

Program Developer Toolkit



California Telehealth
Resource Center

2021 Edition

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INTRODUCTION

The California Telehealth Resource Center (CTRC) specializes in telehealth program development. Our well-connected team of experts responds to hundreds of yearly assistance requests—from across the state, and around the world. Those who contact us represent a variety of organizations interested in starting a telehealth (sometimes called “telemedicine”) program. They recognize that telehealth is valuable, but they need insight and support to get their initiative underway.

This CTRC Program Developer Toolkit is designed to address those needs. It’s based upon the implementation methodology developed for University of California schools and hospitals, as well as statewide safety net clinic referring programs. This standardized approach was created to ensure organizational consistency, using established project management fundamentals. The process, reflected in these pages, provides a clear step-by-step approach that culminates in telehealth program implementation.

This approach has been adapted and expanded for use in all types of service settings, and applies to both small and large facilities. It acts as a roadmap that incorporates promising practices and resource materials. It can also be customized to suit your own unique telehealth environment.

The Program Developer Toolkit is intended to help new programs obtain proven insights from established programs. This reduces trial-and-error, eliminates unproductive backtracking, helps control expenses, and ultimately maximizes success.

As a document, the Program Developer Toolkit is constantly evolving. Future iterations will continue to incorporate the latest promising practices and industry lessons learned. Toolkit materials are available in print format or online, at www.caltrc.org. We welcome, encourage, and value your feedback!

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INTRODUCTION

Introduction & Overview

OVERVIEW

You'd like to start your new telehealth program quickly—but you don't want to learn by trial-and-error. You need to know when you're on track, and when you should make some adjustments. The CTRC Program Developer Toolkit was designed to help in all these areas, and more. It gives you a clear overview of the processes, activities, and information necessary for each program development phase.

These phases, outlined below, help your organization accumulate critical insights that support more effective decisions. Ideally, they should be implemented in this order:

ASSESS & DEFINE

Phase One involves three steps for evaluating your environment, and defining your proposed program:

Step 1: Assess Service Needs & Environment

- Assess service needs
- Identify potential telehealth opportunities
- Verify organizational readiness

Step 2: Define Program Model

- Consider the type of program that best meets needs

Step 3: Develop Business Case

- Describe the proposed program's impact

DEVELOP & PLAN

Phase Two involves two steps that help clarify activities necessary for program implementation:

Step 4: Develop/Plan Program & Technology

- Create a detailed project plan

Step 5: Develop Performance Monitoring Plan

- Define monitoring/evaluation mechanisms, and a program improvement process

IMPLEMENT & MONITOR

Phase Three involves two final steps that support implementation and ongoing program monitoring:

Step 6: Implement Telehealth Program

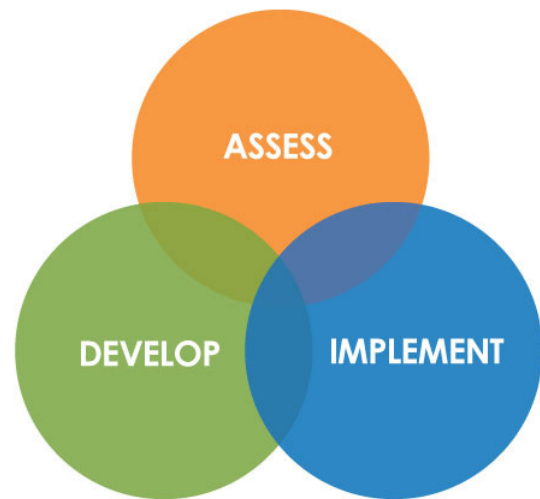
- Perform all work required to implement your program

Step 7: Monitor & Improve Program

- Systematic and ongoing program assessment/adjustment

THESE PHASES CAN OVERLAP

The CTRC Telehealth Program Developer Toolkit presents three distinct phases—though in practice, they generally blend together into one cohesive process. Information from one phase may overlap another. Data obtained in a later step may suggest re-evaluation of an earlier step. If you encounter this, don't feel discouraged. It's a normal part of program development.



CUSTOMIZE AS NECESSARY

Telehealth programs vary significantly in their objectives, size, and complexity. Similarly, organizations differ in the way they make decisions. Your own organization may prefer to develop detailed written reports, or simply provide an informal presentation. No matter the size of your program, CTRC recommends that you address each distinct phase outlined in the Program Developer Toolkit. Based upon aggregated data, programs that carefully follow these sequentially ordered steps tend to experience fewer setbacks and greater success.



Don't rush ahead.

Why not just jump to Step Six or Seven, since you'll eventually end up there anyway? Because experience shows that successful telehealth programs take time to define and plan. A structured development process lets you consider key decisions and impacts—BEFORE making costly mistakes. If you jump in randomly, you'll likely need to backtrack and review key information. Remember, surprise revisions are rarely welcome (and often expensive)!

Steps One through Five don't necessarily take a substantial amount of time. It really depends upon the scope and complexity of your project. Additionally, each step lets you draw upon the tried-and-true approach of others to avoid expensive pitfalls. You'll also identify and incorporate promising practices, every step of the way. This creates a strong foundation, and often eliminates the need to rework your program later.



ADVANCE SNAPSHOT:

Steps One, Two, and Three determine the clinical and community needs that would be supported by your proposed telehealth program. During the “Assess & Define” phase, you perform an assessment to collect quantitative data on service level needs. Based upon these needs, you begin defining the type of telehealth program you’ll offer with increasing degrees of specificity. You consider the business case for your program, to determine how it fits into your organizational business plan. You predict which revenue streams it may create; how it may be funded for start-up and operation; and which secondary sources of revenue may eventually materialize. This is the time to carefully assess the existing marketplace, and make sure there’s sufficient demand for a new telehealth program.

During these first three steps, you will:

- ▶ Identify and document the need and rationale for your envisioned telehealth program.
- ▶ Define the service(s) your telehealth program will deliver.
- ▶ Describe the means of service delivery.
- ▶ Perform a market analysis to determine if there’s demand for your proposed service, combined with a willingness/ability to pay for it.

Read on for sections dedicated to steps One, Two, and Three. They provide detailed information on corresponding activities.



ADVANCE SNAPSHOT:

Steps Four and Five are about planning: identifying the work required to achieve each of the outlined results. It's easy to assume that planning means actually doing the work—but that part really happens in Steps Six and Seven. Before that, focus on creating detailed preparations. In Steps Two and Three, you develop a high-level understanding of the program model, and a business case explaining why it makes sense. In Steps Four and Five, you begin to expand things further.

During these two steps, you will:

- ▶ Use information collected in Steps Two and Three to create a plan that details necessary implementation work.
- ▶ Define all tasks needed to build, test, deploy, and operate your program.
- ▶ Determine which functions are necessary to perform the defined tasks.
- ▶ Estimate the hours/effort required to do this work.
- ▶ Estimate the timeline for this work.
- ▶ Determine whether additional staff are required in certain areas.
- ▶ Develop a plan to monitor and evaluate program performance.

Read on for sections dedicated to Steps Four and Five. They provide detailed information on corresponding activities.

**IMPLEMENT
& MONITOR****6****IMPLEMENT THE
TELEHEALTH PROGRAM****7****CONTINUOUSLY MONITOR
& IMPROVE THE PROGRAM****ADVANCE SNAPSHOT:**

With your plan in hand, you're now ready to implement your telehealth program. In Steps Six and Seven, you use the written plans developed in Steps Four and Five to implement or expand your program. Thanks to your written plan, the implementation and executive management teams will be able to monitor progress and provide assistance if challenges arise. This includes tracking actual efforts to anticipate time, cost, and use of resources. In Step Seven, your monitoring activities are based upon performance indicators that also help assess program impact.

During Steps Six and Seven, you will:



Put into action the plans, decisions, and approaches identified in Step Four.



Begin monitoring your program, using the approach identified in Step Five.

Read on for sections dedicated to Steps Six and Seven. They provide detailed information on corresponding activities.

PROGRAM DEVELOPER STEP-BY-STEP CHECKLIST

This checklist highlights important factors to consider as you progress through each of the seven steps. If you answer “no” or “unsure” for any question, go back and re-examine the issue at hand before proceeding further.

YES NO UNSURE

Assess Service Needs & Environment

1. Do you know which healthcare services are NOT currently available for your patients?
2. Have you identified and prioritized activities suited for telehealth?
3. Have you identified the assumptions and constraints for implementing a telehealth program?
4. Have you identified the top reasons for developing a telehealth program, based upon your needs assessment results?
5. Have you verified a willingness and desire to pay for the fulfillment of the need?

Define & Specify Program Model

1. Do you know which services will be offered to meet the identified patient needs?
2. Have you identified the mode of service delivery?
3. Have you determined who will provide the service, and where they are located?
4. Have you identified the organizational model that best suits patient needs?
5. Have you identified any constraints based upon your organization (i.e., federally qualified health center rules)?
6. Do you know which general technological features & functions are needed to deliver the target service(s) in the proposed way?
7. Of your various technology choices, have you selected the one most appropriate for your program?
8. Have you identified any additional human resources needed, and where they'll be located?
9. Have you identified any additional facility-related resources needed, and where they'll be located?
10. Have you identified any legal, legislative, or regulatory constraints that your organization would need to consider when developing your telehealth program?
11. Have you determined your program's implementation approach (i.e., phased, pilot, etc.)?

CHECKLIST, continued

YES NO UNSURE

Develop Business Case

1. Have you determined approximate start-up and operating costs for your telehealth program?
2. Have you determined how the benefits of telehealth relate to the mission of your organization, and the needs of the community?
3. Have you identified the payer mix?
4. Have you obtained financial commitment to implement and sustain your telehealth service(s)?
5. Do you know the approximate expected cost reductions (i.e., providers who no longer need to travel to remote clinics)?

Plan Program & Technology

1. Have you identified the activities or steps you'll undertake to achieve your telehealth objectives?
2. Have you developed a plan to manage the work involved in establishing a telehealth program?
3. Have you identified which organizational leaders will be involved in your program, and what their roles will be?
4. Have you identified members of your telehealth team, and their roles and responsibilities?
5. Have you developed a communication/marketing strategy to promote your telehealth services?
6. Have you developed policies and procedures for operation of the program?
7. Have you identified a suitable space for telehealth?
8. Have you determined how appointments will be scheduled?
9. Have you determined how referrals will be made?
10. Have you identified the type of training needed, and who needs to be trained?
11. Have you developed clinical referral guidelines?
12. Have you determined how telehealth will be integrated into clinic operations?
13. Have you identified the specific hardware, software, and telehealth equipment you'll need (i.e., bandwidth, product standards, product features)?
14. Have you defined the necessary service level and support agreements?

CHECKLIST, continued

YES NO UNSURE

Plan Program & Technology, continued

15. Have you identified interoperability and scalability requirements?
16. Have you identified existing organizational resources that can be used to meet specified requirements (i.e., existing network, hardware, equipment)?
17. Have you identified the types of approvals or authorizations required to assign existing resources to your telehealth services?
18. Do you know the organization's procurement policies and procedures?

Develop Performance Monitoring Plan

1. Have you developed an approach to measure, track, and achieve your targets for telehealth volume and utilization?
2. Have you developed a plan to measure success in achieving your project objectives and outcomes?
3. Have you determined how you'll know what impact telehealth has made in your organization?
4. Have you identified collection methods for obtaining necessary data?
5. If performance objectives are not being met, have you developed a process to identify and implement necessary changes?
6. Have you determined how program improvements will be defined, planned, implemented, tested, and managed?

Implement the Telehealth Program

1. Are you monitoring project schedules and determining if deliverables are being met?
2. Are you identifying risks, and mitigating when necessary?
3. Have you implemented your communication plan?
4. Have you determined how necessary program modifications are identified and managed?

Monitor & Improve Program

1. Can you determine if the program is meeting its objectives?
2. Can you identify what changes are needed to ensure that the program meets its objectives?

USING THIS TOOLKIT

Successfully building a telehealth program involves a number of vital skills—technological, clinical, operational, program development, and project management. The CTRC Program Developer Toolkit helps you formulate a project management process specifically designed for telehealth. This allows programs at any maturity level to easily assess their current position, identify necessary actions, and move toward implementation or enhanced service delivery.



COMPREHENSIVE RESOURCES

The Program Developer Toolkit covers major telehealth program implementation activities. It also connects you with resources supplying detailed information on key telehealth topics; and templates that streamline reporting and assessment. All these materials have been developed using nationally recognized telehealth practices.

The CTRC website offers additional telehealth resources that are updated regularly. It also provides a wide variety of no-cost training videos that support all phases of program development. CTRC is completely neutral and unbiased—100% dedicated to helping your telehealth program succeed. For the latest options, visit www.caltrc.org.

EACH PROCESS IS UNIQUE

Follow the program development steps presented here in sequential order. As mentioned previously, however, remember that certain steps may overlap or loop back on each other as you obtain a bigger picture. Your development process is totally unique to you. So it may help to think of the Seven Steps as a detailed roadmap. You can customize the process as needed, while feeling confident that you're covering vital analysis and decision points.



WATCH FOR THESE GUIDEPOSTS

At various points in this Toolkit, you'll notice several icons that may serve as helpful guideposts as you proceed through the different planning and implementation steps. Be on the lookout for each of these symbols. Their functions are summarized below:



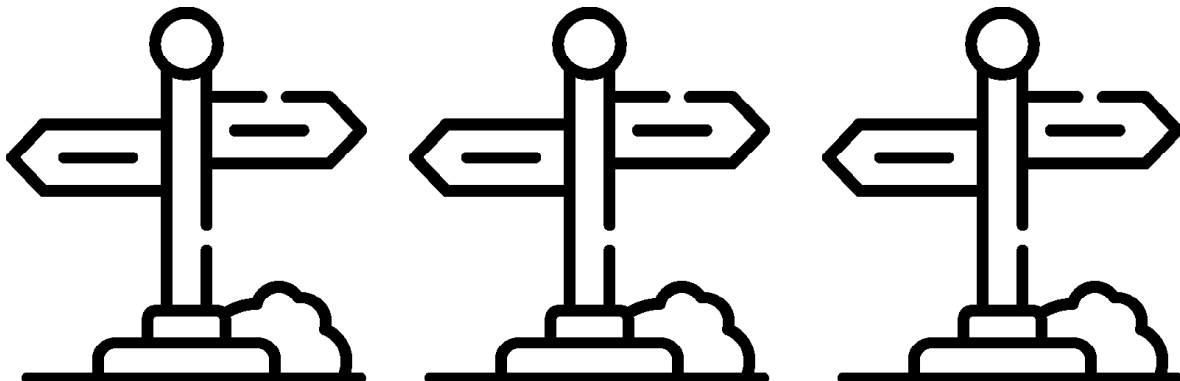
"Slow and Steady" alerts you to potential pitfalls or impediments that have been shown to represent a critical risk factor. Proceed with care and caution!



"In a Nutshell" provides a useful summary of key insights you can use throughout your discovery and planning process.



"Trusty Tools" shows a list of proven tools and resources that are designed for a specific planning stage or preparatory step.



TELEHEALTH PROGRAM DEVELOPER SUMMARY & RESOURCE MATRIX

This matrix is a high-level summary of questions to answer for each step; products/activities associated with each step; and CTRC guides/videos/tools that can lend support. New materials are created regularly. Check the CTRC website for the latest resources, and sign up for our e-mail alerts. Visit caltrc.org.

1

STEP ONE: DETERMINE PROGRAM NEED

QUESTIONS	PRODUCTS/ACTIVITIES	GUIDES VIDEOS TOOLS
<ul style="list-style-type: none"> • What might telehealth do for my organization? • Is my organization ready and willing to support telehealth development? • What resources need to be allocated for initial planning? • What are the unmet healthcare needs of our existing and potential patients? • Which of these needs may be met using telehealth? • What provider-related needs or opportunities might be met with telehealth? 	<ul style="list-style-type: none"> • Perform Organizational Readiness Assessment • Organizational Readiness Assessment Report • Approval to Proceed • Allocation of Resources • Perform Needs Assessment • Needs Assessment Report 	<ul style="list-style-type: none"> • Program Developer Guide • Assessing Organizational Readiness Guide • Organizational Readiness Video • Organizational Readiness Assessment Template • Organizational Readiness Summary & Approval Template • Predictors of Success Video • What Is Telemedicine Video • Typical Visit Video • Technology Overview Video • Telemedicine Applications Video • Needs Assessment Guide • Needs Assessment Template • Needs Assessment Video • Promising Practices for Step One

2

STEP TWO: DEFINE PROGRAM MODEL

QUESTIONS	PRODUCTS/ACTIVITIES	GUIDES VIDEOS TOOLS
<ul style="list-style-type: none"> • What services have you decided to provide? • How will the services be provided? • What is the proposed scope of the program? 	<ul style="list-style-type: none"> • Kickoff Meeting • Preliminary Program Charter • Preliminary Program Proposal • Telehealth Program Model • Preliminary Technology Assessment • Approval To Proceed • Allocation of Resources 	<ul style="list-style-type: none"> • Charter Template • Sample Kickoff Meeting Agenda • Project Team Composition Checklist • Promising Practices for Step Two

3

STEP THREE: COMPREHENSIVE ANALYSIS

QUESTIONS

- What is the estimated demand for the service?
- What service and technology estimates/assumptions are being used for the cost projections?
- What is the financial model associated with the proposed program?
- How will the program be funded or supported—initially and ongoing?
- How will the program impact the organization's financial position?
- Is the program sustainable?
- Will the program create revenue in another area of the organization?
- Will the program require subsidy from the organization?
- Is there a demonstrated return on investment?
- What are the clinical program requirements?
- What are the operational program requirements?
- What are the technology requirements?
- How will the technology requirements be met?
- What implementation approach will be used?

PRODUCTS/ACTIVITIES

- Market Analysis
- Business Case Report
- Clinical Services Requirements and Implementation Approach/Strategy
- Technology Requirements and Implementation Approach/Strategy
- Site Readiness Assessment
- Updated Program Charter
- Approval To Proceed
- Staff Plan

GUIDES | VIDEOS | TOOLS

- Reimbursement Guide
- FQHC Reimbursement Guide
- Telecommunications Discount Guide
- FQHC Reimbursement Video
- Market Analysis Video
- Marketing Guide
- Marketing Templates
- Sample Consent Form
- Provider Selection Template
- Roles and Responsibilities Video
- Roles and Responsibilities Guide
- Technology Guide
- Site Readiness Assessment Worksheet
- Promising Practices for Step Three

4

STEP FOUR: ADD THE SPECIFICS

QUESTIONS

- What are the tasks needed to implement the program?
 - Clinical services
 - Operational
 - Technology
 - Human resources
 - Physical environment
- What are possible challenges, and how will we handle problems?
- How will the work be organized?
- How will we communicate with stakeholders?

PRODUCTS/ACTIVITIES

- Clinical Services Implementation Plan
- Technology Implementation Plan
- Communication Plan
- Budget

GUIDES | VIDEOS | TOOLS

- Training Guide
- Training Templates
- Competency Skills Template
- Sample Duty Statements
- Room Design Guide
- Promising Practices for Step Four

5

STEP FIVE: DEVELOP PERFORMANCE MONITORING

QUESTIONS

- How will overall program performance be monitored and assessed?
- What data will need to be collected?
- How will the data be collected?
- How will program modifications be identified and implemented?

