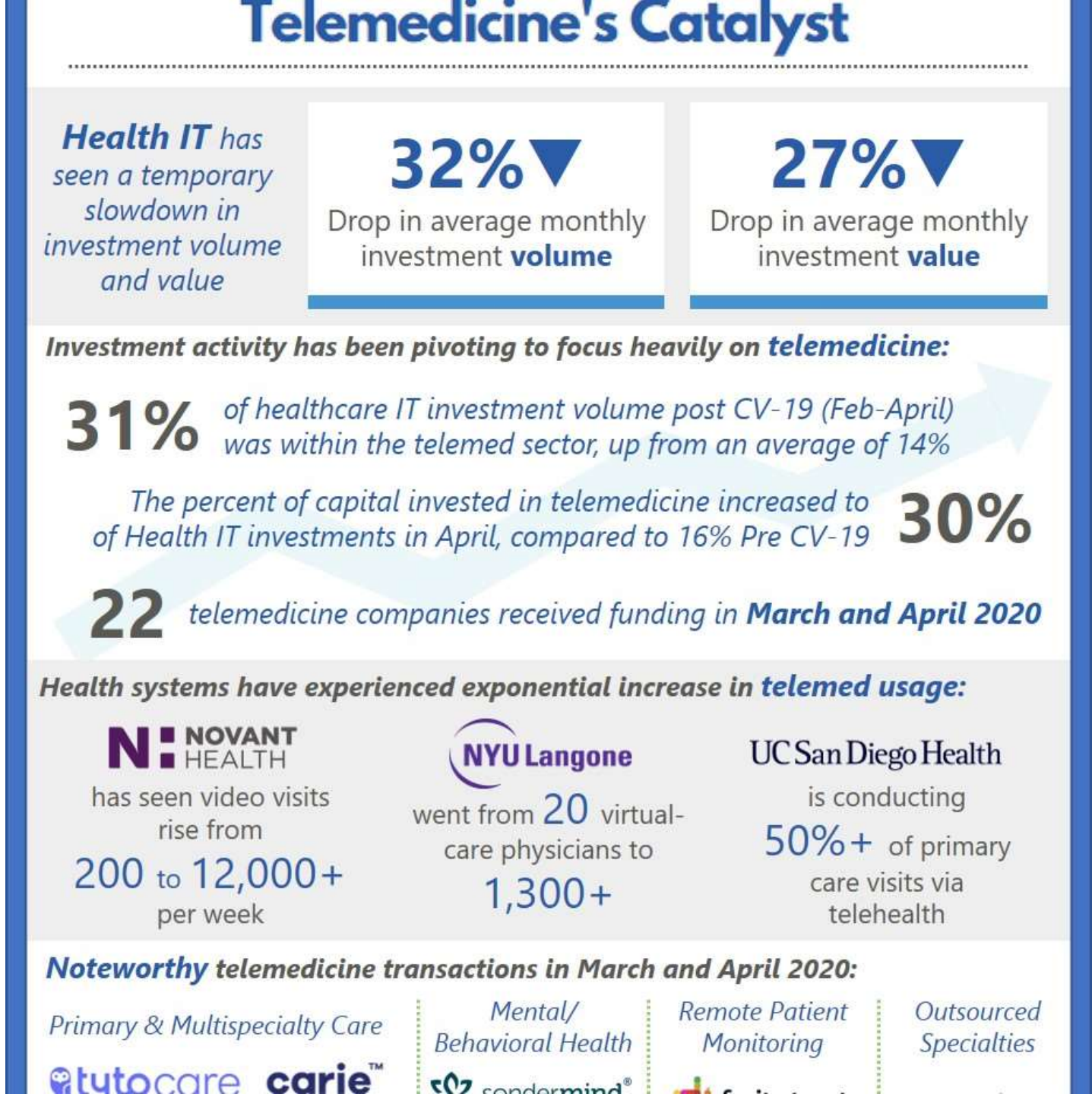
Current and Future Landscape of Telehealth

US Telehealth adoption

Telehealth visits are exploding as doctors and patients embrace distancing amid the coronavirus crisis

General virtual health care visits expected to top 200 million this year, up sharply from their original expectation of 36 million visits for all of 2020.