PRODUCTS/ACTIVITIES

- Program Monitoring Plan
- Quality Improvement Process

GUIDES | VIDEOS | TOOLS

- Performance Indicators and Data Elements Matrix
- Promising Practices for Step Five

6 STEP SIX: MANAGE PROGRAM IMPLEMENTATION

QUESTIONS

- Are project schedules being met?
- Are risks being identified and mitigated?
- Is a communication plan in place?
- Is work being done in a quality manner?
- Do any tasks need revision?
- Are needed program modifications being identified and managed?
- Is the program ready for operation?

PRODUCTS/ACTIVITIES

- Project Management Reports
- Program Deliverables

GUIDES | VIDEOS | TOOLS

- Sample Clinical Protocols
- Video Etiquette/Procedures
- Completion Checklist
- Patient Informing and Consent Materials
- Promising Practices for Step Six
- Dermatology Guide
- Diabetic Retinopathy Guide

7 STEP SEVEN: START SERVICE, KEEP MONITORING

QUESTIONS

- Is the program meeting its objectives?
- What program changes would ensure that the program meets its objectives?
- What challenges or improvements have been identified?

PRODUCTS/ACTIVITIES

- Data analysis reports and/or presentation
- Improvement logs and data collection documents
- Implemented improvements and changes to the program

GUIDES | VIDEOS | TOOLS

- Patient Satisfaction Survey
- Promising Practices for Step Seven

ASSESS & DEFINE STEP 1

Determine Service Needs

Assess & Define, Step 1

DETERMINING YOUR SERVICE NEEDS

1

STEP ONE: ASSESS SERVICE NEEDS & ENVIRONMENT

QUESTIONS

- What are the unmet healthcare needs of our existing and potential patients?
- Which of these needs may be met using telehealth?
- Which provider-related needs or opportunities might be met with telehealth?
- Are there any major organizational barriers that should be addressed before starting development?
- Is telehealth in line with your organization's mission and strategic plan?

PRODUCTS/ACTIVITIES

- Needs Analysis & Report
- Organizational Readiness Assessment & Report
- Preliminary Technology Assessment & Report
- Learn about telehealth
- Engage stakeholders
- Read the CTRC Promising Practices Guide

Telehealth programs usually get started when someone determines that technology-enabled visits from a distance could address certain unmet health care needs. Perhaps your community needs medical specialty services, or clinicians need easier access to continuing education. Maybe you've heard that home monitoring of chronic disease patients reduces hospital and ER admissions. Telehealth has numerous applications. Your first task is identifying which community need(s) it might serve most effectively.

In the early stages of program development, you'll explore these needs and evaluate the ways telehealth may improve outcomes. You'll also assess potential barriers that could hinder successful program implementation.

It's often useful to assemble a needs assessment team early on. This helps ensure that all key stakeholders are involved when performing research and creating initial program recommendations.



During Step One you will:

- Identify and assess unmet clinical/educational/administrative needs
- Assess your organizational readiness
- Perform a preliminary technology assessment
- Identify potential telehealth opportunities
- Learn about telehealth technology applications
- Learn about predictors of success, and promising practices
- Begin to engage stakeholders (i.e., bring a team together)

ACTIVITIES FOR INSIGHT



1. Assess Organizational Readiness

Deciding if your organization is ready to take on the challenges and embrace the opportunities of telehealth program implementation—that’s the main goal of Step One. The best time to assess readiness is PRIOR to development and green-lighting. Identifying serious barriers early helps you address them before they negatively impact the project.



Tools for this activity:

- Organizational Readiness Assessment - Video
- Organizational Readiness Assessment - Guide
- Organizational Readiness Assessment - Template
- Organizational Readiness Assessment - Summary of Results

2. Analyze Clinical/Educational/Administrative Needs

This step may sound simple. To some extent, however, the success of your entire program depends upon how well you’ve researched and identified unmet needs. It’s easy enough to say, for instance, “we should use telehealth for dermatology.” But successful programs go further, identifying which level of service is needed and why. Whether you’re a large health system developing a provider network, or a single rural health clinic, you must closely evaluate the population and needs you intend to serve.



Collect some actual data.

In summary, determine your current capacity to provide services, and the existing need for those services. Don’t rely solely upon needs you suspect or perceive; collect actual data. This information will prove vital as you develop your program.

Try This Analysis Sequence:

- ▶ Decide on the scope or extent of your evaluation. Will it focus on patients and providers in your clinic—or will it explore needs within the community that aren't currently being addressed?
- ▶ Decide which data you'll collect, where it might exist, and how you'll obtain it. Smart ways to collect information include billing records, referral records, surveys/interviews with clinicians/patients/community leaders, public health data, and needs assessments of other agencies. The idea is to find out what's needed, then quantify this need so you can create measurable program goals and objectives. This approach helps you verify adequate need for services, before deciding on your program design and model.
- ▶ Determine where your current services are, where you want them to be, and the difference between the two. This is often called the "gap," and evaluation is called a "gap analysis."
- ▶ Prioritize the needs you've identified. There may be more needs or opportunities to use telehealth than you can reasonably initiate all at once.
- ▶ Identify any major barriers that would impact your ability to move forward with planned services.



Tools for this activity:

- Needs Assessment - Guide
- Needs Assessment - Worksheet



Put things in **WRITING!**

Even if your needs analysis is not a detailed or formal report, it's strongly recommended that your results be compiled into a written format. Later in the development process, you'll need to review your original assumptions and decisions.

ACTIVITIES FOR INSIGHT, continued



3. Assess Preliminary Technology

Collaborate with your IT staff to conduct an initial assessment of your network and connectivity. This helps you identify major barriers or necessary improvements as you consider the type(s) of services you'd like to provide.

4. Learn About Telehealth

This is a great time to begin learning all you can about telehealth: how it works, different applications, typical equipment, and available resources.

The CTRC website features short videos on several introductory topics, along with reference guides that pertain to key areas. Many other websites and organizations have great information, too. Our CTRC team is always happy to connect you with helpful tools. Your organization may also wish to consider attending an online or in-person training program. Visit caltrc.org for a comprehensive and unbiased library of no-cost videos and webinars.

5. Review Promising Practices

See the “Promising Practices” section of this Toolkit for helpful lessons learned by other telehealth programs. These often prove invaluable during program development.



Tools for Step Three:

- Preliminary Technology Assessment Template

Tools for Step Four:

- CTRC Resource Library (www.caltrc.org)

Tools for Step Five:

- Promising Practices Compendium (see “Promising Practices” section)

SERVICE NEEDS ASSESSMENT CHECKLIST



Have you covered everything? Don't leave any details to chance. Instead, read through the Step One Checklist below. You may see a few additional elements to consider before proceeding further.

YES NO UNSURE

Answer These Critical Questions

1. Do you know which healthcare services are NOT currently available to patients?
2. Have you identified and prioritized activities suited for telehealth?
3. Have you identified the assumptions and constraints for implementing your unique telehealth program?
4. Have you decided on the top reasons for developing your telehealth program, based upon your "Needs Assessment" results?
5. Have you determined that there is both a willingness and desire to pay for the fulfillment of these needs?

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ORGANIZATIONAL READINESS TOOLS

The following tools can help you perform a detailed organizational readiness assessment:

- CTIRC's Organizational Readiness Guide helps you examine key factors for successful program initiation.
- Consider questions included in the Organizational Readiness Assessment Template to determine if your organization is ready to begin telehealth development.
- The Organizational Readiness Assessment Summary compiles your Readiness Assessment answers into a useful overview. This can help you present your findings to an oversight or governance body.

ASSESSING ORGANIZATIONAL READINESS

Is your organization ready for telehealth? Candidly answering this question is an important step in your development process. It helps ensure that your resulting program will be fully adopted, embraced, and utilized.

Telehealth offers healthcare organizations new and effective systems for delivering healthcare—and, in many instances, allows organizations to reach far beyond current service offerings to think creatively about delivery models. Implementing a telehealth program is an organizational change; and like all change, it's about people. Technology is a cornerstone of telehealth programs. However, successful implementation requires the ability to manage change across many areas.

Telehealth programs don't always begin as the result of an organization's strategic planning process. In many cases, an individual within the organization takes an interest in telehealth and begins promoting that idea to others. Ideally, an organization embraces telehealth and makes optimal use of the technologies. Unfortunately, however, some programs don't adequately or accurately assess their current organizational readiness to start a telehealth program. As a result, they end up with expensive equipment sitting idle in a closet.

How do you know if your organization is ready to take on the challenges and embrace the opportunities of implementing a telehealth program? The best time to assess this readiness is before you begin implementation. The importance of assessing your organization's capacity for change cannot be overstated.



Prepare for success.

Experts estimate that 50 percent of all change efforts fail, because leaders don't fully assess organizational readiness before undertaking a new initiative or program.

Defining Readiness

"Readiness" entails the willingness and ability of an organization to shift from its traditional operating approach toward something new.

Organizations that successfully implement a telehealth program have the internal ability and willingness to move in a new direction. "Willingness" involves the desire of the organization and its employees to change and embrace new ways of working. "Ability" entails having or acquiring the skills necessary to successfully implement that change. Honestly assessing organizational readiness identifies major challenges that could delay or prevent your new program's successful start-up. Also identify organizational strengths that might assist in program development and acceptance.

PERFORMING A READINESS ASSESSMENT



Performing an evaluation of organizational readiness does not have to be time-consuming. In many cases, it can be easily accomplished in one day. This assessment may be as simple as reviewing the steps in this Toolkit, to make sure critical areas have been considered. It can also involve a detailed written presentation for executive management. The actual level of formality depends upon your organization's needs and culture. No matter how extensive your review, assessment of organizational readiness is the foundation of a successful telehealth program.

Consider How the Program Might Change Your Organization

Your first task in assessing organizational readiness is identifying the desired new program. Develop a short paragraph that specifically describes the action or program your organization is considering. While this may seem rather basic, it makes sure all stakeholders share a common vision. Examples might include the following:

- A CLINIC implementing a telehealth program that provides medical specialty services using remote experts.
- A HOSPITAL implementing a telestroke program that provides telehealth neurology consults for emergency department patients experiencing symptoms.
- A PROVIDER expanding an existing practice to provide dermatology services for new and existing patients.

Determine How the Project Would Align with Current Operations

Your second task in assessing organizational readiness is determining how your organization's existing state relates to the desired new program. Specifically, evaluate how the proposed project aligns with your organization's current vision, mission, and strategic plan. Consider the following questions when assessing your organization's readiness to take on the proposed program:

1. Does the proposed project align with the organization's current vision, mission, and strategic plan?
 - Does the project support the organization's vision of its desired future?
 - Does the project align with the organization's beliefs about who it is, what it does, and how it serves?
 - Does the project support the organization's approach to achieving its goals and objectives?
2. Is the proposed project consistent with your organization's values and culture?
 - Is the project consistent with your organization's guiding principles?
 - Does the project align with your organization's existing beliefs, assumptions, and expectations?
 - Does your organization's culture support innovation and clinical technology applications?

Project Alignment Questions, continued

3. Are resources available to begin development of the proposed project?

- Is funding available for initial planning activities?
- Is staff available to work on the project?
- Are there leadership groups in place to foster support?

4. Does the proposed program have a champion?

- Is there a clinical champion for the project?
- Is there an administrative champion for the project?
- Are there leadership groups in place to foster support?

5. Do stakeholders support the program?

- What perceptions do stakeholders have about the proposed program?
- Are stakeholders educated about the proposed program?

6. Who has authority over the proposed program?

- Who has to approve the project?
- Are these teams/groups/individuals supportive of the project?

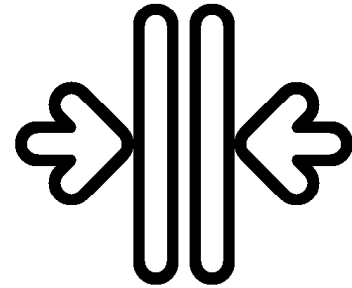
7. What are the potential opportunities or barriers to program initiation?

A SWOT analysis can be beneficial in assessing organizational readiness for implementing a new program. SWOT (Strengths/Weaknesses/Opportunities/Threats) can help identify areas that may require assessment and/or modification to move forward. Additionally, it spotlights opportunities that can contribute to success, and barriers that may inhibit effectiveness.

- What are your organization's strengths?
- What are your organization's challenges or weaknesses?
- Where are your organization's business opportunities?
- Are there any short-term or long-term barriers to your organization's success?

8. Is your organization technology-ready?

Performing a preliminary technology assessment can help identify key barriers to ongoing program success. Take the Technical Needs Assessment Survey on the following page.



TECHNICAL NEEDS ASSESSMENT SURVEY



YES NO UNSURE

Do you have internet access in your clinic exam rooms?

All rooms

Some rooms

Via wall jack

Via wireless

Do you have internet access in the room you use for conferences and staff meetings?

All rooms

Some rooms

Via wall jack

Via wireless

Do you receive your broadband from the California Telehealth Network (CTN)?

All rooms

Some rooms

Via wall jack

Via wireless

If you currently have telehealth equipment at your facility, please specify below:

Live video

Store and forward

No equipment

VIDEO EQUIPMENT SPECIFICATIONS

Video conferencing equipment type: _____

Is your unit high-definition or standard? _____

Monitor size? _____ Is the unit wall-mounted, or on a mobile cart? _____

Can it be easily moved from one room to another (please circle one)? Yes No

Do you have peripheral equipment that will be used with the unit? (ex: dermascope, otoscope, stethoscope)

If so, please list all: _____

STORE AND FORWARD CAPABILITIES

What specialties do you use? _____

Software used? _____

Camera used? _____

Do you have an EHR (please circle one)? Yes No

Please list the brand: _____

POST-ASSESSMENT POINTERS



After taking the Technical Needs Assessment on the previous page, it's important to address pros, cons, opportunities, and challenges.

Answering the questions accurately helps you understand whether your organization is fully ready to implement a new telehealth program. If you're not quite there, you now have a clearer snapshot of which areas need attention before proceeding. After you make necessary organizational adjustments, complete the assessment worksheets once again before moving forward.

Once you've achieved full consensus that the time is right to proceed, follow a structured program development process. It's an extremely beneficial way to keep your implementation on track, while minimizing unforeseen problems.

NEEDS ANALYSIS TOOLS

The following tools may be particularly helpful in performing a thorough needs analysis:

[1. Needs Assessment—Areas to Consider & Data Sources](#)

This resource includes a variety of questions that may be pertinent to your needs analysis, and also might suggest some possible data sources.

[2. Guide To Performing a Formal Needs Assessment](#)

This tool details the tasks involved in creating a large-scale needs assessment. Some organizations may require this level of discovery and analysis. If necessary, it can be simplified for smaller studies as described in Step One.

[3. Organizational Readiness Assessment Template](#)

This template includes key questions to consider as you analyze your unmet needs. It also provides space to document your thoughts and responses.

NEEDS ASSESSMENT

There are many ways to obtain data on community needs and resources. Provided below are sample data that may be collected when determining community needs and identifying potential telehealth services. Also included are suggestions on locating the data for each collection recommendation. Please keep in mind that this is not an exhaustive list. Adapt or modify it as necessary to meet your organizational needs.

Demographic & Socioeconomic

Characteristics	Possible Data Sources
Age Analysis: Compare the county and state percentage age distributions, and describe how the county age distribution is different from the state.	1. CDC National Center for Health Statistics http://www.cdc.gov/nchs/ 2. Henry J. Kaiser Family Foundation http://www.statehealthfacts.org/compare.jsp 3. State health department
Race/Ethnicity Analysis: Compare county and state distributions, and describe how the county distribution is different from the state. Do you have any racial/ethnic group needing special consideration?	1. CDC National Center for Health Statistics http://www.cdc.gov/nchs/ 2. Henry J. Kaiser Family Foundation http://www.statehealthfacts.org/compare.jsp 3. State health department
Socio-Cultural Demographic Features: Identify unique features of your county that may increase risks of health problems for members of your community (i.e. poverty, high unemployment).	1. US Census Bureau http://quickfacts.census.gov/qfd/index.html 2. State health department

Health Status

Characteristics	Possible Data Sources
How does your county compare with the rest of the state on chronic disease indicators? • Coronary heart disease mortality rate • Cerebrovascular disease mortality rate • Hospitalization rate for diabetes • Hospitalization rate for asthma	1. CDC Data and Statistics http://www.cdc.gov/DataStatistics/ 2. CDC Behavioral Risk Factor surveillance survey http://www.cdc.gov/brfss/index.htm 3. State health department
What is the percent of the population with behavioral risk factors? • Cigarette smoking • Hypertension • Hypercholesterolemia • Diabetes mellitus • Physical activity • Family history of hypertension • Family history of hypercholesterolemia • Family history of diabetes mellitus	1. CDC Data and Statistics http://www.cdc.gov/DataStatistics/ 2. CDC Behavioral Risk Factor surveillance survey http://www.cdc.gov/brfss/index.htm 3. State health department

Health Status, continued

Characteristics	Possible Data Sources
Are there any special populations with chronic disease problems (i.e. race, migrant workers)?	<ol style="list-style-type: none"> 1. CDC National Center for Health Statistics http://www.cdc.gov/nchs/ 2. CDC Behavioral Risk Factor surveillance survey http://www.cdc.gov/brfss/index.htm 3. State health department
What conditions drive your re-admission rates?	Review your hospital/clinic re-admission records to identify those conditions for which patients are most commonly re-admitted.
Are there any diseases or diagnoses that you've found particularly difficult to manage locally?	Review your hospital/clinic service data to identify diseases or diagnoses that are commonly referred out to other sites for service provision.

Service Availability

Characteristics	Possible Data Sources
Are there any special problems your community faces that restrict access to care (i.e. location, hours of operation, lengthy wait for next appointment)?	<ol style="list-style-type: none"> 1. Survey community members to identify any restrictions to care access at your site. 2. Facilitate focus group interviews with community members to identify any restrictions to care access at your site. 3. Review your hospital/clinic scheduling records to identify services that have longer wait times for the next available appointment.
What percentage of your population lacks health insurance coverage?	<ol style="list-style-type: none"> 1. State health department 2. US Census Bureau http://quickfacts.census.gov/qfd/index.html 3. Medicare and Medicaid reports
Which specialty services are needed but not available in your community?	<ol style="list-style-type: none"> 1. Review your hospital /clinic service data to identify clinical services are available and not available at your site. 2. Review your hospital /clinic referral records to identify services that are regularly transported out. 3. Review health status data collected to determine additional services that may be needed in your community. 4. Survey your target population to identify services they need, which are not available.
Are there any populations not served by language-specific or culturally knowledgeable service providers?	<ol style="list-style-type: none"> 1. Review county demographic information to identify specific populations located in your service area. 2. Review your hospital/clinic records to identify those populations that are in your service area, but not served by language-specific or culturally knowledgeable service providers

Service Availability, continued

Characteristics	Possible Data Sources
Are there any gaps between healthcare service needs and available resources?	<p>Compare identified healthcare service needs to your community's available resources.</p> <ul style="list-style-type: none"> • Service needs can be identified through review of hospital/clinic service records, referral records, demographic and socioeconomic data, and feedback received from patients or others in the community. • Available resources can be identified through asset mapping—identification of local resources in the community.
Where does the demand for healthcare services regularly exceed local resources?	<ul style="list-style-type: none"> • Review your hospital/clinic referral patterns to identify services that are regularly referred out to other sites or regularly referred to your site. • Review your hospital/clinic scheduling patterns to identify services that have long wait times for seeing the provider (helps to determine any provider shortages). • Review your hospital/clinic scheduling patterns to identify types of services scheduled.

Referral Patterns

Characteristics	Possible Data Sources
What are your predominant referral patterns?	<ul style="list-style-type: none"> • Review your hospital/clinic referral patterns to identify the type of services that are regularly referred out to other sites or referred to your site. • Identify where the services are referred to or from and why they are referred (service is not available at all at your site; service is available, but no appointments are available in the near future; service is not available at a distant patient site). • Review your hospital/clinic scheduling patterns to identify services that have long wait times for seeing the provider (helps to determine any provider shortages). • Review your hospital/clinic scheduling patterns to identify types of services scheduled.
Do you currently refer patients to other sites?	Review your hospital/clinic referral patterns to identify the type of services that are regularly referred out to other sites, and how often referrals are made for each service.
What diagnoses/healthcare services are commonly referred or transported out?	Review your hospital/clinic referral patterns to identify the types of services that are most commonly referred out to other sites.

Referral Patterns, continued

Characteristics	Possible Data Sources
Does your organization have existing referral relationships with distant sites or specialty services?	Review your hospital/clinic referral patterns to identify the types of services that are regularly referred out to other sites, and how often referrals are made for each service.
What diagnoses/healthcare services are commonly referred or transported out?	Review your hospital/clinic referral patterns to identify the type of services that are most commonly referred out to other sites.
Where do community members go to receive services unavailable locally?	<ul style="list-style-type: none"> • Survey community members to identify where they go to receive healthcare services that are not available locally. • Facilitate focus group interviews with community members, to identify where they go to receive healthcare services that are not available locally.
Are healthcare providers in your organization currently traveling to other communities/organizations to provide care?	Review your hospital/clinic referral patterns to identify the types of services that are regularly referred to your site.
Are there healthcare providers traveling to your organization from another community/organization to provide patient care?	Review your hospital/clinic service data, to identify services that require healthcare providers in your organization to travel to a different location to provide care.
Are there healthcare providers traveling to your organization from another community/organization to provide patient care?	Review your hospital/clinic service data, to identify services that require a healthcare provider from another site to provide care to patients in your service area.

Administrative/Educational Events

Characteristics	Possible Data Sources
Are there any educational events that currently involve travel time and expense, but do not require in-person attendance?	<ul style="list-style-type: none"> • Review the schedule of educational events attended by staff at your site to determine if any involve travel, but do not require in-person attendance. • Survey staff to gather additional data on educational events that involve travel, but do not require in-person attendance.
Is there an interest in accessing educational events (grand rounds/CME) offered at other sites that have videoconferencing capabilities?	Survey staff to determine if there is an interest in accessing educational events offered at other sites.
Are there meetings and events currently taking place at your organization that involve travel to another location, but do not require in-person attendance?	<ul style="list-style-type: none"> • Review the schedule of meetings and events taking place at your organization that involve travel to another location, but do not require in-person attendance. • Survey staff to gather additional data on meetings and events that involve travel, but do not require in-person attendance.

Payer Mix

Characteristics	Possible Data Sources
How many unique patient visits does your site receive per year?	Review your hospital/clinic service data to identify the number of patients served.
What is the payer breakdown for those visits? • Medicare • Medi-Cal • Commercial/Private Payer • CMSP • Self-pay	Review your hospital/clinic billing data to identify the payer mix for the patients your site serves.
What is the Medicaid spending by county for the region you serve?	<ul style="list-style-type: none"> • State health department • Medicaid reports
What is the Medicare spending by county for the region you serve?	<ul style="list-style-type: none"> • State health department • Medicare reports

GUIDE TO PERFORMING A FORMAL NEEDS ASSESSMENT

Introduction

When rolling out telehealth programs to deliver healthcare at a distance, it's sometimes tempting to begin your development efforts by looking at the newest telehealth equipment and deciding to implement a program. To optimize success, however, you should first conduct a needs assessment.

What Is a Needs Assessment?

A needs assessment is a process that identifies the healthcare needs of a community. Needs assessments collect and analyze data to determine current level of service availability, desired level of service availability, and the gap between the two. This helps your organization's clinical, executive, and administrative stakeholders evaluate the rationale for developing your planned telehealth program. A needs assessment can be conveyed in a single page or in a detailed volume, depending upon your requirements and resources.

Conducting a needs assessment provides numerous benefits, including:

- Clearer understanding of community needs
- Foundation for program development
- Clear objectives and shared expectations among stakeholders
- Improved coordination of services, and rational allocation of resources
- Improved ability to evaluate program effectiveness
- Information for the marketing analysis and business plan

Developing the needs analysis, market analysis, and business model are interrelated activities. Some organizations may actually wish to combine the needs assessment, market research, and analysis. It really depends upon the scope of your planned program.



Conducting a Needs Assessment

There are many ways to conduct a needs assessment. For simplicity, this Toolkit provides one framework that you may adapt to suit your requirements. The size and scope of your envisioned telehealth program will determine the comprehensiveness of your evaluation.

It's not a linear process—in fact, it's as interactive and dynamic as the services you're likely to offer. So don't worry if you find yourself amending prior activities partway through. The table below provides a concise summary of the typical steps.

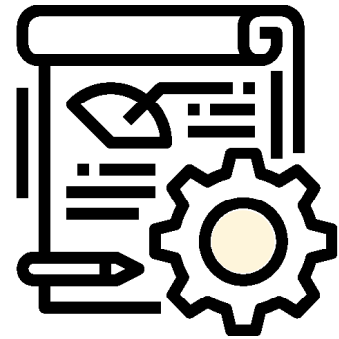
Needs Assessment Summary Table

Steps	Activities	Objectives
Scope definition	Decide how detailed and comprehensive your evaluation should be.	Determine how much of the community's unmet needs you can address. Are you going to limit your analysis to specific telehealth application areas, targeted illness, or a particular geographic location?
Data collection	Consider your assessment approach, and begin evaluating options.	Identify what information you will consider to establish potential needs/opportunities. Consider your analysis methods and, if examining new information, determine how data will be collected. Who will do this work?
Gap analysis	Identify where you are now, and where you'd like to be.	Describe your current patient/healthcare services/provider environment (i.e. what your organization does now). Identify the new or augmented patient/healthcare services/provider environment your telehealth program will support in the future. Define what's needed to "bridge the gap" by describing all new or expanded clinical services in detail. Discuss the anticipated telehealth delivery model, high-level technology needs, provider details, and other key requirements.
Potential barrier identification	Candidly consider factors that may delay or hinder your progress.	Describe obstacles and challenges to achieving the desired outcome. Which additional steps are necessary to attain your objectives? Can you realistically take those steps?
Determining services/priorities	Decide which factors and initiatives are most imperative for your particular organization.	Rank new or expanded clinical objectives in order of priority. If you later determine it's not feasible to implement every offering—or if you need to consider a phased approach—these priorities will help develop an orderly plan.
Solidifying next steps	Summarize and present your results to determine the path forward.	Present an assessment overview to key stakeholders. Seek permission and/or buy-in for continuing with your program development efforts.

Task 1: Define the Scope

Defining your scope is the initial task in your needs assessment process. In most cases, it helps determine how telehealth can best address the unmet needs of your community. During this step, consider these questions:

- Whose needs will be assessed?
 - Some or all of the existing patient population?
 - Some or all of a projected (potential) new patient population?
 - Providers (i.e., continuing education requirements)?
 - Some or all of your organization (i.e., main hospital and clinics)?
- Which type(s) of healthcare services will be evaluated?
 - Primary care?
 - Specific type(s) of specialty care?
- How extensive will your needs assessment be?
- What kind of resources will be available to conduct your needs assessment?



Task 2: Identify the Assessment Approach

This task helps clarify how to structure and conduct your assessment. Your approach should describe preliminary assumptions about the specific information you'll consider, and how you'll gather it.

Information, or data, will be at the heart of your needs assessment. You may gather brand new data for consideration. You may also need to look at previous information compiled by others. The table below illustrates how key information sources may contribute to your progress:

Information Sources

Data Category	Description
Primary data	Original or new data you expect to collect and analyze throughout your assessment. Examples include results from patient surveys, notes from focus groups about needed healthcare services, etc.
Secondary data	Information that has already been collected, which you can analyze or reference in your assessment. It can exist in either a previously reviewed or raw form (which you can further analyze). An example would be health history information a hospital maintains on its patients.
Qualitative data	Information or facts presented in a narrative (non-numerical) format that doesn't lend itself to statistical analysis. An example would be person-to-person interview data.
Quantitative data	Information presented in numerical terms that can serve as the basis for statistical analysis. An example would be survey results reflecting a fixed set of options provided to respondents.

Consider These Questions

These questions can help define your needs assessment approach:

- What existing (secondary) information is already available?
- What new information (primary data) is needed? Where and how can it be gathered?
- How will the needs assessment process be coordinated and monitored?
- How will data be analyzed?
- When, how, and in which format will results be presented?
- Who will conduct necessary research?



Assessment tools commonly used to gather information for a needs assessment include:

- Focus group interview

This qualitative method involves conducting in-depth interviews with a small number of people whose conversation is structured and facilitated by a moderator.

- Public issues forum

This qualitative method obtains feedback from large groups of community members.

- Secondary data analysis

This pre-existing information is collected without any direct research subject contact.

- Survey

This quantitative method collects data from a sample of individuals selected from a target population.

- Individual interviews

These structured conversations help gather information about an individual's assumptions and/or perceptions.

- Asset mapping

This approach catalogs local assets or resources to meet specific objectives.

Task 3: Identify Current & Desired State

This task helps you define how your organization currently performs, and how you'd like it to evolve. You'll start by focusing on the healthcare services your organization presently provides. You'll assess key resources (such as staff/equipment), how existing services are delivered, and numbers/types of providers. The desired state evaluation identifies supplemental services, delivery capabilities, providers, and other resources that can be supported by telehealth.

Consider these important questions to obtain relevant insights on current/desired states:

- What types of healthcare services are offered by your organization?
- Where, how, and when are those services delivered?
- Which healthcare services require residents of your region to travel?
- Which of these services could most benefit from a telehealth-based approach?
- Is the availability/accessibility of specific services especially challenging?
- What types of issues do you foresee regarding your organization, community, and/or industry (i.e., economic downturn, new competition, downsizing)?
- How might telehealth services expand your organization's scope/reach, address key opportunities, or provide a competitive edge?

(continued on next page)

Current & Desired State, continued

Additional questions to consider:

- How could you use telehealth to leverage the unique strengths of your organization or region? For example, if your hospital offers premier cardiac care, how might telehealth help you build upon that strength?
- Is there a market for the proposed service?
- Is there a willingness, desire, and/or ability to pay for the proposed service?

Task 4: Identify the Gap

This task helps you describe and measure the difference (i.e., “gap”) between your current operational reality and the desired state. This is where you identify the requirements that need to be met.

A telehealth gap analysis specifies:

- New or extended healthcare services that must be provided to reach the desired state.
- How new or extended services will be delivered using a telehealth model.



You may also wish to confirm the availability/willingness of specific resources to participate in the way you envision. These resources can include specific clinics, hospitals, and/or physicians.

Your gap analysis should identify general technology requirements—not specific equipment models or vendors. Typically, clinical and information technology teams collaborate to identify key technology requirements. For example, if a new or revised health service will provide secondary cardiology care to remote patients, your gap analysis might state that technology must support these dynamics:

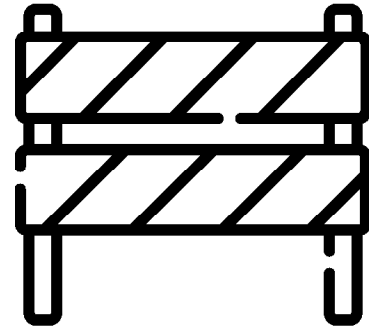
- “Live” interactive cardiology consult
- Ability to measure blood pressure, pulse rate, and body weight in the patient’s home
- Ability to perform EKGs and portable x-rays in the patient’s home, or at a remote client site
- Ability to forward pertinent results and images

Information technology personnel can use a list like this to determine general telecommunications and network requirements for your planned telehealth program.

Task 5: Identify Barriers

Once you've identified needed services and decided whether telehealth could be an appropriate solution, consider potential implementation barriers. You may, for instance, encounter a lack of:

- Financing (capital, allocated budget, etc.)
- Personnel
- Specialized skills
- Equipment and/or peripheral devices
- Telecommunications and IT infrastructure
- Knowledge regarding the implementation process
- IT support



Identifying these impediments can help you plan accordingly, or re-assess your objectives.

Task 6: Summarize Results

Now, rank your telehealth program components and their associated requirements in order of priority. From the list of proposed services, which are most important for your organization to provide? Next, decide which element(s) of each top-priority service are most imperative to support.

Priority ranking provides vital information. Let's say you come to realize that the program you envision can't be fully implemented due to financial, business, or personnel factors. Identifying your top priorities in advance gives you a clear-cut way to adjust your planning roadmap.

Task 7: Present Results

As you complete each task in your needs assessment, remember to document the outcomes in a way that keeps all your information readily available.

If you need formal approval before proceeding to a subsequent planning phase, this approach helps you prepare a detailed presentation quickly. You'll have easy access to data that can help explain your rationale, and foster stakeholder support. We recommend that you secure organizational buy-in at the conclusion of each program development phase.

ORGANIZATIONAL READINESS ASSESSMENT TEMPLATE



Step One: Identify the Anticipated or Desired Change

Describe your planned program, and how it will accomplish the desired change:

Step Two: Assess Organizational Alignment

1. Does the proposed project align with the organization’s current vision, mission, and strategic plan?

Level (circle one)

Alignment with vision/mission	None	Minimal	Significant	Major
Alignment with strategic plan	None	Minimal	Significant	Major

Actions required to become fully ready, and/or comments:

Step Two, continued

2. Is the proposed project consistent with the organization's values and culture?

Level (circle one)

Alignment with organizational values/culture

None Minimal Significant Major

Actions required to become fully ready, and/or comments:

3. Are resources available to begin development of the proposed project?

Level (circle one)

Resource availability

None Minimal Significant Major

Actions required to become fully ready, and/or comments:

4. Does the program require a champion?

☐ Yes ☐ No

Identified champion name and role: _____

Decision makers who are interested/supportive: _____

Actions required to become fully ready, and/or comments:

Step Two, continued

5. Do stakeholders support the program?

Level (circle one)

Openness of stakeholders to program	None	Minimal	Significant	Major
Stakeholder program knowledge/education	None	Minimal	Significant	Major

Actions required to become fully ready, and/or comments:

6. Who has authority over the proposed program?

Name(s) and role(s) of program authority/authorities: _____

Actions required to become fully ready, and/or comments:

7. What does the SWOT analysis reveal about organizational successes and potential barriers?

Level (circle one)

Internal supporting factors (skills, strengths)	None	Minimal	Significant	Major
External supporting factors (opportunities)	None	Minimal	Significant	Major

Actions required to become fully ready, and/or comments:

ORGANIZATIONAL READINESS ASSESSMENT SUMMARY



Date:

Organization:

Description of desired initiative:



RECORD NEEDED ACTIONS BELOW	Major Barrier	Moderate Barrier	Key Changes Needed	Minor Changes Needed	Full Support
Alignment with Organizational Vision/Mission					
Alignment with Strategic Plan					
Alignment with Organizational Values/Culture					
Resource Availability					
Identified Champion(s)					
Decision Maker Interest					
Support for Initiative					
Stakeholder Program Perceptions					
Stakeholder Program Education					
Program Authority					
Internal Support Factors (skills, strengths, etc.)					
External Support Factors (opportunities)					

Record needed actions/recommendations here:

NEEDS ASSESSMENT WORKSHEET



DEFINE YOUR PURPOSE

What is the purpose and scope of your needs assessment?

DEFINE YOUR DATA

What data are you going to collect?

Which tools will you use to gather that data?

PERFORM YOUR GAP ANALYSIS

What is the current state of your organization? Consider current healthcare services, delivery methods, number/type of providers, and available local resources. Describe any unmet community and market needs below.

What is the desired state of your organization? Consider planned supplemental services, delivery capabilities, providers, and necessary support. Which specific community needs can telehealth address?

Describe the gap between your current state and your desired state. Are there new and/or extended healthcare services you must provide to reach that state? Provide the details below.

GAP ANALYSIS, continued

Specifically, how can telehealth be used to help you reach your desired state?

DEFINE POTENTIAL BARRIERS

Are there any potential barriers to implementing a telehealth program? Consider factors like financing, training, and/or technical support and describe below.

Based upon the potential barriers outlined above, describe any plan revisions/modifications that may be necessary to overcome them.

RANK SERVICE PRIORITIES

Now that you've identified your desired organizational state—and the services telehealth can help you enhance—rank your service needs below, according to priority (from highest to lowest).

1	
2	
3	
4	
5	
6	
7	
8	
9	

ASSESS & DEFINE STEP 2

Defining Program Model

Assess & Define, Step 2

DEFINING YOUR PROGRAM MODEL

2

STEP TWO: DEFINE/SPECIFY YOUR PROGRAM MODEL

QUESTIONS

- What services have you decided to provide?
- How will those services be provided?
- What is the proposed scope and implementation strategy?
- What technology model will you use?
- Do you have authority, support, and resources to move forward?

PRODUCTS/ACTIVITIES

- Develop program goals and objectives
- Develop preliminary service description
- Develop preliminary telehealth delivery model
- Identify implementation approach
- Create program charter

Step Two identifies specific clinical services your telehealth program will target. It also outlines the program model that will be used to deliver those services. You'll identify the services you want to target, along with geographical boundaries. You'll also explore which form of telehealth you'll implement, and the most appropriate program model for your unique organization. During Step Two, you'll gather information and consider how your program can be integrated as a valued, strategic organizational element. You'll also consider your implementation approach—pilot program, single service only, limited sites, etc.

You'll begin by reviewing your prioritized list from the previous needs assessment. Then you'll research the types of telehealth that could best address those needs. After that, you'll collect very preliminary application cost data for various models, to explore which might work best. This step transitions into Step Three—where you'll expand information from Step Two to create a business model, business case, and more detailed cost estimates.

Once you complete Step Two, you'll have a high-level understanding of what you need clinically, technologically, and organizationally to provide the targeted telehealth services you envision.



During Step Two, you will:

- Decide on the type(s) of services to provide
- Prepare a preliminary program model description
- Decide on the type of telehealth program that best works for your application
- Consider assumptions/constraints/opportunities
- Create high-level cost estimates
- Create a written proposal, or program charter

ACTIVITIES FOR INSIGHT

1. Develop program goals and objectives

Why is it important to create measurable goals based upon your decisions about service needs? Because it helps you define the scale of your program—including your equipment needs, estimated workload, evaluation procedures, and more. By this point in the process, some organizations assemble a small group to begin defining their program and technology model. Others may be ready to collaborate with a larger team. Remember, you may need to go back and revise periodically as new insights take shape.

2. Develop a preliminary service and program description

This descriptive proposal outlines the type of service(s) you plan to provide. It includes:

- Proposed telehealth service descriptions
- Alternatives already considered, and reasons for the proposed solution
- A high-level description of the proposed program model—including the rationale, and how it would be incorporated into existing service delivery
- A high-level description of what's needed to support the identified program model.