The adoption of telehealth flew into hyper-drive over the past few month, with all types of telehealth interactions on pace to top 1 billion by year's end



THE US TELEHEALTH LANDSCAPE

TELEMEDICINE

American Well
ANALYTE HEALTH
AVEDIS
AVIZIA
CareClix
CortiCare
dr. on demand
HealthTap
InnovaTel
intellivisit
MDLIVE
MeMD
PHILIPS Healthcare
Polycom
sherpaa
SnapMD
TELADOC
virtuwell
zipnosis

REMOTE PATIENT MONITORING

BABYSCRIPTS
Abbott
AND
GE Healthcare
nanit
PHILIPS Healthcare
NIHON KOHDEN
BIOTRONIK
WelchAllyn
Honeywell
Medtronic
Boston Scientific
SPACELABS HEALTHCARE
VALIDIC

MEDICAL ALARMS

greatcall
people you can count on
LifeStation
HealthRight
MEDICAL GUARDIAN
PHILIPS Lifeline
LifeFone
MEDICAL ALERT SYSTEM
MobileHelp
OneCallAlert
MedicalAlert
RescueTouch
Your Chosen Level of Response
ResponseNow
MEDICAL ALERT SYSTEMS
RESCUE ALERT
Nationwide Service

mHEALTH

amazon alexa
7 Cups of Tea
buoy
Calm
fitbit
Google Home
HAVEN
HEADSPACE
IBM Watson
lumosity
Microsoft
verily
WebMD

Source: Business Insider Intelligence, 2018

BI INTELLIGENCE

Current Areas of Telehealth

- TeleAnesthesia
- TeleCardiology
- TeleCritical Care
- TeleDentistry
- TeleDermatology
- TeleEmergency Medicine
- TeleEndocrinology
- TeleFamily Practice
- TeleGastroenterology
- TeleInfectious Diseases
- TeleImmunology
- TeleInternal Medicine
- TeleObstetrics
- TeleMental Health
- TeleNeurology
- TeleNursing
- TeleOncology
- TeleOphthalmology
- TeleOrthopedics
- TeleOtolaryngology
- TelePathology
- TelePediatrics
- TelePsychiatry
- TeleSurgery
- TeleStroke
- TeleUrology

Emerging Areas of Telehealth - mHealth

- The future of implantable technologies from smart stents to high-tech tattoos
- Implantable devices such as ECG recorders, pacemakers, and defibrillators can transmit the status of the heartbeat to healthcare providers and forewarn of potential problems.
- Implanted devices for heart failure patients, can monitor heart failure status and transmit information on worsening of changes

Emerging Areas of Telehealth - Wearable devices

- Wearable devices and mobile apps
- With increased accessibility to smartphones, providers also benefit from apps and devices that help them care for patients.
- Wearable devices including health tracking and patient monitoring devices becoming the future of healthcare.
- Wearable devices help remove elements of human error for providers, because the communication of data comes directly from the device itself.

Emerging Areas of Telehealth - mHealth and Disease Management.

Steinhubl, S. R., Muse, E. D., & Topol, E. J. (2015). The emerging field of mobile health. *Science translational medicine*, *7*(283), 283rv3. doi:10.1126/scitranslmed.aaa3487

Science Translational Medicine

Challenges, Critical Success Factors and Best Practices in Telehealth Project Management

Current Models: Telehealth & Clinical Services

LIVE (SYNCHRONOUS) VIDEOCONFERENCING

STORE-AND-FORWARD (ASYNCHRONOUS) VIDEOCONFERENCING

REMOTE PATIENT MONITORING (RPM)

MOBILE HEALTH (MHEALTH)

NONCLINICAL HEALTH EDUCATION AND PUBLIC HEALTH PROGRAMS.

Telehealth & Clinical Services Models

- The equipment needed may range from dedicated turnkey videoconferencing units to software-based videoconferencing programs for computers or mobile platforms such as tablets and cell phones.
- The technology should be able to provide sufficient AV clarity needed for the patient's assessment and the ability for providers to communicate easily with each other.
- The technologies should be able to connect peripheral medical devices that may be hardwired or portable (eg, general examination camera, stethoscope, pulse oximeter, otoscope, ultrasonography device).
- Interoperability with existing telehealth services and technologies.
- The recommended criteria for current technologies are H.323 compliance, live video resolution of 4 × Common Intermediate Format (4CIF) (704 × 480) or higher
- The technologies should comply with current organizational, legal, and regulatory requirements and will change as technology develops.

Telehealth & Clinical Services Models

- **Connection**
  - Provide adequate bandwidth to support the needs of the telehealth program goals.
  - Provide point-to-point connectivity from within or outside the health care facility.
  - Use a high-speed Internet connection.
  - Occasionally, telehealth interactions use an ISDN connection when sites lack the infrastructure to support high-speed Internet connections.
  - For live synchronous telehealth, a frequently suggested minimum speed is a 384-kilobits-per-second bidirectional connection between the sites.
- **Privacy and Security**
  - Telehealth interactions must comply with HIPAA and other regulatory requirements.
  - Create a point-to-point encryption between the devices involved in telehealth interaction.
  - Virtual private network tunnels are a common method used to facilitate the privacy of the Internet connection used for the telehealth interaction.
  - Each covered entity should ensure the security of protected health information

Telehealth Integrates all Project management knowledge Areas:

Integration	Scope	Time	Cost
Quality	Procurement	Human resources	Communications
	Risk management	Stakeholder management	