This should include:

- General technology requirements (i.e., live interactive, store and forward)
- Specific types of healthcare providers
- Specific service sources (i.e., city hospital)
- Preliminary costs needed to support high-level requirements (i.e., space, staff)

The service and program description documents your research and recommendations. It may be a standalone report. It can also be included with the preliminary telehealth delivery model, or be incorporated into the program charter.



Tools for Step Two:

- Simple Charter
- Charter Template
- Kick-Off Meeting Template

ACTIVITIES FOR INSIGHT, continued

3. Develop a preliminary delivery model

A telehealth program model outlines your choice of telehealth services, detailing the most suitable approach for your particular circumstances and goals. It specifies:

- The proposed delivery method for providing the service (i.e., live interactive with a telehealth system on a clinician's desktop)
- High-level requirements of the system and needed equipment—including requirements for interoperability, network/storage capacity, and IT support
- Preliminary cost estimates for associated technology components

The model documents your research and recommended decisions. It may be a standalone report. It can also be included with the preliminary telehealth delivery model, or be incorporated into the program charter.

4. Develop an implementation approach

Consider the best approach for implementation. Perhaps it's a small pilot with limited service provision, followed by expansion. Maybe you begin with a limited number of sites offering one type of telehealth (i.e., live interactive), followed by another application (i.e., provider education). Many programs find measured steps useful, while others are successful with broader implementations. Such decisions are often based on available resources, organizational risk tolerance, residual time, and opinions of program champions/decision-makers.

5. Create a charter or other written report

It's often helpful to develop a charter that documents information gathered to date. Charters provide background on the reason(s) telehealth is being considered. They also outline associated challenges, solutions, assumptions, constraints, timeframes, and approvals. A well-defined charter ensures that key preliminary decisions are well-documented before moving into detailed program planning.



Tools for Step Three:

- Step Two Program Model Checklist
- Program Charter Template

Tools for Step Five:

- Program Charter - Template
- Program Charter - Sample

DEFINE/SPECIFY PROGRAM MODEL CHECKLIST

Have you covered everything? Don't leave any details to chance. Instead, read through the Step Two Checklist below. You may see a few additional elements to consider before proceeding further.

YES NO UNSURE

Answer These Critical Questions

- | | | | |
|--|--------------------------|--------------------------|--------------------------|
| 1. Do you know which services will be offered to meet identified patient needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Have you identified the mode of service delivery? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Have you determined who will provide the service, and where they are located? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Have you identified the organizational model that best suits patient needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Have you identified any constraints based upon your organization (for example, federally qualified health center rules)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Do you know the general technological features & functions needed to deliver the target services in the proposed way? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Have you selected the most appropriate technology options for your program? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Have you identified any additional human resources needed, and where they'll be located? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Have you identified any additional facility-related resources needed, and where they'll be located? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Have you identified any legal, legislative, or regulatory constraints that your organization needs to consider during program development? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Have you determined your program's implementation approach (i.e., phased, pilot project, demonstration project)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

CTRC TELEHEALTH PROGRAM DEVELOPER PROJECT CHARTER TEMPLATE



Name of Organization:

Version Number:

Revision Date:

I. BACKGROUND & PROBLEM STATEMENT

Project Background

Share background information that helps explain how this project came to be.

Problem Statement

Describe your reasons for initiating the project. Specifically, state the clinical and/or business challenge. Explain why the project is needed. If applicable, summarize why existing services are inadequate. This foundational statement drives the project. The subsequent needs analysis (if not already performed) should provide additional information.

II. PROJECT DESCRIPTION & SCOPE

Descriptive Overview

Furnish a description of the project, defining the overall scope. In particular, note boundaries and limitations. Provide sufficient detail so that all parties involved understand exactly what the project does and does not include. As additional project details are developed, the scope and/or charter may need revision.

Goals & Objectives

Clearly state all goals and quantitative objectives for the project.

II. PROJECT DESCRIPTION & SCOPE, continued

Project Scope
Provide a description of the project scope, carefully identifying any limitations. All parties should clearly understand what the project entails, and what is doesn't. As more insight about the project is obtained, the scope and/or charter may need revision.

Project Inclusions:
Project Exclusions:

Assumptions
Describe any project assumptions related to need, clinical services, business, technology, resources, scope, expectations, and/or schedules.

Constraints
Describe any project constraints being imposed in areas such as schedule, budget, resources, and/or technology to be employed.

II. PROJECT DESCRIPTION & SCOPE, continued

Major Project Milestones

Provide a description of key project milestones, identifying any limitations. All parties should clearly understand what the project entails, and what it doesn't. As more insight about the project is obtained, the scope and/or charter may need revision.

Milestone/Deliverable:	Planned Completion Date:

III. GOVERNANCE & OVERSIGHT

Development Team

Create a list that identifies the major parties involved in the project—such as project sponsors, stakeholders, and eventual project owners. Be sufficiently clear regarding roles and parameters to avoid confusion down the line. Identify your anticipated team members below.

Team Member:	Responsibility:

Sponsorship & Ownership

Identify who has authority over the project. Include any external oversight bodies and organizational policies that define and/or steer the project going forward.

IV. REFERENCE MATERIALS

Documents

List any related documents or other resources that could be helpful in understanding various aspects of the project (such as the scope and/or need).

Terminology

Identify any key terms related to the project. Note that anyone affiliated with the project will need to know and fully understand these terms.

Approvals

Approval of the project charter indicates a clear understanding of its purpose and content. By signing this deliverable, each individual signifies agreement with the direction of the project and all specified requirements. Essentially, a signed charter is an agreement to move forward.

Approver Name:	Title:	Signature:	Date:

V. APPROVALS & REVISION HISTORY

Charter Revision History

Keeping track of any changes to the charter is vital to program clarity, stakeholder buy-in, and long-term success. Use this space to record notes and modifications accordingly.

Charter Version:	Date:	Description:

CTRC TELEHEALTH PROGRAM DEVELOPER PROJECT CHARTER EXAMPLE



Name of Organization:	Version Number:	Revision Date:
Hospital in the Woods	2.0	November 1, 2020

I. BACKGROUND & PROBLEM STATEMENT

Project Background

Hospital In The Woods will be receiving telehealth equipment for use in their facility through grants awarded by the State Rural Health Office and a private foundation. The grant also provides funding for a part-time telehealth coordinator. Hospital In The Woods formed a telehealth committee to look at how telehealth might benefit their organization. The committee is meeting on a monthly basis.

Problem Statement

Hospital In The Woods is a small Joint Commission accredited 25-bed critical access not-for-profit hospital located in Anywhere, CA. The rural location of Anywhere is a serious barrier to receiving specialty care, especially during winter months when travel is severely restricted due to snow levels. Anywhere is designated as a rural HPSA area for Medicare.

NIH sees a potential need for oncology, rheumatology, cardiology, dermatology, and possibly psychiatric services. Over 150 specialty referrals are made monthly.

Payer mix is Medicaid 35%, Medicare 25%, Uninsured 18%, Commercial 22%. There are concerns that the Medicaid and Medicare payer mix may limit reimbursement.

II. PROJECT DESCRIPTION & SCOPE

Descriptive Overview

Implement outpatient oncology services at the Hospital In The Woods Rural Health Clinic. Initial implementation will be providing oncology services to patients at this facility.

This project will undertake the activities and tasks required to implement services, including equipment procurement, develop of work flows, clinical and operational policies and procedures, business model development, clinical service provision, billing and scheduling, staffing, service coordination, and performance monitoring.

Hospital In The Woods is working with CTIRC to coordinate necessary work; and to create a business model and training manual for telehealth billing.

II. PROJECT DESCRIPTION & SCOPE, continued

Goals & Objectives

1. Improve Access to Clinical Service

Provide 10 telehealth oncology consults per month. Reduce travel for patients and wait times for visits.

2. Maximize Administrative Efficiency and Revenue

Reduce facility revenue lost when patients are required to obtain services outside the hospital/clinic. Optimize reimbursement with availability of current reimbursement schedules.

3. Build A Program Foundation That Will Allow for Expansion and Sustainability

Assess the impact of telehealth at three months, six months, and one year. Prepare a business model for expanded services. Identify grant opportunities for further funding of telehealth.

Scope

Project Includes:

- Development of oncology outpatient services provided from the Rural Health Clinic
- Development of program operations including policies, procedures, and clinical coordination
- One patient site
- Identifying an oncology provider for telehealth service delivery
- Working with local clinicians to engage them in telehealth

Project Does Not Include:

- Implementation of other clinical specialties until oncology is operational
- Wireless applications
- Any additional patient sites

Assumptions

- Begin providing services in MM/YYYY
- Equipment and peripherals to be procured in a timeframe that supports service startup
- Adequate broadband is available for live interactive telehealth
- Remote oncology service provider is interested in telehealth
- All grant funds are approved and received as expected
- Current staffing will support development efforts and activities

Constraints

- Two grants are the only source of funding
- Current staff will be required to perform implementation tasks, in addition to current workload

II. PROJECT DESCRIPTION & SCOPE, continued

Major Project Milestones

Milestone/Deliverable:	Planned Completion Date:
Fill in as appropriate.	

III. GOVERNANCE & OVERSIGHT

Development Team

Team Member:	Responsibility:
Gary Smith	Overseeing IT implementation
Tricia Simpson	Development and training of clinicians
Terry Humboldt	Project rollout and ongoing funding

Sponsorship & Ownership

See attached document for a list of names and governing bodies that have steering and oversight responsibility for this project.

IV. REFERENCE MATERIALS

Documents

- Project Scope of Work
- CTRC Organizational Readiness Assessment Template
- CTRC Reimbursement Guide

V. APPROVALS & REVISION HISTORY

Charter Revision History

See project approval signatures in separate Appendix document. The revision history is indicated below.

Charter Version:	Date:	Description:
Version 1	December 12, 2020	Initial charter document
Version 2	February 25, 2021	Update per attachment
Version 3	April 5, 2021	Update per attachment

CTRC TELEHEALTH KICKOFF & PLANNING MEETING TEMPLATE



Timeframe:

2 - 4 hours is usually sufficient time for a kickoff meeting.

Purpose:

To begin development of a plan that facilitates implementation of appropriate telehealth program/technology.

Attendee List:

Project Sponsor	Director of Information Technology
Chief Executive Officer	Chief Operating Officer
Chief Medical Director	Clinic Manager
Chief Financial Officer	Telehealth Coordinator
Director of Nursing	Medical Director

1. Convene Team

- Welcome/introductions
- Explain meeting objective

2. Provide Telehealth Overview

3. Explain Development Process

4. Establishing Predictors of Success

5. Consider and Assemble a Charter

6. Create a Development Plan

- Review needs and potential opportunities
- Identify implementation team
- Identify necessary information/input/insight

7. Identify Next Steps

ASSESS & DEFINE

STEP 3

Define/Develop Business Case

Assess & Define, Step 3

DEFINING/DEVELOPING YOUR BUSINESS CASE



3

STEP THREE: DEVELOP YOUR BUSINESS CASE

QUESTIONS

- What is the proposed scope of the program?
- What is the estimated demand for the service?
- Which service and technology estimates are being used for cost projection?
- What is the financial model associated with the proposed program?
- How will the program impact the organization's financial position?
- Is the program sustainable? What is the sustainability model?
- Will the program create revenue in another area of the organization?
- Will the program require subsidy from the organization?
- Is there a demonstrated return on investment?
- Is the organization willing to implement without a revenue-positive or neutral program design?
- Will grants be required for program initiation and/or sustainability?

PRODUCTS/ACTIVITIES

- Market Analysis
- Business Case Report

Step Three helps you evaluate service demand, costs, benefits, risks, and other elements of the proposed telehealth program. It also helps consolidate outcomes into a business case report. This step ties together the information and analysis completed during needs assessment and preliminary program development. It expands upon these insights with a financial and market analysis. This helps establish the program's business model, articulating how the proposed program would financially impact your organization.

Stakeholders need a clear understanding of the proposed program's financial impact, along with an appreciation of the risks associated with implementation. It's often challenging to develop a telehealth business model that supports sustainability. In many cases, the program may provide beneficial access to care, without necessarily supporting the organization's bottom line. This may be perfectly acceptable, given your organizational mission and revenue streams. However, you should comprehend the financial impact before proceeding.

The business case looks at estimates for service delivery, and costs to develop/operate the telehealth program. It also evaluates sources of revenue and anticipated positive/negative fiscal impacts to facilitate a "big picture" overview. Conducting a market analysis during this step helps determine whether sufficient market demand for the proposed program exists.

STEP 3/BUSINESS CASE, continued

It's often assumed that a service need automatically implies demand for the service. However, it's important to determine whether sufficient purchasing power is available to obtain or pay for service fulfillment. It may be challenging to develop a compelling business case for the program, if purchasing power or supportive revenue streams cannot be identified. A careful market analysis helps reveal whether adequate payment capabilities and a desire for the proposed services exist.

The level of detail and formality can vary appreciably from one business case report to another. Several factors influence the format, including:

- Proposed telehealth program scope
Does your proposed service augment an existing program, or is it the first organizational implementation of its kind? Larger programs and first-time implementations tend to benefit from a more formal and detailed business case report.
- Audience for the business case report
Your primary audience might include a board of directors, granting agency, bank, and/or venture capitalist. Different entities typically require varying levels of detail.

ACTIVITIES FOR INSIGHT

Business Case Report (sometimes called a Business Plan)

A business case report incorporates elements of a market analysis, strategic plan, operational/management plan, financial plan, and environmental assessment. It also includes information from your needs analysis and preliminary program proposal. It generally contains:

- Description of the need for the telehealth program (using work products created during Step One, "Determine Needs")
- Description of how the proposed program aligns with your organization's existing mission, lines of business, and/or strategic plans
- Description of market demand for the service
- Cost estimates
- A fiscal analysis and return on investment (ROI) calculation for the telehealth program
- Description of how program development and implementation will be structured and managed
- Description of program promotional activities
- Overview of ongoing operational management, and necessary resources (including financial)
- Projected organizational fiscal impact
- Evaluation of risks and constraints



Tools for Step Three:

- Needs Assessment
- Market Analysis Guide
- Market Analysis Template

BUSINESS CASE CHECKLIST

Have you covered everything? Don't leave any details to chance. Instead, read through the Step Two Checklist below. You may see a few additional elements to consider before proceeding further.

	YES	NO	UNSURE
Answer These Critical Questions			
1. Have you determined approximate start-up and operating costs for your telehealth program?			
2. Have you determined how telehealth program benefits relate to your organizational mission, and community needs?			
3. Have you identified the payer mix?			
4. Have you obtained financial commitment to implement and sustain your telehealth services?			
5. Have you estimated expected cost reductions (i.e., reduced need for provider travel to remote clinics)?			



End each step with a review!

Include a critical review at the end of each program development step. This lets stakeholders and decision makers evaluate progress to date, and make informed decisions about moving forward with the plan as currently envisioned. Whether your “green light” decision requires official board approval, or the informal consensus of a program development team, a detailed review keeps everyone fully informed. Intentionally building in reviews and decision-points also helps foster organizational engagement and buy-in for your emerging telehealth program.

DEVELOP & PLAN STEP 4

Develop Detailed Program & Technology Plan

Develop & Plan, Step 4

PLANNING YOUR PROGRAM/TECHNOLOGY

4

STEP FOUR: PLANNING PROGRAM/TECHNOLOGY

QUESTIONS

- What are the clinical program requirements?
- What are the operational program requirements?
- What are the technology requirements?
- How will these requirements be met?
- What tasks will be required to create and implement all clinical, operational, and technical functions?

PRODUCTS/ACTIVITIES

- Detailed Program Implementation Plan
- Detailed Technology Implementation Plan

Step Four creates two key deliverables. In this step, you'll identify detailed programmatic and technical requirements for providing your targeted service(s). Additionally, you'll create a comprehensive project plan. This information will be used to procure services and equipment, and also to staff the program.

Step Four adds even more detail to the data collected in Step Two. It expands upon information about the clinical program, resource requirements, technical needs, and operational models. Don't forget to keep reviewing and seeking stakeholder buy-in as you continue to progress through the various planning stages.



Step Four creates the detailed task lists you'll use during program implementation (Step Six). At the end of Step Four, you should have:

- A complete description of equipment specifications, clinical requirements, and operational/staffing requirements
- A complete task list for implementing each area
- An implementation plan that includes assigned tasks, assigned resources, preliminary timelines, and schedules
- A defined approach you can use to implement your telehealth program

ACTIVITIES FOR INSIGHT



1. Detailed Program Implementation Plan

Develop a detailed program implementation plan for the administrative, operational, and clinical services portions of your telehealth program. Your plan should include the following:

- Detailed description of requirements pertaining to clinical services, operational needs, and estimated volumes.
- Complete listing of necessary implementation tasks—including staffing, clinical services, site coordination, operations, room preparation, training, and marketing/communications.
- Preliminary timelines, schedules, and estimates of required initiatives and resources.

2. Quality Improvement Process

Your technology plan should include:

- Detailed technical requirements and specifications for all plan-related technology components.
- Defined requirements for service-level agreements.
- List of targeted products, services, and vendors (including projected one-time and continuing costs).
- Complete listing of tasks necessary to implement and operate all technology components of your telehealth program.



As you complete Step Four, pay close attention.

If you notice that the information is starting to differ substantially from the approach you initially outlined, revisit the business case you created in Step Three. It's important to compare details periodically, to ensure that your approach remains clear and consistent throughout the entire planning process.

PROGRAM/TECHNOLOGY PLANNING CHECKLIST



Have you covered everything? Don't leave any details to chance. Instead, read through the Step Two Checklist below. You may see a few additional elements to consider before proceeding further.

YES NO UNSURE

Answer These Critical Questions

1. Have you identified the activities or steps you will undertake to achieve your telehealth objectives?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Have you developed a suitable plan for managing the work involved in establishing a telehealth program?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Have you identified which organizational leaders will be involved in your program, and what their roles will be?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Have you identified members of your telehealth team, and their roles and responsibilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Have you developed a communication strategy to promote your telehealth services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Have you developed policies and procedures for program operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Do you have a suitable space for telehealth?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Have you determined how appointments will be scheduled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Have you determined how referrals will be made?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Have you identified necessary training, and who needs this training?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have you developed clinical referral guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have you determined how telehealth will be integrated into clinic operations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Have you identified detailed attributes of necessary hardware/software for telehealth (i.e., bandwidth, product standards, product features)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have you defined the necessary service level, and support agreements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Have you identified interoperability and scalability requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Have you identified existing organizational resources that can be used to meet specified requirements (i.e., existing network, hardware, equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Have you identified the types of approvals or authorizations required to assign existing resources to telehealth services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Are you familiar with your organization's procurement policies and procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DEVELOP & PLAN

STEP 5

Develop a Performance Monitoring Plan

Develop & Plan, Step 5

DEVELOP A PERFORMANCE MONITORING PLAN

5

STEP FIVE: PERFORMANCE MONITORING PLAN

QUESTIONS

- How will regular program performance be monitored and assessed?
- What data elements are required?
- How will they be collected?
- What management reports will be produced?
- How will the program be evaluated?
- On what criteria? Using what methodology?
- How will program modifications and improvements be identified and implemented?

PRODUCTS/ACTIVITIES

- Performance Monitoring Plan
- Evaluation Plan
- Quality Improvement Process

Step Five identifies how the telehealth program will be monitored and evaluated, to determine if it successfully satisfies program objectives.