Telehealth Project Management Success and Best Practices

Pre-Planning

Telehealth Implementation

Post-Implementation

Pre-Planning

Define the Purpose of the Telehealth Project

Engage Executive Leadership/Key Stakeholders

Assemble the team

Define Success

Evaluate Vendors

Contract

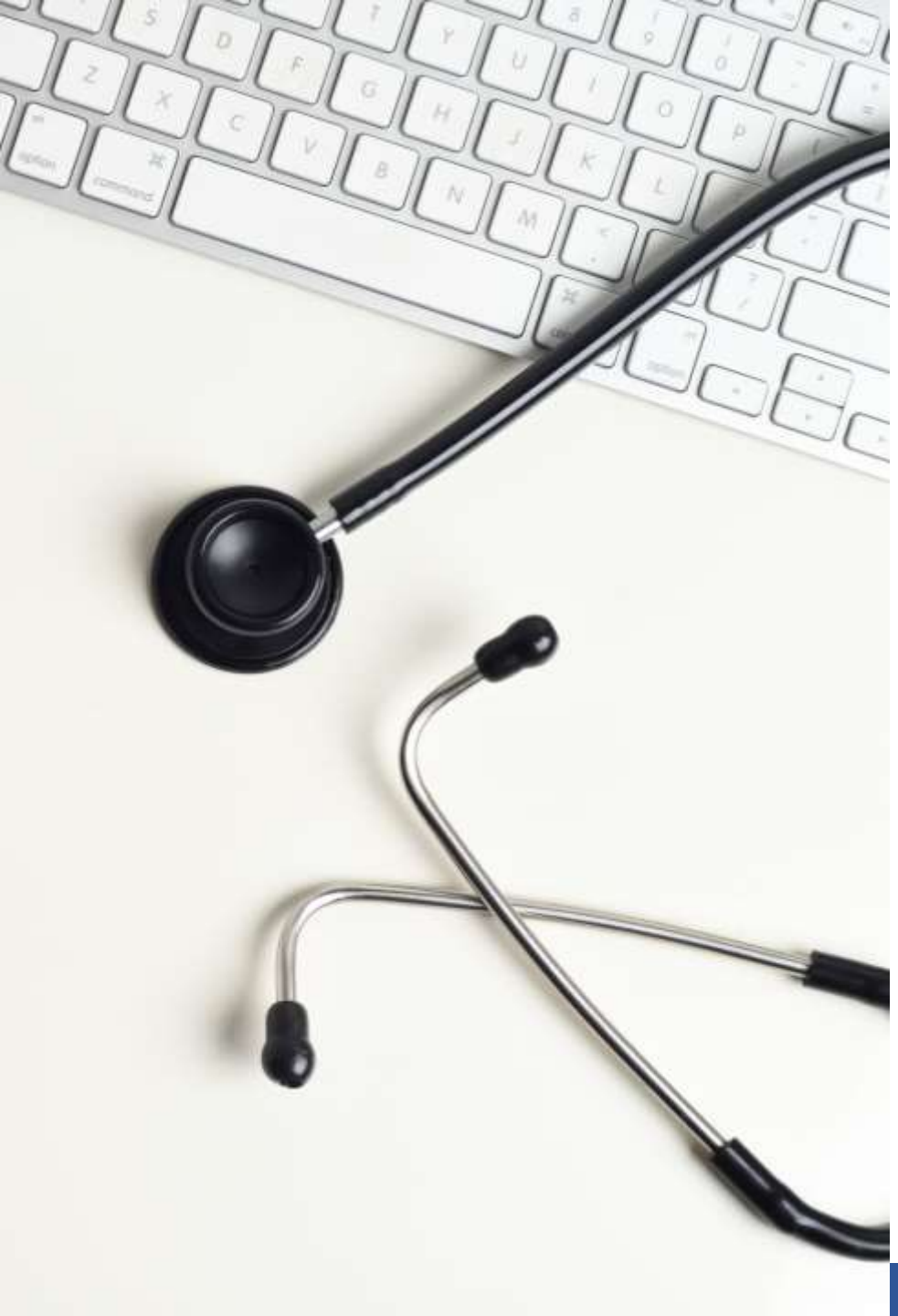
Pre-Planning: Needs Assessment & Infrastructure Analysis

Assess and confirm your organizations readiness for telehealth.

- It is costly, time consuming and challenging to start a telehealth program
- A formal assessment of readiness have the advantage of identifying potential problems and addressing them early.
- Increase support for the project by engaging people early.

Best Practice: Perform A Needs Analysis

- A needs analysis will help your organization to identify key unmet needs
- Improves understanding of the nature and scope of the unmet need,
- Provides a sound foundation for planning, helping to clarify objectives and shared expectations
- Iimproved coordination of services and resources and provide supporting structure for your program evaluation.



Pre-Planning – Define the Purpose of the Telehealth Project

- Why is a telehealth service model being considered and what is it intended to achieve?
- What is the problem that needs to be solved?
- How will telehealth contribute to the organization's overall vision?
- What outcomes are anticipated and how will these be measured?
- Have examples and evidence of effective telehealth technologies used in similar contexts been identified
- What population will be served?

Pre-Planning: Engage Executive leadership

- Has the project gained support from senior leadership?
- Have internal champions been identified for the initiative?
- Is there recognition and support for change from clinicians and executive?
- Does the project leader have good project management skills to drive sustainable implementation, integration and organizational change?

Pre-Planning: Engage Key stakeholders

- Ensure staff have the opportunity to be involved in developing the project plan and developing the evaluation measures?
- Consult and Engage community or consumers in designing the service?
- Establish regular lines of communication to keep all stakeholders well informed of progress?
- Create feedback mechanisms to ensure issues and considerations of staff and consumers are captured and can be addressed?

Pre-planning: Assemble the Right Team(s)

The success of any telehealth project depends on engaging the right people.