During Step Five, you'll decide which data is necessary to assess progress and achievement of objectives. You'll also determine how to collect that necessary data, develop report formats, and create a schedule for monitoring/reporting performance. You'll use this critical information to identify and implement key improvements throughout the life of the program (see Step Seven).

During Step Five, closely document your process for reviewing performance, identifying improvements, and implementing change. As with any program, modifications and enhancements are often necessary for optimal performance. Many organizations already have formal quality improvement processes in place to identify and implement enhancements. You can modify yours during Step Five, or create something entirely new.



Whatever you do, don't overlook this step!

Technically, the performance monitoring plan could be considered part of Step Four. Yet it's often overlooked until the program is operating—which means data necessary for adequate evaluation simply isn't collected. It's distinctly broken out as Step Five here, because evaluation and monitoring are so vital to your program's ongoing success.

ACTIVITIES FOR INSIGHT

1. Performance Monitoring Plan

Develop a detailed program implementation plan for the operational, administrative, and clinical services portions of your telehealth program. The Performance Monitoring Indicators Matrix is a particularly effective tool in this regard.

2. Quality Improvement Process

The quality improvement process should clearly document the manner in which your program will implement quality enhancements. Be sure to address improvement structure, performance review, and ways to submit improvement suggestions. Also address the ways you plan to monitor the actual implementation of improvements.



Tools for Step Five:

- Performance Monitoring Indicators Matrix



Address program evaluation in detail during Step Five. Make key decisions on formal evaluation methods, and also routine tracking. By the end of Step Five, you should have:

- Selected performance indicators, and corresponding data elements.
- Data collection mechanisms—along with a plan for developing and implementing your performance monitoring process.
- A specific process for reviewing performance monitoring data, and making program improvements.

ACTIVITIES FOR INSIGHT, continued



SLOW & STEADY

Your data collection should begin immediately.

Don't put off your data collection. You may view the process as arduous or confusing, but that doesn't have to be the case. When you design data capture into your actual workflows and operational process, it can often take place automatically. The process generally becomes more daunting when the information needs to be captured and assessed after the program has already begun. Gathering data and reporting on performance helps foster organizational support, necessary funding, and further expansion of services. For the sake of consistency, remember to match your data design with the baseline data collected during your needs assessment.

PERFORMANCE MONITORING CHECKLIST

Have you covered everything? Don't leave any details to chance. Instead, read through the Step Two Checklist below. You may see a few additional elements to consider before proceeding further.

YES NO UNSURE

Answer These Critical Questions

1. Have you identified key performance indicators?
2. Have you determined the data elements you'll track and measure to evaluate ongoing program performance?
3. Have you familiarized yourself with the various data points in the Performance Monitoring Indicators Matrix?
4. Have you developed a specific and workable plan for ongoing data collection?
5. Do you know who will review this data, and how periodic program enhancements will be recommended?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PERFORMANCE MONITORING & DATA ELEMENTS MATRIX

Revised to include data elements or aggregated data elements. Also includes a separate column to consider core, desirable, or remove. Decisions would be impacted by the aggregated data element matrix.

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Program Performance									
1. Percent of all health services /encounters performed using telehealth: total and by specific service type.	<ul style="list-style-type: none"> •Non telehealth services/encounters <ul style="list-style-type: none"> -Total number -Total by service type •Services provided/obtained through telehealth: <ul style="list-style-type: none"> -Total number -Total by service type 	Indicates overall use of telehealth in the facility –total and by specific service types	X	X	X	X	X	X	
2. Telehealth services provided: total and by type	<ul style="list-style-type: none"> •Completed telehealth encounters: <ul style="list-style-type: none"> -Total number -Total by service type 	General overview of telehealth use.	X	X	X	X	X	X	
3. Clinical services provided: total and by type	<ul style="list-style-type: none"> •Clinical service encounters: <ul style="list-style-type: none"> -Total number -Total services by type 	General overview of clinical services.	X	X	X	X	X	X	
4. Administrative services provided: total and by type	<ul style="list-style-type: none"> •Administrative service usage: <ul style="list-style-type: none"> -Total number -Total services by type -Total participants -Total hours 	General overview of administrative services. Types could include: <ul style="list-style-type: none"> • Administrative meetings • Community/business non-health meetings • Commercial conferencing services 	X	X	X	X	X	X	
5. Educational services provided: total and by type	<ul style="list-style-type: none"> • Educational services provided: <ul style="list-style-type: none"> -Total number -Total number by type -Total attendees -Total hours 	General overview of educational services. Types could include: <ul style="list-style-type: none"> • Education for health professionals 	X	X	X	X	X	X	

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Program Performance									
5. Educational services provided: total and by type (continued from previous page)		<ul style="list-style-type: none"> • Elective education for health professionals • Case reviews/grand rounds • Community health education programs • Patient support groups 							
6. Clinical versus non-clinical uses, in percent	<ul style="list-style-type: none"> • Clinical encounters: <ul style="list-style-type: none"> -Total • Non-clinical encounters: <ul style="list-style-type: none"> -Total 	General overview of service use.	X	X	X	X	X	X	
7. Percent of requested telehealth services/ encounters that were successfully scheduled.	<ul style="list-style-type: none"> • Telehealth encounters requested: <ul style="list-style-type: none"> -Total number of requests -Total number by type • Telehealth encounters scheduled: <ul style="list-style-type: none"> -Total number scheduled -Total number scheduled by type 	<ul style="list-style-type: none"> • May identify telehealth provider shortages or long wait times • May identify scheduling operations problems 	X	X	X	X	X	X	
8. Percent of scheduled telehealth encounters completed.	<ul style="list-style-type: none"> • Telehealth encounters scheduled: <ul style="list-style-type: none"> -Total number scheduled -Total number scheduled by type • Telehealth encounters completed: <ul style="list-style-type: none"> -Total number completed -Total number completed by type 	Alerts to low completion rates. May be affected by (partial list): provider availability, technical problems, patient site staffing, patient no-show.	X	X	X	X	X	X	
9. Percent of scheduled telehealth encounters not completed: total, by type, and by specific reason	<ul style="list-style-type: none"> • Telehealth encounters scheduled: <ul style="list-style-type: none"> -Total number scheduled -Total by type • Telehealth encounters not completed: <ul style="list-style-type: none"> -Total number completed -Total number by type -Not completed by specific reason 	Alerts to low completion rates. Reason codes could include: <ul style="list-style-type: none"> • Provider not available • Patient failed to appear • Patient presenter unavailable 	X	X	X	X	X	X	

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Program Performance									
9. Percent of scheduled telehealth encounters not completed: total, by type, and by specific reason (continued from previous page)		<ul style="list-style-type: none"> Participants not available Patient refused service Required workup/test results or other clinical data not available Technical or equipment problem 							
10. Percent of encounters that are started but cannot be completed: total and by reason	<ul style="list-style-type: none"> Telehealth encounters started <ul style="list-style-type: none"> -Total -Total by type Telehealth encounters started but not completed: <ul style="list-style-type: none"> -Total -Total by type -Total by reason 	Alert to low completion rates. Reasons could include: <ul style="list-style-type: none"> Patient refused after visit began Presenter of provider called away during visit Required workup/test results not available Technical/equipment problem 	X	X	X	X	X	X	
11. Percent of patient refusals: total and by reason	<ul style="list-style-type: none"> Scheduled telehealth encounters: <ul style="list-style-type: none"> -Total scheduled -Total by type Patient refusals: <ul style="list-style-type: none"> -Total refusals -Total by type -Total by reason 	Monitors refusal rates and reasons for refusal. Reasons could include: <ul style="list-style-type: none"> Uncomfortable with technology Unsure that technology is effective Wants to see doctor in person 	X	X	X	X	X	X	
12. Completed encounters impacted by a technical issue: percent of total completed encounters and percent by reason	<ul style="list-style-type: none"> Encounters completed: <ul style="list-style-type: none"> -Total completed -Total by type Encounters with technical issue reported <ul style="list-style-type: none"> -Total -Total by specific reason 	Monitors types of technical situations that are impacting operations. By capturing reasons, performance improvement measures can be implemented. Reasons could include: <ul style="list-style-type: none"> Dropped calls Poor video quality Poor audio quality Diagnostics not working 	X	X	X	X	X	X	
13. Scheduled encounters cancelled or not completed due to technical issues: percent of total scheduled encounters and percent by reason (13, 14).	<ul style="list-style-type: none"> Scheduled telehealth encounters: <ul style="list-style-type: none"> -Total scheduled -Total scheduled by type 	Monitors types of technical situations that are causing service cancellations. Reasons could include: (see next page)	X	X	X	X	X	X	

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Program Performance									
13. Scheduled encounters cancelled or not completed due to technical issues (continued from previous page)	<ul style="list-style-type: none"> Scheduled telehealth encounters cancelled or not completed due to technical issues: <ul style="list-style-type: none"> -Total -Total by reason 	<ul style="list-style-type: none"> No network connection Dropped calls Poor video quality Poor audio quality Diagnostics not working 							
14. Most frequent times for telehealth services delivery	<ul style="list-style-type: none"> Encounter start time 	This has value for “on demand” telehealth services to identify staffing patterns.			X	X			
15. Average time from telehealth service request to telehealth encounter scheduled—non-high risk	<ul style="list-style-type: none"> Encounter request date Encounter scheduled date 	Provides information on scheduling system performance and provider availability.	X	X			X	X	
16. Average time from service request to the on-demand provider to start of encounter—high risk	<ul style="list-style-type: none"> Time encounter requested Time encounter scheduled 	Provides information on scheduling system performance and provider availability.			X	X			
17. Average time from identification of need for a telehealth encounter until S&F package sent	<ul style="list-style-type: none"> Date and time of patient image capture Date and time of store and forward package transmission 	Store and forward service type specific. Detects patient site performance issues.	X		X	X			
18. Average time from S&F package sent to assessment/ results returned	<ul style="list-style-type: none"> Date and time of store and forward package transmission <ul style="list-style-type: none"> -All services -By service type Date and time of provider response 	Store and forward service type specific. Detects remote provider site performance issues.	X		X	X			
19. Average time per telehealth encounter (including prep and charting): all services and by specific service type	<ul style="list-style-type: none"> Start time of encounter End time of encounter Specific service type 	Provides information on total encounter time at either patient or provider side. Useful for scheduling.	X	X	X	X	X	X	
20. Average number of video minutes per encounter: total and by specific service	<ul style="list-style-type: none"> Start time of live video End time of live video Service type 	Provides information on time required for different specialties/services (without pre- and post-provider activity). Useful for scheduling, service negotiations.	X	X	X	X	X	X	

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Program Performance									
21. Time required to obtain service telehealth versus non-telehealth: total and by specific service	<ul style="list-style-type: none"> Estimated time to in-person service delivery -Specific Type -Service method Date of service telehealth request Date of service telehealth encounter 	Indicates relative availability of telehealth services; ability to impact service scheduling.	X	X	X	X	X	X	
22. Percent of allocated telehealth appointment time used.	<ul style="list-style-type: none"> Time allocated to telehealth appointments Allocated time used for appointments 	Measures use of available resources, and available resources unused.	X				X	X	
23. Result of telehealth encounter by reason	<ul style="list-style-type: none"> Total encounters Encounter result by reason 	Reasons may include: <ul style="list-style-type: none"> Corroborated initial diagnosis/treatment plan Resulted in definitive diagnosis/treatment plan Confirmed need for face-to-face visit with remote provider Confirmed need for urgent/emergent transport Avoided need for face-to-face visit with remote provider Avoided need for urgent/emergent transport No change in diagnosis or treatment plan Changed diagnosis or treatment plan 	X	X	X	X	X	X	

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Program Performance									
24. Telehealth services by delivery method	<ul style="list-style-type: none"> • Telehealth encounters completed • Total number by delivery method 	Provides distribution by delivery method. Methods could include: <ul style="list-style-type: none"> • Live interactive • Store and forward • Hybrid • Telemetry 	X	X	X	X			
25. Percent of patient encounters, no subsequent in-person encounter was necessary	<ul style="list-style-type: none"> • Total number of telehealth encounters • Total number of telehealth encounters with no subsequent in-person required 	Provides information on how often telehealth visits replaced an office visit.	X	X	X	X		X	
26. Primary diagnosis by service type	<ul style="list-style-type: none"> • Service type • CPT codes for primary diagnosis • CPT codes for secondary diagnosis 		X	X	X	X		X	
Home/Chronic Disease Monitoring									
27. Improved quality of life scores. Aggregate change in quality of life rating; percent improved, percent no change, percent decreased.	<ul style="list-style-type: none"> • Quality of life scores 	Provides improvement in quality of life rates through telehealth use. Balances under patient measures provider.	X	X	X	X	X	X	
28. Physiologic measurements collected by type, compared to number indicated in care plan.	<ul style="list-style-type: none"> • Number physiologic measures scheduled for collection • Number physiologic measures collected 	Non-adherence to care plan by type: human and technology.		X					

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Home/Chronic Disease Monitoring									
29. Percent change in admission and readmission rates	<ul style="list-style-type: none"> Average readmission rate before telehealth Average readmission rate after telehealth 	Provides change in in-patient admissions resulting from telehealth use.		X					
30. Percent change in visits to primary care provider (PCP)	<ul style="list-style-type: none"> Average PCP visit rate before telehealth Average PCP visit rate after telehealth 	Provides reduction in PCP visits resulting from telehealth use.		X					
31. Average number of in-home care nurse encounters per episode of care for home monitoring telehealth programs	<ul style="list-style-type: none"> Number of in-home nurse encounters Number of episodes of care 	Provides overall utilization on nursing services.		X					
32. Nurse contacts per episode of care due to out-of-range reading (NEW)	<ul style="list-style-type: none"> Nurse contacts for out of range readings Number of episodes of care 	Provides information on out-of-range readings per episode of care.		X					
33. Average time between in-home nurse interventions compared to non-telehealth	Number of home clinical visits <ul style="list-style-type: none"> For telehealth enrollees For non telehealth enrollees Number of days between visits <ul style="list-style-type: none"> For telehealth enrollees For non telehealth enrollees 	Allows tracking of the length of stable periods.		X					
34. Unplanned telehealth encounters by episode of care	<ul style="list-style-type: none"> Number of unplanned telehealth encounters Number of episodes of care 			X					
35. Average number of nurse encounters per unit of time (hour, shift).	<ul style="list-style-type: none"> Number of nurse encounters Unit of time 	Provides productivity information.		X					

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
eICU									
36. Percent change in mortality rate	<ul style="list-style-type: none"> Average mortality rate before telehealth Average mortality rate after telehealth Average ICU length of stay before 	Provides reduction in mortality rate through telehealth use. Requires historical data collection and comparison. A common indicator for effectiveness and cost-avoidance.			X				
37. Percent change in ICU length of stay	Telehealth <ul style="list-style-type: none"> Average ICU length of stay after telehealth 	Provides reduction in ICU length of stay that in eICU programs use. Requires historical data for comparison.			X				
38. Percent change in complications	<ul style="list-style-type: none"> Average complication rate before telehealth Average complication rate after telehealth 	Provides reduction in complications in eICU programs. Requires historical data collection and comparison. Provides reduction in overall length of stay in eICU programs. Requires historical data for comparison.			X				
39. Percent change in complications	<ul style="list-style-type: none"> Average length of stay before telehealth 				X				

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Emergency Department									
40. Percent of appropriate TPA. Percent reduction in over all length of stay. Delivery in allowable timeframe	<ul style="list-style-type: none"> • Number of patients presenting with stroke symptoms that are eligible for TPA • Number of patients for whom TPA was administered within the allowable timeframe 	Provides a measure of telehealth impact on delivery of TPA in appropriate cases. Requires historical data comparison.				X			
41. Percent change in time required for triage or evaluation in ED	<ul style="list-style-type: none"> • Time triage or evaluation services requested <ul style="list-style-type: none"> -Total -By service type • Time triage or evaluation services provided <ul style="list-style-type: none"> -Total -By service type 	Provides measure of change in obtaining triage or evaluations and use of ED beds. Requires historical data comparison.							
Provider Measures									
42. Practitioners referring patients for telehealth: -Percent of total practitioners	<ul style="list-style-type: none"> • Number of practitioners • Number of practitioners with telehealth referrals 	Provides an indicator of the acceptance and use of telehealth by referring practitioners.	X	X	X	X		X	
43. Percent of providers that indicated overall satisfaction levels of satisfied or above: -Total and by reason	<ul style="list-style-type: none"> • Number of satisfaction instruments collected • Number of responses that indicate satisfied or above: <ul style="list-style-type: none"> -Total responses -Total responses by reason 	Identified overall satisfaction and reasons. Reasons could include: <ul style="list-style-type: none"> • Makes efficient use of time • Integrated into workflow • Presenter knowledgeable • Technology is reliable • Technology is appropriate • Patient comfortable/cooperative 	X	X	X	X	X	X	
44. Percent of providers indicating unsatisfied: -Total and by specific reason	<ul style="list-style-type: none"> • Number of satisfaction instruments collected • Number of responses that indicate unsatisfied or below by reason 	Detects provider concerns. Reasons may include: <ul style="list-style-type: none"> • Technology did not perform as expected 	X	X	X	X	X	X	

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Provider Measures									
44. Percent of providers indicating unsatisfied: -Total and by specific reason (continued from previous page)		<ul style="list-style-type: none"> • Patient site not prepared • Proper video etiquette was not followed • Poor patient presentation skills • Protocol not followed • Necessary information unavailable • Ineffective use of time • Patient uncooperative 							
45. Percent of patients for whom telehealth encounters were deemed appropriate	<ul style="list-style-type: none"> • Total encounters • Inappropriate encounter 	An indicator of referral pattern behaviors. Detects opportunities for provider education.	X	X	X	X	X	X	
46. Percent of patients for whom telehealth encounters were deemed appropriate	<ul style="list-style-type: none"> • Number of encounters where provider participated in the encounter • Number of providers that indicated increased understanding 	This only applies to patient site providers that participated in teleconsultation. This is a measure of effectiveness and impact.	X		X	X			
47. Percent of patient sites indicating satisfied or above, and by specific reason	<ul style="list-style-type: none"> • Number of satisfaction instruments collected • Number of responses that indicate satisfied or above, and by specific reason 	Identified overall satisfaction and reasons. Reasons could include: <ul style="list-style-type: none"> • Makes efficient use of time • Integrated into workflow • Provider knowledgeable • Technology is reliable • Technology is appropriate • Patient comfortable/cooperative 	X	X	X	X	X	X	

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Provider Measures									
48. Percent of patients indicating unsatisfied: -Total and by specific reason.	<ul style="list-style-type: none"> Number of satisfaction instruments collected Number of responses that indicate unsatisfied or below by specific reason 	Detects patient site areas of concern. Reasons may include: <ul style="list-style-type: none"> Technology did not perform as expected Provider site not prepared Proper video etiquette was not followed Poor provider presentation skills Necessary information unavailable Ineffective use of time 	X	X	X	X	X	X	
49. Percent of providers/presenters that are trained to use the system	<ul style="list-style-type: none"> Number of telehealth providers/presenters in system Number that received formal training 	Identifies training levels.	X	X	X	X	X	X	
50. Percent of providers/presenters that demonstrate adequate ability in telehealth service delivery	<ul style="list-style-type: none"> Number of telehealth providers/presenters in system Number that demonstrated skill in telehealth service delivery 	Direct observation needs to support assessment of skills. Identifies need for additional training.	X	X	X	X	X	X	
Patient Measures									
51. Percent of patients that indicated overall satisfaction levels of satisfied or above	<ul style="list-style-type: none"> Number of patient responses collected Number of patient responses with satisfied or above 	Identifies overall satisfaction.	X	X	X	X		X	
52. Percent of patients that indicated they would recommend the telehealth system to a friend or family member	<ul style="list-style-type: none"> Number of patient responses collected Number of favorable patient responses 	Identifies overall satisfaction.	X	X	X	X		X	