- It is critical to assemble the right team(s) to define the project's objectives. Telehealth Involves **people**, **processes**, and **technologies**
- Leadership Team:
  - Board of Directors/C-suite Executives
  - Practice Owners/Partners
- Core Team:
  - Information Technology/Physicians/Nurses
  - Administrators/Compliance officers
  - Finance/Patient engage officers/patient advocates
- Advisory Team
  - Patient advisory board/Patients/Caregivers
- Implementation Team
  - Information Technology/Physicians/Nurses

Pre-Planning: Define Project Success

HEALTH OUTCOMES	PATIENT EXPERIENCE	REDUCED COSTS	PROVIDER SATISFACTION
Improved: ✓ Health outcomes ✓ Continuity of care ✓ Compliance with standards of care ✓ Insight about population health ✓ Quality of life ✓ Medication management **Reduced:** ✓ ER visits ✓ Complications ✓ Admission Rates	**Improved:** ✓ Patient satisfaction ✓ Patient engagement ✓ Patient retention and loyalty ✓ Convenience of care ✓ Care plan compliance ✓ Safety ✓ Access to care **Reduced:** ✓ Wait time to receive care	**Reduced:** ✓ Cancellations/ No-Shows ✓ Labor costs ✓ Cost per case ✓ Costs due to readmission penalties ✓ Non-reimbursable care ✓ ER visits **Improved:** ✓ Patient reach	**Reduced:** ✓ Burnout ✓ Turnover rate ✓ Appointment length **Improved:** Continuity of care ✓ Efficiency of care delivery ✓ Care team/patient communication

Define Project Success: IOM Dimensions of Quality

- In addition to the triple or quadruple aims of project management, include clinical success factors
- Telehealth innovations should be designed to increase the quality of care. As much as possible, align project success with the Institute of Medicine's (IOM) six dimensions of quality (STEEEP).
  - ✓ Safe
  - ✓ Timely
  - ✓ Effective
  - ✓ Efficient
  - ✓ Equitable
  - ✓ Patient-centered

Pre-Planning: Evaluate Vendors

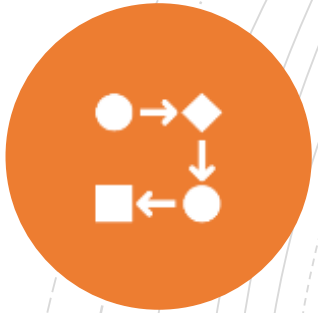
- Vendor Organizational Suitability
- Vendor IT Expertise
- Security
- Usability
- Customer Service
- Clinical Verification and Validation

Pre-Planning: Contracts

- Secure any remaining approvals within your organization to proceed with contracting
- Negotiate terms (financial investment, customer support, additional services, upgrade schedule, success metrics, etc.)
- Document clear and measurable definitions of success for your working relationship and the initiative at large
- Identify the timeline for the current contract and outline when terms will be renegotiated
- Clearly outline the plan to scale your program, and align on any relevant contingency plans
- Work with your legal, financial, procurement, or IT teams as necessary to get the new contract signed or existing contract updated