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Cost Benefit									
53. Estimated reduction or avoidance in travel costs as a result of using telehealth system: -Total, by type of transport, and by payer of transport	<ul style="list-style-type: none"> • Total sessions held • Total travel miles avoided <ul style="list-style-type: none"> By patients - By providers By payer - By service type • Estimated cost of travel miles <ul style="list-style-type: none"> By patients - By providers By payer - By service type 	This indicator reflects all types of travel cost avoidance—both patient and provider. Should be captured with each appropriate encounter, or via algorithm. Many programs develop algorithms to identify where provider or patient would have to travel without telehealth, determine mode of transportation, and estimate cost transportation including: vehicle charges (personal vehicle, ambulance, public transportation, air ambulance), mileage costs, salary costs while traveling, overtime/swing shift cost, etc. Payer types may include patient, health system, insurer, or government program. Provides an indicator of environmental impact.	X	X	X	X	X	X	
54. Carbon footprint impact	<ul style="list-style-type: none"> • Total travel miles avoided • Total reduction in carbon footprint 	Resulting from telehealth services.							
55. Net cost and revenue per telehealth service delivery unit -Total and by service type	<ul style="list-style-type: none"> • Net cost of telehealth service delivery <ul style="list-style-type: none"> -Total cost per unit -Total cost per unit by service type • Net revenue per telehealth service delivery <ul style="list-style-type: none"> -Total revenue per unit -Total revenue per unit by service type 	Provides per-unit cost for services provision. Requires work with the organization's administration/finance offices to develop and apply a model. Organization creates model customized to specific application and situation. Data elements could include: cost of equipment, amortization period, cost of development, staffing costs, overhead, insurance, IT support, training, cost of provider services, revenues (direct and indirect).	X	X	X	X	X	X	
56. Return on investment	<ul style="list-style-type: none"> • Revenue/gain from investment in telehealth • Cost associated with investment in telehealth 	Measure to compare a program's cost with the anticipated gain from the program. Requires work with the organization's finance office to develop ROI model and collect data.	X	X	X	X	X	X	

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Cost Benefit									
57. Cost benefit	<ul style="list-style-type: none"> List of costs by item List of benefits with associated financial value—can be both direct and indirect; tangible and intangible 	Overall picture of program value that allows program to quantify and place a value on tangible and intangible costs and benefits.	X	X	X	X	X	X	
58. Percent of total revenue generated by telehealth services (NEW)	<ul style="list-style-type: none"> Total revenues Revenue associated with telehealth service 	How telehealth contributes to the overall revenue of the organization. May be useful to look at gross revenue and net revenue.	X	X	X	X	X	X	
59. Percent of services reimbursed: -Total and service by type	<ul style="list-style-type: none"> Total number of telehealth services <ul style="list-style-type: none"> -Total -Total by type Total number of reimbursed services <ul style="list-style-type: none"> -Total -Total by type 	Provides telehealth-specific information on reimbursement.	X	X	X	X	X	X	
60. Percent of total provided telehealth services that are not reimbursed	<ul style="list-style-type: none"> Total number of encounters Total number of telehealth services that were reimbursed <ul style="list-style-type: none"> -Total by service type -Total dollar amount Total number of services not reimbursed (not billed) <ul style="list-style-type: none"> -Total by service type -Total dollar amount 	Provides information on the number of unpaid telehealth services.	X	X	X	X	X	X	

Indicator	Data Elements/ Aggregated Data Elements	Purpose/Value	Outpatient Services Chronic	Disease Home Monitoring	eICU	ED Services	Admin	Educational Svcs	Selected Indicators
Cost Benefit									
61. Comparative cost to place 24-hour internist	<ul style="list-style-type: none"> • Cost of telehealth on demand internist • Cost of 24-hour on-site internist 								
62. Productivity loss avoided	<ul style="list-style-type: none"> • Estimated hours of work lost due to travel 	Requires application of an algorithm to associate time savings with productivity loss reduction.	X	X	X	X	X	X	

PROGRAM/TECHNOLOGY PLANNING CHECKLIST



Have you covered everything? Don't leave any details to chance. Instead, read through the Step Two Checklist below. You may see a few additional elements to consider before proceeding further.

	YES	NO	UNSURE
Answer These Critical Questions			
1. Have you developed an approach to measure, track, and achieve your target for telehealth volume and utilization?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Have you developed a plan to measure success in achieving your project goals and outcomes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Have you determined how you'll measure the impact telehealth has made within your organization?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Have you identified workable collection methods for obtaining the necessary and appropriate data?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. If performance objectives are not being met, have you developed a process for identifying and implementing relevant changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Have you determined how program improvements will be defined, planned, implemented, tested, and managed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



DEVELOP & PLAN STEP 5

Special Section

Preparing for Organizational Change

Develop & Plan, Step 5 - Special Section

PREPARING FOR ORGANIZATIONAL CHANGE

5 STEP FIVE: CHANGE MANAGEMENT

QUESTIONS

- Do you have a formal, structured change management plan?
- Is your plan customized to reflect the size of the change and the people involved?
- Do you have a detailed communications plan?
- Do you have the necessary sponsorship from organizational leadership?
- Are you prepared to manage resistance among staff?
- Have you developed a system to gather feedback and share best practices?

PRODUCTS/ACTIVITIES

- Change Management Model
- Change Readiness Assessment
- Primary Sponsor
- Resistance Management Plan

1. What Is Change Management?

Change management is the application of standardized tools and processes to successfully lead the people in your organization through a new initiative. While project management focuses on the technical side of change—including workflows, technology, and job descriptions—change management helps your employees successfully adapt to these technical changes as your telehealth initiative progresses.

If you've been following this Toolkit in sequence, you've already collected initial data and begun to outline processes. Now it's time to consider the people in your organization who will put these processes and enhancements into place. This is a special activity in Step Five that prepares your staff for transition via targeted communications, awareness, and support from organizational leadership and people managers. Creating a comprehensive change management plan helps reduce project delays and minimize rework, decreasing the chance that your telehealth project will be abandoned down the road. It also helps lessen employee resistance and workarounds when you introduce new technology and related processes.



Using a structured change management methodology helps keep your initiative on track. Popular change management models include Kotter's, Lewin's, and ADKAR (which stands for awareness, desire, knowledge, ability, and reinforcement).

The model you adopt largely depends upon the scope of your project and your organizational culture. Regardless of your approach, however, it's important to create a change management team and understand key participant responsibilities.

Develop & Plan, Step 5 - Special Section

ORGANIZATIONAL CHANGE (continued)



2. Communicating Change

To effectively communicate change to employees, consider everyone whose work will be impacted by the telehealth program once it's implemented.

- Develop a communications plan and timeline for each audience group.
- Try to incorporate multiple communication methods, such as group meetings, email, and individual conversations.
- Have your primary sponsor introduce the initiative to your organization, then provide ongoing updates.
- People managers should then communicate with their direct reports to explain changes impacting specific roles and responsibilities.
- Provide staff with ample opportunity to ask questions and share feedback. This helps limit the volume of misinformation that can circulate during widespread change.

Expect to meet resistance when implementing a project of this size—but remember, there are several ways to anticipate and help reduce employee pushback. Think back to past initiatives. What type of resistance did you encounter during those implementations? Were you able to address it successfully, and could it resurface? Can you examine employee feedback regarding past successes or failures? This activity may feel similar to the needs assessment previously discussed, but this time you're identifying potential barriers among employees. Hindrances might include anxiety over role changes, fear of job loss, change fatigue, ambivalence due to past failures, or perceived inequality.

3. Training Support

Eventually, you'll work out the specifics of your telehealth training program. When creating a change management plan around training, consider how to support long-term awareness and competencies. Identify all the groups that need to receive training. Then think about the unique learning styles and scheduling accommodations that will come into play for your specific employee mix.

It's important to support your teams with multiple learning modalities. Consider providing written learning aids, practice tools, and quick-start resources. Identify subject matter experts (SMEs), and make these individuals accessible across your organization. Remember that things are likely to continue evolving after your initial training, so put a system in place that can quickly alert staff to updated policies, educational materials, and SME access. This helps ensure that employees are always taking advantage of the most up-to-date resources.



Develop & Plan, Step 5 - Special Section

ORGANIZATIONAL CHANGE (continued)



4. The Human Element

People managers have a uniquely important role in your change management plan. They act as liaisons between employees and leadership, providing communication, feedback, and team advocacy where necessary. These managers observe their teams as they perform the new work, coaching staff members toward expected competencies.

Each team may have its work impacted in a different way once telehealth is implemented. This means that the individuals supervising those teams may need to prepare differently. Since people managers know and understand the individuals who comprise their teams, they're often able to manage resistance at a more personal level. Remember that positive recognition from a direct supervisor is one of the most effective ways to mitigate resistance.



As your telehealth program becomes more established, you will track performance and collect data. Don't forget to check in with your teams and explore how they feel about the change in general. Monitor areas of early adoption and those of prolonged resistance. Consider whether you can gather feedback from each group, which may assist teams experiencing a slower transition.

Also make sure your teams have the time, resources, and support they need to perform new work at an expected level of competency. If this isn't the case, explore what you can provide to close the gap. Work closely with the telehealth project manager, who has also been collecting data and performing improvement cycles throughout implementation. This individual can help you communicate changes, provide support, and obtain feedback. Once you begin achieving key organizational milestones, have your primary sponsor communicate the positive news and encourage employees to celebrate.



Change management prepares employees in your organization to successfully transition through program implementation. That's why it's broken out into its own distinct subsection within Step Five. To navigate change successfully, you should have:

- A primary sponsor
- An organization-wide communication plan
- A resistance management plan
- Systems to gather employee feedback and measure adoption
- Reinforcement mechanisms

ACTIVITIES FOR INSIGHT

1. Communications Plan - Starter Prompts

Use these starter prompts to begin crafting a communications plan that helps you get the word out in a way that's timely, clear, and thorough. Adapt the following cues for all your key audiences:

Identify key audience (group whose work will be affected once this change is initiated).	
List the best method(s) to communicate information to this audience.	
What is the best timeframe for communicating what this audience needs to know?	
Indicate the best person(s) to provide this information.	
How will audience feedback be gathered and reviewed?	

2. Resistance Management Plan - Starter Questions

These sample questions can equip you to identify and address sources of resistance before they evolve to create bigger challenges.

Where do we anticipate resistance for this initiative?	Example: We anticipate resistance from teams with concerns about time management
What might this resistance look like in our employees?	Examples: Lack of support, complaining to supervisors, saying "we've always done it this way"
What is our plan to prevent resistance related to the potential scenario(s) identified above?	
How will we manage resistance if it occurs?	

ACTIVITIES FOR INSIGHT (continued)



Assessment is Critical

Take the time to assess your organization's readiness for change from a human perspective. Remember, a versatile new technology or perfectly detailed workflow won't help you meet the needs identified in Step One if your staff doesn't comply.

CHANGE MANAGEMENT CHECKLIST

Have you covered everything? Don't leave any details to chance. Instead, read through the Step Five/Change Management Checklist below. You may see a few additional elements to consider before proceeding further.

YES NO UNSURE

Answer These Critical Questions

1. Are you using a structured change management methodology?
2. Have you identified a primary sponsor?
3. Does this person understand the responsibilities of this role?
4. Is the primary sponsor prepared and able to fulfill their role for the duration of the project's implementation?
5. Have you established a change management team (separate from the project manager/project management team)?
6. Do you have a proactive plan to mitigate employee resistance?
7. Do you have a resistance management plan?
8. Do people managers have the information and support required to lead change on their teams?
9. Do you have an employee communications plan?
10. Have you identified all unique audience groups who require a communications plan?
11. Does your communications plan explain why change is taking place, and not just how?

CHANGE MANAGEMENT CHECKLIST (continued)



YES NO UNSURE

Answer These Critical Questions

12. Have you created a system that allows employees to ask questions and provide feedback?
13. Does your telehealth training program accommodate multiple learning styles and use multiple teaching modalities?
14. Are there resources employees can access post-training?
15. Are there subject matter experts (SMEs) across the organization who can reinforce team learning?
16. Do you have systems in place to assess clinical competency?
17. Does your organizational structure and culture reinforce the use of telehealth (vs. reverting back to previous workflows)?

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5

KEY ROLES/FUNCTIONS

It's vital to proactively manage change from a human perspective across your organization. See the Telehealth Staffing Guide toward the end of this Toolkit for a variety of other telehealth-related roles that are intrinsic to the success of your program.

Change Management Function

This function is part of the development and overall implementation of your telehealth program. It's focused on the human aspect of your change initiative, using a standardized set of tools and processes to enable successful project outcomes. The change management function assesses organizational readiness, creates change management plans, and oversees implementation of associated activities. A team may be necessary to support these activities, based upon project scope and required expertise.

Ideally, the project manager and change management team leader should collaborate throughout the project to keep technical and change management activities closely aligned. You might even consider assigning these two functions at the same time. Once your telehealth initiative is in post-implementation, there may still be some ongoing need to communicate reminders that help support adherence and continuity.

Primary Sponsor Role

A primary sponsor is a member of the executive leadership team. This individual is responsible for ensuring that workplace change achieves its intended objectives. The primary sponsor role authorizes the change, then encourages top-down acceptance through a variety of focused initiatives.

See the Telehealth Staffing Guide for a detailed overview of other key roles important to telehealth program success.

ADDITIONAL ACTIVITY FOR INSIGHT

Sample Change Management (CM) Plan - Starter Framework

The prompts below can help you consider key factors to manage telehealth-related organizational change more proactively and productively.

PHASE ONE: SCOPING	PHASE TWO: EXECUTING	PHASE THREE: SUSTAINING
Select a CM methodology that reflects: <ul style="list-style-type: none"> • Scope of change • Organizational preparedness 	Develop key CM plans: <ul style="list-style-type: none"> • Communications • Resistance • Training • Coaching (people management) 	Collect and review employee feedback
Assemble a change management team	Implement plans	Identify practice gaps
Choose a primary sponsor	Enlist primary sponsor to help encourage top-down acceptance	Undertake performance management activities
Create or provide systems that facilitate ongoing staff feedback	Make sure teams know where they can go to ask questions or provide input	Acknowledge and celebrate milestones

IMPLEMENT & MONITOR

STEP 6

Implement Your Telehealth Program

Implement & Monitor, Step 6

IMPLEMENTING YOUR PROGRAM

6

STEP SIX: PROGRAM IMPLEMENTATION

QUESTIONS

- Are you meeting project schedules?
- Are you identifying and mitigating risks?
- Is a communication plan in place?
- Is high-quality work being delivered?
- Do any tasks need revision?
- Are you identifying and managing necessary program modifications?
- Have you completed all deliverables and products required for smooth operation?
- Is the program fully ready for operation?

PRODUCTS/ACTIVITIES

- Project Management Reports
- Project team meeting
- Program deliverables

Step Six ensures that you complete everything necessary to make the telehealth program fully operational. You begin by making sure ALL required implementation tasks are defined, scheduled, and assigned a primary resource responsible for task completion. In this step, program development measurably benefits from the application of project management principles and practices.

Depending upon the scope of your telehealth program, work that occurs during this step may be managed by a dedicated project manager using formal project management practices to keep initiatives on track. Smaller work efforts may be managed and coordinated more informally. In nearly all cases, however, it's useful to have a lead person responsible for coordination and completion of the various implementation tasks.

A detailed work plan is generally used to record and track progress on these tasks. This work plan also serves to highlight dependencies between tasks. Once your work plan is established, shift your focus toward smooth execution. Throughout the process, it's important to update stakeholders, manage risks, and resolve any issues that arise. Once your program is fully operating, focus on executing your performance monitoring plan and conducting ongoing evaluation.

Implement & Monitor, Step 6

IMPLEMENTING YOUR PROGRAM, continued



Following the Step Four plans and specifications you've already established, Step Six ensures that:

- Proper equipment is purchased and installed
- Clinical protocols are fully finalized
- Appropriate contracts are implemented
- Operational processes and procedures are created/revised, then clearly communicated
- Staff members are hired, assigned, and/or trained
- Suitable facilities are established
- To the extent feasible, all aspects of your telehealth program are tested to verify program readiness using the envisioned program model

ACTIVITIES FOR INSIGHT

1. Project Management Report

Step Six helps you manage, track, and report upon the implementation of your telehealth program. It includes specific activities that let you evaluate and monitor risks and issues, which can vastly improve stakeholder communication. A range of project management tools and reports are available to support your implementation, including:

- Implementation plan updates
- Status reports
- Communication plans
- Test plans

2. Project Deliverables

Be sure to address and accomplish all project deliverables that are part of Step Six. Products created during final implementation may include:

- Finalized clinical protocols for new service
- Executed contracts and agreements
- Policies and procedures
- Patient-focused informational materials

PROJECT IMPLEMENTATION CHECKLIST



Have you covered everything? Don't leave any details to chance. Instead, read through the Step Two Checklist below. You may see a few additional elements to consider before proceeding further.

YES NO UNSURE

Answer These Critical Questions

1. Are you monitoring project schedules, and determining if the appropriate deliverables are being satisfied?
2. Are you identifying risks, and mitigating when necessary?
3. Have you implemented your communication plan?
4. Have you determined how necessary program modifications will be identified and managed?

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IMPLEMENT & MONITOR

STEP 7

Monitor Your Telehealth Program

Implement & Monitor, Step 7

MONITOR & IMPROVE YOUR PROGRAM

7

STEP SEVEN: PROGRAM MONITORING/IMPROVEMENT

QUESTIONS

- Are you collecting useful data?
- Are you producing regular performance monitoring reports?
- Are the reports being reviewed by your program team?
- Is your program meeting its objectives?
- What program changes would improve operation and/or outcomes?
- Which challenges or improvements have you identified?

PRODUCTS/ACTIVITIES

- Performance monitoring
- Improvement logs and data collection documents
- Program improvements and/or changes for implementation

Step Seven is the ongoing monitoring and evaluation of your program—and the identification, assessment, and implementation of program improvements. This step monitors the program to determine if it's achieving the desired clinical and business outcomes. It also identifies necessary changes or improvements. Once the program is operational, Step Seven will be repeated at intervals described in the Monitoring Plan. Essentially, it will become part of your regular telehealth operations.

ACTIVITIES FOR INSIGHT

1. Performance Monitoring

Data analysis determines whether a given outcome differed from what you expected. The results and interpretation of your data analyses should be incorporated into a report and/or presentation format. This helps improve clarity and facilitate accurate review.

2. Improvement Logs & Data Collection Documents

Remember, documentation is a critical aspect of your evaluation process. Collecting data and maintaining improvement logs lets your team track deliverables as the project progresses. It's a proven and effective way to identify areas for potential improvement.