Project Implementation

Project Implementation



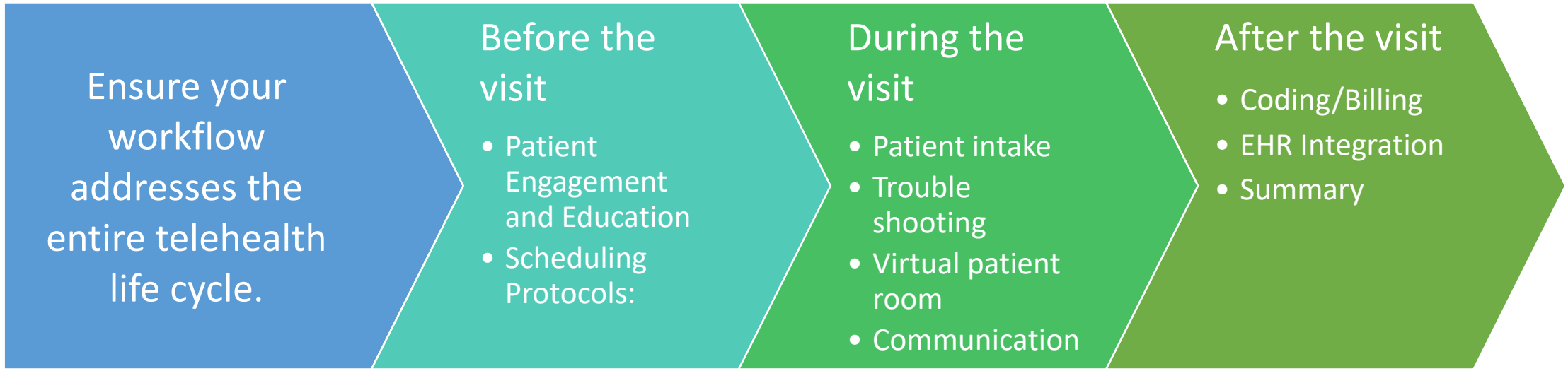
Workflow, Policies and Procedures

Staff and Patient Preparation

Project Implementation

Evaluation

Project Implementation: Workflow & Procedures



Project Implementation: Staff and Patient Preparation

TRAINING

SUPER USERS

EDUCATE STAFF ON NEW WORKFLOW

TRAIN STAFF TO EDUCATE PATIENTS

CONDUCT INTERNAL TELEHEALTH TEST VISIT

DEVELOP A PROCESS FOR ONGOING FEEDBACK

Training and Education

The under-estimation of the personnel requirements required to support implementation, has been identified as a common cause of telehealth failure

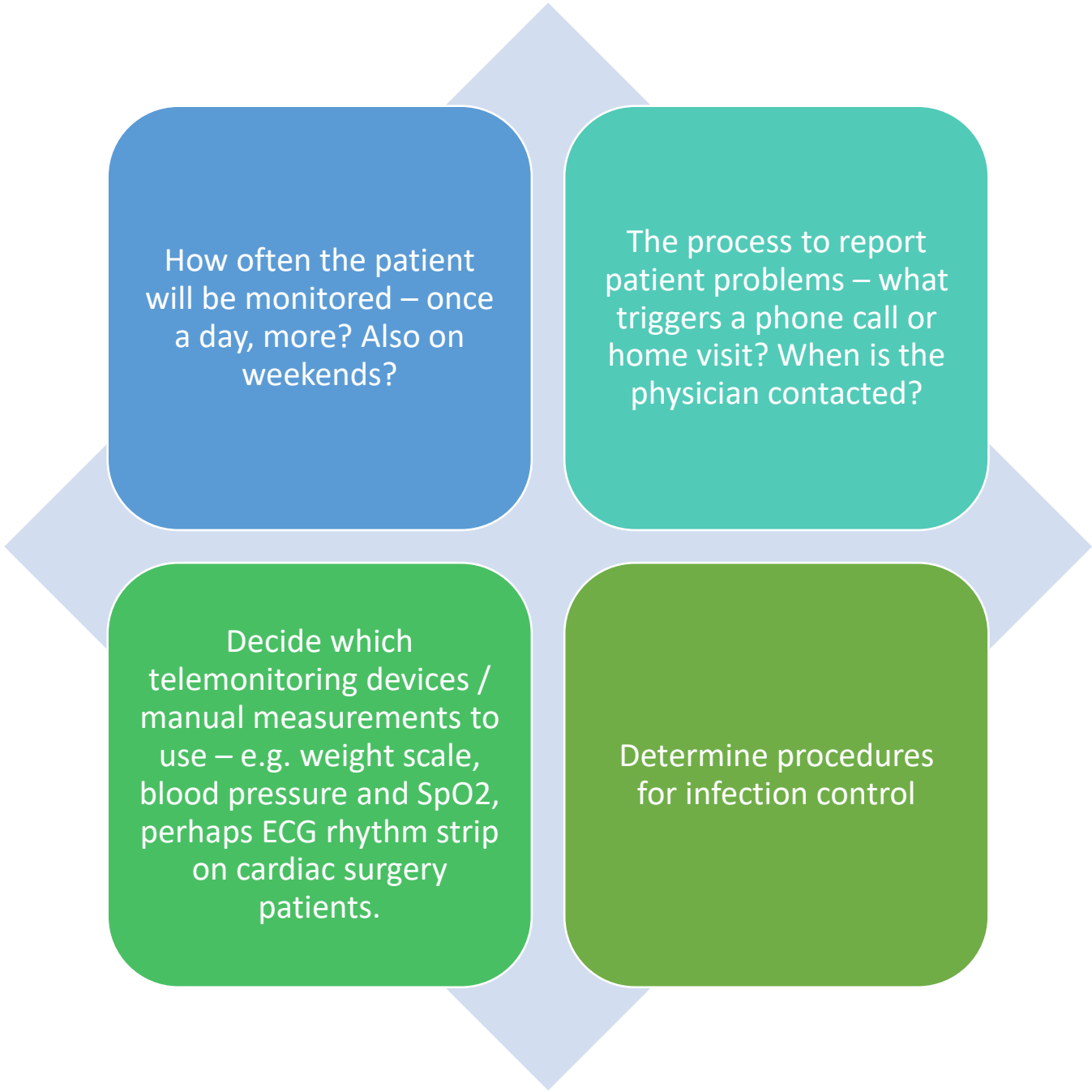
Consider:

Is there an adequate workforce base to support the demand for telehealth services?	What technical and administrative resources are required to support the service?	How will any additional impacts on the health service or clinicians be monitored and managed?

Telehealth Technology and Clinical Services

- Determine who will actually provide care
- Determine initial set of acceptable diagnoses/visit reasons
- Develop workflow for conducting a visit (standard forms, demographic information gathering, etc.)
- Develop triage protocols
- Develop telehealth treatment protocols that comply with standards and protocols of care
- Develop follow-up protocols
- Infection control and cleaning of equipment

Telehealth Technology and Clinical Services



Evaluation

- Develop an evaluation and monitoring plan
- Conduct an end-to-end test of the entire process and all use cases, and connection between all sites.
- Monitor and evaluate all key elements of the program on a regular and ongoing basis.
- Include a range of topics in your plan
  - Service usage,
  - Patient and provider comfort level with particular technologies, devices and applications
  - Cost savings analysis.
- Be sure to monitor and track ancillary or related services benefiting from your telehealth program activities, e.g. lab and blood tests performed at local clinics, staff and nursing employment etc.

Telehealth Unique Challenges

Telehealth Project Management: Challenges

Although telehealth offers many benefits, there are also barriers to adopting such technology which includes:

- Reimbursement models
- Interstate licensure challenges
- Legal and regulatory issues
- Concerns over security, privacy, and confidentiality
- Lack of evidence about impact on health care costs, utilization, or outcomes
- Concerns about impacts to clinical duty to provide safe and effective care
- Logistical space challenges

Telehealth PM – Interstate Licensure

Interstate Licensure:

- Telehealth rules vary from state to state
- Include the legal and billing team as early in the process as possible to understand federal, state, and payer requirements and regulations
- Identify in which states your clinicians need to be licensed as well as in which states they are currently licensed
- Research interstate licensure, including the Interstate Licensure Compact
    - the enhanced Nursing Licensure Compact (eNLC)
    - the Interstate Medical Licensure Compact (IMLC)
- Check with your malpractice insurance carrier to ensure you are covered to provide telehealth services

Telehealth: Legal Issues

LEGAL DOCUMENTS

- Business Associate Agreement
- Master Service Agreement
- Scope of Work/Price Quote
- Purchase Order
- Financial Audit Reports
- Confidentiality Agreement/Non-Disclosure Agreement
- W-9 Form

VALIDATION DOCUMENTS

- IT Security and Risk Assessment
- 510(k) Clearance:
- Liability Insurance
- Medical Licenses for Practitioners
- Third-party Audit

Q&A

Wrap-Up & Next Steps

Want to get involved?