3. Program Changes & Improvements

Based upon your data analysis, you may find that program modifications or enhancements are necessary. It's important to develop a clear plan for addressing these periodic shifts and changes.

MONITORING/IMPROVEMENT CHECKLIST



Have you covered everything? Don't leave any details to chance. Instead, read through the Step Two Checklist below. You may see a few additional elements to consider before proceeding further.

YES NO UNSURE

Answer These Critical Questions

1. Can you clearly determine whether your program is meeting its objectives?

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2. Can you identify which specific changes are needed to ensure that the program continues to meet its goals?

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3. Do you have a specific method in place for tracking and measuring key deliverables along the way?

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4. Have you identified the team member(s) who will review this information on a regular basis?

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TELEHEALTH PROMISING PRACTICES

Promising Practices & Lessons from the Field

START SMART... WITH PROMISING PRACTICES!

Take Full Advantage of Lessons from the Field

There's no need to go it alone when you're planning your telehealth program. CTIRC gives you easy access to insights from other organizations. Understanding these experiences can help you avoid pitfalls, streamline development, and make more informed choices.

The following pages identify promising practices and lessons learned from hundreds of telehealth programs implemented over the past decade. Use this information as a compass to help implement your own program in the most straightforward, cost-effective way possible.

Every insight was derived using evaluation reports from telehealth programs funded by CTIRC. Promising practices were then evaluated and reviewed by a national panel of recognized experts, who both validated and expanded the compendium.

For ease of review, the observations are organized according to the Seven Steps identified in the CTIRC Telehealth Program Developer Toolkit. Get started on the following page, and visit www.caltrc.org for additional resources.



CTRC PROMISING PRACTICES FOR TELEHEALTH PROGRAMS



ASSESS & DEFINE

This list summarizes a wide variety of promising practices and lessons learned from literally hundreds of telehealth programs initiated over the past ten years. The information has been sorted to coincide with the Seven Steps outlined in the CTRC Telehealth Program Developer Toolkit.

DEVELOP & PLAN

Review these candid insights carefully, as you undertake your own telehealth planning and implementation journey. They provide time-tested, straightforward guidelines that can enhance stakeholder buy-in, prevent costly errors, and ensure more efficient decision-making.

IMPLEMENT & MONITOR

STEP 1: ASSESS SERVICE NEEDS & ENVIRONMENT

Promising Practice:

Assess and confirm your organization's readiness for telehealth

It's costly, time consuming, and challenging to start a telehealth program—even though it may sound relatively easy. Organizations that perform a formal assessment of readiness have the advantage of identifying potential problems and addressing them early. They also gain a lot of critical support for the project, by engaging people at the outset.



LESSONS LEARNED:

- Be sure your program “matches the mission/vision.”
- Buying equipment is not the first step.
- You need the proper authority to successfully move forward.
- Knowing and reporting the strengths, weaknesses, opportunities, and threats (SWOT) associated with your organization will help build the case for your program.
- Bringing the major department heads into the process early facilitates easier development and program acceptance.
- Identify appropriate leadership team members, and bring the team together from the outset.

STEP 1: ASSESS SERVICE NEEDS & ENVIRONMENT

Promising Practice:

Perform a needs analysis

A needs analysis will help your organization identify key unmet needs, while providing insight into their nature and scope. This helps you devise more effective strategies and approaches to meet those needs. You'll gain a solid planning foundation that helps you clarify objectives and shared expectations. This leads to improved coordination of services and resources, along with a better supporting structure for program evaluation.

LESSONS LEARNED:

- Determine the needs you wish to meet, and how you plan to meet them. Invite clinical staff to identify service needs at both host and remote sites, and at patient and provider sites.
- Ensure the needs analysis is data driven.
- Recognize that the needs analysis is inseparable from the program model and the business case. It lies at the very heart of sound telehealth program planning.



STEP 2: DEFINE THE PROGRAM MODEL

Promising Practice:

Develop preliminary goals and objects for service delivery

Begin by clearly understanding the types of services you wish to deliver—and the most appropriate telehealth program model for your particular organization. Identify which services you plan to target, which geographical regions you'll serve, and what form of telehealth you'd like to implement. Measurable goals and objectives help with equipment selection, staffing development, performance evaluation, cost estimate creation, and more.

LESSONS LEARNED:

- Prioritize your service options.
- Remain focused on the size and scale of the program you're creating. Celebrate the success of your initial few sites, but also continue improving. Start small to help guarantee long-term success.



STEP 2: DEFINE THE PROGRAM MODEL

Promising Practice:

Select the delivery model that best suits your service objectives

Understand the various forms of telehealth currently in use. This helps to ensure that your choice is well-suited to the particular specialty service(s) you plan to provide.

LESSONS LEARNED:

- Familiarize yourself with the different types of telehealth, and select the right kind(s) for your particular need. A “hybrid” system, encompassing several elements of each kind, can prove highly effective—particularly in the delivery of multi-disciplinary care.
- Create high-quality, structured, layered training. Plan to provide this training on an ongoing basis, at both host and remote sites.
- Keep your model in line with your organization’s vision, mission, and strategic plan.



Promising Practice:

Plan to incorporate Health Information Technology (HIT)

The implementation of electronic health records and other HIT is taking place at an ever-escalating pace. Design and structure your own telehealth system to support health information exchange.

LESSONS LEARNED:

- If your organization is not currently deploying HIT methods and practices, it will soon be expected to comply at some level. Be very mindful of this.
- There are always serious network security/privacy issues and concerns related to HIT. For this reason, be sure your technical leadership and legal counsel are involved in planning from the outset.



STEP 2: DEFINE THE PROGRAM MODEL

Promising Practice: Grow your champions

Having clinical and administrative champions to lead and sustain your telehealth program development: It's considered by many to be the single most important factor for success. Champions need to be true organizational change-agents. They must be in a position to garner top-level attention that can obtain financial, technical, and personnel resources. These inspiring figures play a key role in creating a professional environment that nurtures and develops new program champions.



LESSONS LEARNED:

- The success of your telehealth program depends on finding true champions who can help you shift organizational perceptions and practices over time.
- Make sure your champions are true agents of change—with the vision and passion to galvanize change, and help others embrace it.
- Find equivalent champions at all participating network sites.
- Recognize that your champions are the primary advocates of your program. Their success hinges upon the full support and dedication of the entire team, and the larger organization. Help them succeed!

Promising Practice: Know your geographic area

Understand the nature and norms of the locations you'll be working with remotely. Service expectations can vary markedly in different regions—as can medical service purchasing power, reimbursement options, and non-telehealth caregiver access.



LESSONS LEARNED:

- Visit your remote sites, and meet your colleagues. Learn firsthand about their lives, patients, local opportunities, challenges, and concerns.
- Keep communication with these sites direct, clear, and simple to avoid basic misunderstandings or clinical errors.
- Providing medical services over distance may involve key business and legal considerations. This is especially true if you're planning a telehealth network that aims to supply services across state lines, or nationally.
- Understand the "political geography," activities, and interests of any region where you plan to provide service. Supportive willingness to collaborate could make or break your program's success.

STEP 3: DEVELOP YOUR BUSINESS CASE

Promising Practice:

Perform a market analysis and write a business case report

What's another key part of your program development efforts? Identifying and analyzing costs, benefits, risks, and opportunities. A comprehensive business case addresses all these factors—so dedicate yourself to getting it developed, reviewed, and approved. Conduct a thorough market analysis to gauge demand for your proposed services. This helps ensure long-term program sustainability.



LESSONS LEARNED:

- Determine if there's sufficient demand for the telehealth services you plan to provide. A given area can demonstrate tremendous need for a particular specialty service—yet still lack the demand or purchasing power to make it viable.
- In general, view grants as primarily short-term “seed funding.” Actively seek long-term sustainability, from the moment you begin your planning efforts. Seek out grants to support periodic program expansion.
- Focus beyond the “here-and-now.” Make sure your business case report incorporates a plan for growth.

Promising Practice:

Identify and develop revenue opportunities and fiscal estimates

Reimbursement is one of the most challenging areas you'll encounter when implementing a sustainable telehealth program. In the long run, programs need reimbursement for clinical services that's both reliable and adequate. Continually look for opportunities to contract with payers, insurance companies, and others who can offer cost-effective services.



LESSONS LEARNED:

- A sustainable program may require multiple revenue streams—such as hand-in-hand clinical and educational (CME) services. Make sure your program has a good patient/payer mix.
- Learn about the reimbursement strategies and challenges of other telehealth practitioners. Get a general sense of existing reimbursement methods/practices, at both host and remote sites. Base your program design on what already exists.
- Focus on delivering services that have proven themselves to be sufficiently, reliably reimbursed.
- Rural health clinics and FQHCs have multiple revenue models available. Perform thorough research to identify appropriate options for particular service types.

STEP 4: PLAN YOUR PROGRAM & TECHNOLOGY

Promising Practice:

Create a detailed programmatic and technical implementation plan

The most successful telehealth programs result from careful and detailed planning. It's equally important to deploy well-considered, streamlined, fully integrated technologies. These serve as the structural backbone of any service(s) you choose to provide.



LESSONS LEARNED:

- Make sure your plan includes detailed information on timelines, deliverables, and milestones. It should also comprehensively address technical requirements and potential challenges. Remember that you need purchasing power to obtain this technology—so always gauge service demand before proceeding.
- Ask key stakeholders and senior leadership to review your plan. Encourage candid comments, feedback, and open discussion.
- Your plan is a dynamic and living resource. Update it periodically, as your program evolves and programmatic circumstances change.
- Recognize that unforeseen factors may impact operational schedules or program elements at any point in your planning process. Be flexible in your approach, and ready to make quick adjustments.

Promising Practice:

Get the equipment right

Select the right equipment for your telehealth application and delivery mode. Key components include video equipment, communication systems, medical devices, and software applications. Obtain thorough insights, and learn whatever you can about functionality and compatibility. Remember, the best equipment for your program isn't necessarily the priciest.



LESSONS LEARNED:

- Understand appropriate specifications for your devices, applications, and technical systems.
- Identify trustworthy and knowledgeable sources that can guide your equipment choices, and provide ongoing support. Compare features and capabilities to identify the best equipment for your program.
- Because technology advances quickly, be mindful of upgrades and warranty renewals for your systems and applications. Be sure to budget for potentially substantial costs.
- Test, test, test! Check equipment and connectivity exhaustively before announcing or promoting your program.

STEP 4: PLAN YOUR PROGRAM & TECHNOLOGY

Promising Practice: Integrate telehealth into your operation

Telehealth activities should be designed to complement your standard practices and working methods—not complicate or interrupt them. Integrate telehealth alongside your face-to-face clinical activities. Telehealth examination rooms (at both patient and provider sites) should be situated in close proximity to the clinical staff.

LESSONS LEARNED:

- Plan a workflow analysis to discern how your program fits in with standard clinical practice. Discuss necessary changes with stakeholders.
- Think of telehealth technology as just another tool for the delivery of normal services. The main difference is that patients aren't physically in the room with their consulting providers.
- Wherever possible, keep it simple.



Promising Practice: Know the law

When developing a telehealth program, you need to understand and comply with a wide range of legal and regulatory requirements. Don't forget that regulations and laws can change frequently. Keep your organization's legal counsel fully informed of your plans, well in advance of implementation. This permits adequate time for thorough legal reviews where necessary.

LESSONS LEARNED:

- Identify current policies and regulations, and determine the impact they may have on your program. Critical legal and regulatory areas to consider include licensure, credentialing, HIPAA, and medication prescription.
- Consult with your legal counsel to stay fully apprised of potential organizational impacts. This also ensures that you remain aware of legal or regulatory changes.
- Remember, telehealth law is a rapidly changing niche. Make sure your legal counsel is fully aware of all planned program expansions and/or development activities.



STEP 4: PLAN YOUR PROGRAM & TECHNOLOGY

Promising Practice:

Plan for strong IT support at all participating locations

Your telehealth program can't run smoothly unless you have ready access to trained, knowledgeable IT personnel and network support. These team members need to be available during consults, or any telehealth-based clinical interaction. Their equipment and network expertise helps them troubleshoot and make critical technical adjustments as necessary. Identify an IT champion, and involve the IT department in any planning activities that require authorization or approval of technical strategies.



LESSONS LEARNED:

- Identify an IT champion.
- At all telehealth sites, introduce IT personnel to one another. The better they know each other, the smoother your technical troubleshooting will be.
- Make sure IT personnel are fully versed in your telehealth technologies. They should be authorized to work directly with network systems and settings at an organizational level.
- IT personnel should be fully conversant with all the systems, applications, and network needs of your telehealth program—even if they work with your team indirectly. Wider IT system dependencies and knock-on effects may affect your program functionality. Get these on everyone's radar before problems strike.

Promising Practice:

Appoint a dedicated telehealth program manager

No telehealth program can succeed without a dedicated, trained manager working in sync with your champions. This individual helps conceptualize and establish your program's key operational and clinical elements. These create a solid foundation to pave the way for all future development.



LESSONS LEARNED:

- Appoint this individual at the very beginning of your planning, to assist with program design.
- Scale this position according to the size and scope of your program.
- Regard this individual as the "eyes and ears" of your clinical and administrative champions. He or she should be directly responsible for developing key programmatic elements, performance monitoring, and evaluation strategies.

STEP 4: PLAN YOUR PROGRAM & TECHNOLOGY

Promising Practice:

Incorporate system redundancy

Building redundancy into your telehealth architecture is a critical aspect of program design. Used in this context, the term “redundancy” refers to technological system backup. Just knowing this backup exists for critical technical processes helps your clinical staff feel more confident as they undertake their various telehealth activities.



LESSONS LEARNED:

- Technology can be fickle. Accept this in advance, and plan appropriate backup for all your mission-critical systems and applications. Don't risk having your network go down mid-consult!
- Remember to budget for this redundancy. Include it in your business case analysis, and every plan iteration.
- If costs for redundancy seem prohibitive, ensure process redundancies are well-planned to mitigate any technical failures.

Promising Practice:

Plan for development of protocols/policies/procedures

Adapt clinical and service protocols to your telehealth environment—but as much as possible, retain the content of non-telehealth protocols.



LESSONS LEARNED:

- Create protocols that are as close as possible to your non-telehealth practices. This tends to instill far greater confidence in your caregivers. They retain a sense of familiarity, instead of feeling that their daily tasks are appreciably different from their traditional practices.
- Follow standard, recognizable protocols. These lead to more consistent clinical results, which is vital for program monitoring and evaluation.

STEP 5: DEVELOP YOUR PERFORMANCE MONITORING PLAN

Promising Practice:

Establish both short- and long-term performance goals

When you begin implementing your telehealth program, it may seem easier to focus on the short term. But remember that your ultimate goal involves implementing fundamental practice changes that eventually move toward self-sustainability. So build systems into your program that measure and analyze performance at every milestone along the way. Begin devising these assessment methods and evaluation strategies in the early planning stages. Also consider formally evaluating clinical services and operational/cost impacts. Create an approach that regularly monitors all these factors.



LESSONS LEARNED:

- Carry out long-range strategic planning for your telehealth program on an ongoing basis. This vital process should include the program's governing board.
- Plan to start collecting key program data from the very beginning of program implementation.
- Determine and communicate your measures of success.
- Remember, worthwhile things take time. Be realistic as you set goals.

Promising Practice:

Develop an evaluation and monitoring plan

Before you even begin implementation, clearly determine how you'll evaluate your program and monitor its performance. Consider what you should track, how frequently, and by which methods. This process should receive buy-in from your network partners.



LESSONS LEARNED:

- Monitor and evaluate all key elements of your program on a regular, ongoing basis.
- Address a range of topics in your analysis plan—including service usage, patient and provider comfort levels with specific technologies, devices, applications, and cost savings.
- Be sure to monitor ancillary or related services that benefit from your telehealth program activities. Consider, for instance, lab and blood tests performed at local clinics. Another example might be staff and nursing employment.

STEP 5: DEVELOP YOUR PERFORMANCE MONITORING PLAN

Promising Practice: Develop a quality improvement process

A clearly-articulated quality improvement (QI) process is important to any telehealth program. It helps you identify enhancements, react to circumstantial changes, and assess unexpected performance factors.



LESSONS LEARNED:

- Document your improvement structure, and clarify all improvement activities in your QI process.
- Create an actual written document.
- Find equivalent champions at all participating network sites.
- Develop and share your QI process before implementing the program.

STEP 6: IMPLEMENT YOUR TELEHEALTH PROGRAM

Promising Practice: Apply traditional-care principles for successful telehealth room design

Your designated telehealth room should be user-friendly, and well-equipped with dependable and appropriate technology. It should also be comfortable for patients. Apply basic, traditional room design principles to your videoconferencing applications.



LESSONS LEARNED:

- Follow basic and standard rules when considering telehealth room design. Pay close attention to location, size, equipment, furniture placement, lighting, acoustics, and wall color. Patient comfort is key.
- Plan carefully. Discuss your design ideas with program colleagues and IT personnel.
- Remember to budget for necessary design/remodeling.
- Make sure that any licensing requirements are fully understood and properly implemented.

STEP 6: IMPLEMENT YOUR TELEHEALTH PROGRAM

Promising Practice: Get the people right

Any program stands and falls by the people who implement it. In the case of telehealth, it's particularly crucial to appoint/hire the right staff—at both the patient and provider sites. Clearly define roles and responsibilities in advance. Wherever possible, hire team members who fully understand the program's outreach goals and ambitions. Be sure to plan for ongoing training and personnel development activities as well. Actively nurture your staff, and they in turn will nurture new telehealth champions as your program evolves.



LESSONS LEARNED:

- Identify a coordinator to oversee all daily operational program activities—including scheduling, billing, and technical operations. Ideally, this individual should be dedicated to your program full-time.
- Make sure all staff are technically savvy, and knowledgeable about telehealth systems and applications. They should be flexible and open to new clinical methods and approaches.
- Facilitate an environment in which staff at both sites can collaborate to create a seamless, comfortable, reassuring clinical atmosphere for patients.
- Share existing resources, hire additional personnel, or find dedicated team members through your program's outsourcing activities.
- Develop, standardize, and implement a formal, comprehensive training regimen for all staff members. Training must be ongoing. Design your program to increase in scope and scale as your telehealth program expands.
- Nurture new telehealth champions from all levels of your staff.

STEP 6: IMPLEMENT YOUR TELEHEALTH PROGRAM

Promising Practice: Provide easy-to-use administrative tools

Wherever possible, it just makes good sense to simplify tools and processes for scheduling, billing, program measurement, and documentation.



LESSONS LEARNED:

- Keep administrative systems and methods simple! Medical administration is often complex enough without the added challenge of operating over distance, in unfamiliar environments.
- Make sure your administrative staff is well-trained, and conversant in telehealth methods and practices.
- Identify and clearly communicate your measures of success.
- Carefully document all administrative processes and protocols for ongoing reference.

Promising Practice: Communicate regularly with remote partners

Whether you're a provider or a patient site, the "right arm" of your program is represented by the clinicians, nursing staff, presenters, and schedulers at the site remote from you. Make sure BOTH sides of the telehealth link are considered when devising management/administration practices, billing systems, IT support protocols, problem resolution standards, quality improvement programs, and the like.



LESSONS LEARNED:

- Consider bringing participating site personnel together quarterly or annually to discuss the program, share insights, and discuss any necessary changes. This enhances rapport and fosters ongoing support.
- Keep your communication channels open.
- Learn collaboratively, and move the program forward together.