- Chapters
- Committees
- Communities
- Roundtables

Learn more at: www.himss.org/chapters

- **Contact: ihoffberg@himss.org**

Earn CEU credit!

CPHIMS CAHIMS

Visit the HIMSS Professional Development website to learn more.
www.himss.org/certification

HIMSS PMI Provider #3252

Finalize the PMI PDU Claim Submission process by logging onto https://ccrs.pmi.org to claim your Category A PDUs. HIMSS does not supply this information to PMI.

THANK YOU!

References

- Agency for Healthcare Quality and Research. (2008). Using Telehealth to Improve Quality and Safety Findings from the AHRQ Health IT Portfolio. Retrieved from https://psnet.ahrq.gov/resources/resource/9337#
- Becker's Hospital Review. (August 15, 2019). Shriners Twin Cities, Boys Town Hospital partner on telehealth services. Retrieved from https://www.beckershospitalreview.com/telehealth/shriners-twin-cities-boys-town-hospital-partner-on-telehealth-services.html
- Becker's Hospital Review. (August 9, 2019a). Dartmouth-Hitchcock unveils Telemedicine ICU Unit. Retrieved from https://www.beckershospitalreview.com/telehealth/dartmouth-hitchcock-unveils-telemedicine-icu-unit.html
- Becker's Hospital Review. (August 9, 2019b). 16 Hospitals, Health Systems Launching Telehealth Services. Retrieved from https://www.beckershospitalreview.com/telehealth/16-hospitals-health-systems-launching-telehealth-services.html
- Cohen, J. (2018). 5 Challenges Hindering Telehealth Market Growth. Retrieved from http://multibriefs.com/ViewLink.php?i=5bef27b086372

References

- HealthData Management. (August, 2019). Sen. Grassley: Telehealth is way to keep healthcare in rural America. https://www.healthdatamanagement.com/news/sen-grassley-telehealth-is-a-way-to-keep-healthcare-in-rural-america
- HealthIT.gov. (2019). What is Telehealth? How is Telehealth Different from Telemedicine. Retrieved from https://www.healthit.gov/faq/what-telehealth-how-telehealth-different-telemedicine
- Institute of Medicine 2012. *The Role of Telehealth in an Evolving Health Care Environment: Workshop Summary*. Washington, DC: The National Academies Press. https://doi.org/10.17226/13466.
- Institute of Medicine 2012. *The Role of Telehealth in an Evolving Health Care Environment: Workshop Summary*. Washington, DC: The National Academies Press. https://doi.org/10.17226/13466
- Taylor, J., Coates, E., Wessels, B., Mountain, G., & Hawley, M. S. (2015). Implementing solutions to improve and expand telehealth adoption: participatory action research in four community healthcare settings. *BMC health services research*, *15*, 529. doi:10.1186/s12913-015-1195-3
- US Department of Health and Human Services. (2013). Modifications to the HIPAA privacy, security, enforcement, and breach notification rules under the health information technology for economic and clinical health act and the genetic information nondiscrimination act; other modifications to the HIPAA rules. *Federal register*, *78*(17), 5566-5702.
- Vander Werf, M. (2004). "Ten critical steps for a successful telemedicine program." Stud Health Technol Inform 104: 60-68.
- World Health Organization. (2010). Telemedicine Opportunities and Development in Member Stats. Retrieved from https://www.who.int/goe/publications/goe_telemedicine_2010.pdf