STEP 7: MONITOR AND IMPROVE YOUR PROGRAM

Promising Practice:

Implement your quality improvement process

After assessing your program's initial performance—taking into account service utilization, provider and patient satisfaction, and other key factors—start implementing the QI process you developed during the planning phase previously discussed.

LESSONS LEARNED:

- Evaluate the strengths and weaknesses of your program on a regular basis.
- Implement new ideas, adjustments, and solutions in an organized fashion.
- Make constant quality improvement a standard part of your operational approach.



Promising Practice:

Report regularly

Regularly monitor your program's performance, to identify trends and areas for improvement. This helps ensure that your program will improve continuously over time. It also provides important data to help you determine if your program is achieving its objectives. You'll have the key insights you need to measure your program's organizational and community impact.

LESSONS LEARNED:

- General service utilization reports and quality of service measurements are extremely important.
- Evaluate your telehealth systems and applications in a clinically appropriate and user-friendly manner.
- Evaluate ongoing financial performance as well. As you move toward self-sustainability, this data represents the foundation of your business strategy. As part of your financial analysis, examine costs and benefits, coding issues, reimbursement, accounts receivables, and network utilization.



STEP 7: MONITOR AND IMPROVE YOUR PROGRAM

Promising Practice: Present your outcomes

The field of telehealth is constantly expanding and increasingly mainstream. As such, organizations across the country are tremendously interested in firsthand program experiences and lessons learned. This presents you with numerous opportunities to publish or present your own findings. We invite you to share your insights with new and long-established members of the telehealth community. Together, we can continue improving outcomes and connecting communities!



LESSONS LEARNED:

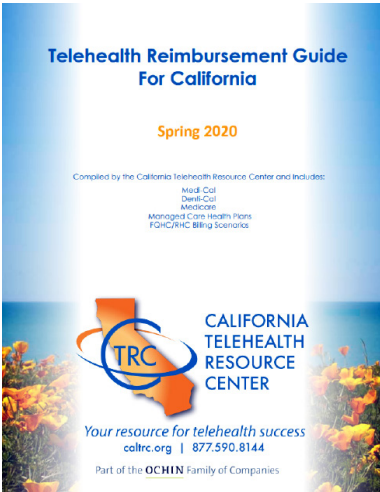
- Consider presenting your own outcomes and program developments (via publication and/or meeting presentation) at least once per year.
- Involve members of your telehealth team in these positive communication activities. It helps secure buy-in from your staff, while increasing enthusiasm for the program.
- Remember that joining forums is a great way to share knowledge and network professionally.
- You can also share outcomes and successes with non-telehealth stakeholders and interested parties in your local community, on your social media feed, etc.



REIMBURSEMENT

Reimbursement Resources

TELEHEALTH PROGRAM REIMBURSEMENT RESOURCES



If you’re looking for reimbursement insights, take advantage of our FREE Telehealth Reimbursement Guide. The California Telehealth Resource Center produces this Guide ourselves, and it’s 100% focused on California payers. Be sure to download the most recent version to obtain the very latest information. Visit caltrc.org today for your no-cost copy, or contact us for additional insights. You can reach our team at (877) 590-8144.

Visit www.caltrc.org/knowledge-center/reimbursement

List other useful reimbursement resources for your team here:

TELEHEALTH STAFFING

Staffing Resources

Telehealth Staffing Guide



California Telehealth
Resource Center

2021 Edition

CTRC STAFFING GUIDE

INTRODUCTION

When planning and developing a telehealth program, staffing is often viewed as one of the most costly components. However, make no mistake—it's your staff that ultimately determines the success of your program. It's therefore critical to closely examine promising practices for developing this vital program component.

Any team encompasses a variety of functions, roles, and responsibilities. Generally speaking, each role is necessary for smooth telehealth service delivery and efficient program operation. As part of the development process, telehealth program planners need to determine how each function will be addressed. Use existing staff? Hire new staff? Assign to which department? Program staffing is influenced by a range of factors—such as type of service site, anticipated service levels, site size, anticipated volume, and available funding.

The roles and functions necessary for telehealth operations are essentially well-defined. But each program still needs to adapt general knowledge for its own unique needs and circumstances. Any organizational team represents a blend of various skills, strengths, and interests. When creating your staffing plan, it's important to make the most of this inherent diversity.

The CTRC Program Development process addresses staffing considerations during “Step Two/Defining Your Program Model” and “Step Four/Developing a Detailed Program Description and Plan.” Always develop your staffing plan as you establish your program's design. The size, scope, and type of your program will invariably impact your staffing requirements. Take this into account before staffing decisions are finalized.

This guide provides insights and suggestions for staffing a successful telehealth program. It also describes the functions, roles, and responsibilities typically associated with telehealth programs. You'll find a template that helps you identify, adapt, and assign these critical functions; as well as sample duty summaries for common positions. Use this information to identify any gaps in your program's staffing plan. It's also useful for strengthening an existing/evolving telehealth program.

CTRC also has several online training videos that support this guide: Patient Site Roles and Responsibilities, Provider Site Roles and Responsibilities, and What Every Telemedicine Presenter Needs To Know. Find these and other resources at www.caltrc.org.

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EIGHT KEY STAFF FUNCTIONS & CORRESPONDING ROLES

Eight functions have been identified as essential when establishing—and then sustaining—a telehealth program. Covering all these functions and roles is vital to your success. It's important to understand the functions, how they differ, and how they work together. Consider each of these functions before deciding on staff roles, responsibilities, and assignments:

1. Project Management
2. Program Management
3. Program Operation and Site Coordination
4. Clinical Direction and Oversight
5. Clinical Referrals
6. Clinical Service Provision
7. Patient Presentation
8. Technical Support



After considering the foundational functions for your telehealth program, begin defining roles and responsibilities in greater detail. They can then be assigned to specific staff members, either new or existing. In many programs, a given individual may perform more than one role. As you identify your program scope, service type(s), and service level(s), also start assessing the actual size of the team you'll require.

These eight key roles are discussed in detail on the following pages.



PROJECT MANAGEMENT

FUNCTION

Project Management/Program Development

The Project Management function is a key part of the initial development and subsequent expansion of your telehealth program. This function coordinates all of the efforts necessary to research, plan, build, implement, and manage your program.

Project managers use specific tools to define the project, and identify/involve stakeholders. They also track and manage specific timelines, resources, and goals necessary for project success. Proper project planning and management needs to incorporate appropriate tools and processes. It helps ensure that clinical, operational, and technical demands are identified, met, or even exceeded. This is the very foundation of project success.

Every project has unique scope and time limitations. The Project Management function carries through until the end of the development process. Its function is different than ongoing program management (discussed below). As a promising practice, any successful program has an assigned project manager.

Be sure to identify the differences between your initial implementation/expansion “project” and the ongoing operations of your established/sustained telehealth program. Smaller programs sometimes combine the project management and program management functions. One individual develops the program, and is then responsible for managing its ongoing operation.

The Project Management/Program Development Function should be assigned before any work begins on telehealth program development.



PROJECT MANAGEMENT

ROLE

Project Management/Program Development

The Project Manager role assumes responsibility for overall development of the telehealth program. This includes research, and the creation of development products (such as needs assessments and program descriptions). The Project Manager also creates and executes project work plans, revising as appropriate to meet changing needs and requirements. Additionally, this role identifies necessary resources and assigns individual responsibilities; manages day-to-day operational aspects of specific projects; and oversees their corresponding scope. This position is responsible for all project accounting aspects—including tracking and reporting of team hours and expenses, and managing the project budget.

The Project Manager identifies key stakeholders, incorporating their input into the planning and implementation process. Even if the other seven positions outlined below have not yet been identified, at minimum there should be representation from the various stakeholders they signify (administration, nursing, IT, rural/specialty medical staff, clinic staff, etc.).

If your organization is fortunate enough to have a full-time Project Manager on staff, this person will transition the fully implemented project to the Program Manager. In smaller clinics, however, one person often fulfills a dual role. Key tasks essentially transition from that of getting the project up-and-running to overseeing daily operations.

It's often quite helpful to obtain technical assistance from experienced telehealth Project Managers during initial program development. They contribute expertise, insight, and specialized tools that support the entire process.



2

PROGRAM MANAGEMENT

FUNCTION

Program Management/Coordination/Oversight

This function oversees the ongoing operational aspects of your telehealth program. Typical elements may include some or all of the following general management activities:

- Increasing organizational awareness
- Ongoing staffing
- Human resources management
- Policies and procedures
- Coordinating with other patient care departments
- Educating patient care departments
- Providing guidance and training to meet specific patient needs
- Coordinating practitioner licensing/credentialing
- Encouraging and coordinating service development and expansion
- Tracking customer satisfaction (remote sites, patients, providers, etc.)
- Data collection (service utilization, service access, etc.)
- Performance monitoring and reporting



2

PROGRAM MANAGEMENT

ROLE

Program Management/Coordination/Oversight

The Program Manager role is responsible for managing all operational aspects of your telehealth program—including (but not limited to) needs assessment, policy and procedures, workflow, and staffing.

This position generally oversees planning, designing, directing, coordinating, and evaluating the performance and status of all your telehealth resources. This typically includes the telehealth department's personnel, hardware, software, and bandwidth.

The Program Manager provides support and assistance to all other roles mentioned in this guide. Additionally, this position regularly interacts with your organizational leadership to keep everyone apprised of telehealth activities.



3

PROGRAM OPERATION/SITE COORDINATION

FUNCTION

Program Operation/Site Coordination

This function includes activities related to general day-to-day program operations. The individual performing this function assists practitioners at both the patient and practitioner's locations, on an as-needed basis. Remember that the success of the remote patient site is intrinsic to the overall success of your entire telehealth program.

A significant amount of dedicated coordination is required at the patient site. That's why it's so important to assign a specific point of contact who is committed to program success. This individual supports other local staff members, while serving as a champion for your telehealth program within the facility.



3

PROGRAM OPERATION/SITE COORDINATION

ROLE #1

Telehealth Operations Manager or Telehealth Coordinator

The Telehealth Coordinator is perhaps the most common role for telehealth programs. It's usually assigned at both patient and provider sites. In smaller organizations, the Telehealth Coordinator may actually serve the multivariate function of Program Manager, Service Coordinator, and Clinical Presenter. This position typically helps develop and/or enhance clinical telehealth services and applications. Sample tasks might include:

- Consulting with partner sites to assess clinical needs and requirements
- Establishing/documenting standardized telehealth consultation procedures and policies
- Training personnel
- Ensuring that scheduling and other processes integrate effectively with established organizational processes
- Communicating regularly with the medical director and program manager
- Scheduling medical specialists for telehealth consultations
- Coordinating day-to-day operations with remote sites
- Verifying that patients are ready to be seen
- Making relevant clinical records available for the patient and/or clinician
- Confirming licensing and credentialing
- Conducting equipment checks prior to patient consultations
- Completing billing forms or paperwork for referring practitioners

As clinical services are identified and developed, this position may also interact with management, business development leaders, billing personnel, quality control teams, and credentialing departments. Additionally, as your program gets underway, this position will be actively involved in the delivery of patient services. The telehealth coordinator may function as a clinical presenter during patient care visits as well. Because this role requires considerable patient care skills, it's often carried out by a registered nurse (RN).



3

PROGRAM OPERATION/SITE COORDINATION

ROLE #2

Patient Site Coordinator

Certain programs make a distinction between the Provider Site Coordinator (sometimes called Hub Site Coordinator) and the Patient Site Coordinator role.

The Patient Site Coordinator serves as the primary contact person at the remote (patient) service location. This position often needs to handle multiple functions, which may include:

- Advocating for telehealth within the facility
- Coordinating the actual use of equipment by various parties (education, patient services, administration)
- Ensuring that proper policies and procedures are in place
- Assisting with data collection and evaluation
- Coordinating with other team members to ensure that medical staff requirements are met

Many rural sites do not have the resources for multiple individuals to fulfill these various roles. In such instances, one person is usually designated to wear multiple functional “hats.”



4

CLINICAL DIRECTION/OVERSIGHT

FUNCTION

Clinical Direction & Oversight

This function ensures that the telehealth services being provided are subject to appropriate clinical oversight. It's especially vital to make sure these services are fully accessible, and meeting identified needs—without overburdening patients, or causing undue staff inconvenience.

The Clinical Direction & Oversight function is normally assigned at both the patient site and the provider site.

ROLE

Clinical Director

The Clinical Director serves as the liaison between your telehealth program and the organization's remaining clinical staff. This individual focuses on program awareness, provider recruitment and training, service development, and general communication.

Additionally, the person in this role often functions as the telehealth program champion—providing necessary encouragement, direction, and medical/clinical oversight. The Clinical Director works closely with the Program Manager, Operations Manager, and Telehealth Coordinator. This role is generally assigned at both the patient and provider sites.



5

CLINICAL REFERRALS

FUNCTION

Clinical Referrals

The Clinical Referrals practitioner at the patient site is often the gatekeeper for patients as they access telehealth services. It's normally this practitioner who identifies patients with the need to receive specialty care using telehealth. Such a referral is frequently based upon specialty provider relationships that have already been established.

ROLE

Patient Site Referring Clinician

In most medical settings, this role is usually performed by the patient site's primary care provider. The Referring Clinician determines when a patient needs a service not available on-site; then makes a referral to the telehealth practitioner. Thus, the Referring Clinician often initiates the consult for specialty services.

This position encompasses the combined skills of a remote site coordinator and patient presenter to facilitate telehealth interaction. There may be additional interaction with the telehealth coordinator and medical director, to ensure that appropriate services are available. In this way, the Referring Clinician helps safeguard quality care while addressing the community's needs.



6

CLINICAL SERVICE PROVISION

FUNCTION

Clinical Service Provision

The Clinical Service Provision practitioner functions at the specialty site, or another service site. This individual provides the service(s) being requested by the referring practitioner. The clinician may also directly request telehealth services for a given patient as a component of follow-up care.

ROLE

Telehealth Provider/Clinician/Practitioner

The Telehealth Provider is located remotely from the patient, and is often a clinical specialist of some kind. This position leads and conducts the actual patient telehealth interaction, and also oversees the actions of those assisting the patient.

In some cases, the practitioner actually directs patient care remotely. In other cases, the practitioner merely serves in a consultative capacity to the patient's primary care provider.

Usually, the Telehealth Provider position relies heavily on the services of a patient presenter when seeing a given patient. Readings from an electronic stethoscope, various video scopes, or other peripheral devices may be needed as part of this care. The Telehealth Provider may also review information from the patient's electronic medical record.



7

PATIENT PRESENTATION

FUNCTION

Patient Presentation

By definition, a telehealth clinician is not in the same physical proximity as the patient. Accordingly, that clinician needs some level of clinical and/or technological assistance with patient interaction. The Patient Presentation practitioner thus serves as an extension of the clinician. He or she may assist the patient, operate telehealth equipment, use necessary peripherals, or generally ensure that all standards of care are being met.

ROLE

Patient Presenter

The Patient Presenter works directly with the remote telehealth clinician. This individual explains the purpose of the visit, then introduces the patient to the practitioner. The Presenter may also:

- Obtain informed consent based upon the facility's policy
- Ensure that patient charts are available and accessible
- Prepare the patient for the telehealth visit
- Serve as the extended eyes/ears/hands of the practitioner during live interactive consults
- Discharge the patient, and coordinate additional care
- Capture digital images and/or necessary clinical information for the remote practitioner

Generally, the Patient Presenter needs to understand and use various scopes and other peripheral devices. The role is often filled by several individuals, as most organizations find that this approach boosts efficiency. Some organizations stipulate that all nursing and/or medical staff should be trained to serve in this capacity, as the need arises.



8

TECHNICAL SUPPORT

FUNCTION

Technical Support

The Technical Support function minimizes downtime, while optimizing the usability of all network-related equipment and connections. Technology is becoming progressively easier to use, but nothing is infallible. This skilled professional helps your telehealth program avoid technical glitches, blips, failures, and other unwanted surprises.

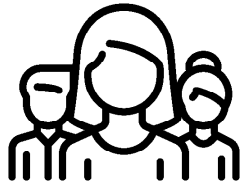
ROLE

Technical Specialist/Network Analyst

The Technical Support role is responsible for the day-to-day functionality of your telehealth equipment, and all related network peripherals (i.e. bridge, stethoscopes, routers, etc.). This generally includes:

- Appropriate testing and operational maintenance of all telehealth-related equipment
- Coordination of proper and appropriate usage by all personnel
- Maintenance of necessary network infrastructure
- Adherence to all equipment-related organizational policies and procedures

This person should be readily available whenever technical difficulties arise with live telehealth sessions. The role collaborates with the Telehealth Coordinator to maintain a usable network that best meets the needs of all patients served. In larger organizations, the technical and network roles are often held by different people.



ADDITIONAL FUNCTIONS

FUNCTION

Distance Education Coordination

Some organizations establish a specific focus on educational offerings. Delivery of these services requires skilled coordination for optimal value. This function makes sure that presenters and participants alike have a worthwhile, rewarding experience.

Event Scheduling

Once your telehealth service achieves a patient volume that justifies its existence, it's often helpful to have someone oversee scheduling. Certain programs use different scheduling procedures for administrative and educational activity. Others don't distinguish between these two focus areas, so they're scheduled in similar ways.

Administrative Assistance/Accounting

Many larger health system- and university-based programs work with a large number of grants. This may precipitate the need for specialized administrative and accounting support.

Quality & Research

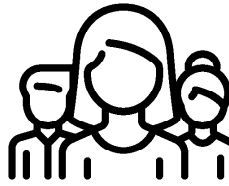
Some organizations place an extremely high value on data comparison and evaluation. In such cases, these elements may be broken out as their own separate functional areas.

Patient Monitoring

Home health programs prioritize strong, trusting relationships between patients and caregivers. Monitoring, observing, and communicating with these patients is the foundation of home-based telehealth services. In many cases, this requires one or more dedicated staff members.

Change Management

These individuals focus on the human element of shepherding change across your organization. They often work closely with the project manager, using a variety of standardized tools to encourage continued staff compliance and acceptance. See the special section in Step Five entitled "Change Management" for additional details.



10

OTHER KEY STAKEHOLDERS

Organizational members at both ends of the service spectrum need to understand your telehealth program. Plan to keep them fully apprised of implementation schedules and evolving services. Consistent communication is the key to long-term support and sustainability. The following list includes individuals who typically require regular updates.

Chief Executive Officer/CFO/CIO/Lead Administrative Team

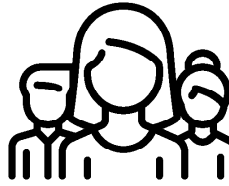
Inform your organizational leaders about the benefits and operational dynamics of your telehealth program. As you identify priorities, they need to understand exactly how telehealth services can help the organization achieve annual and long-term goals. Once they perceive the value telehealth can bring to the organization, they're much more likely to lend ongoing support.

Chief of Medical Staff

In many organizations, this is a rotating position. So it's especially important to establish (and periodically re-establish) consistent communication. Building awareness and gaining support is vital to your program's ongoing success. If your organization staffs this role full-time, consider engaging this person as a telehealth champion. As new providers/physicians are recruited, this individual can encourage or even require the use of telehealth services.

Director of Nursing/Chief Nursing Officer

This individual directs the overall activities of your organization's nursing staff. The role is instrumental to telehealth program success. Work to gain support and buy-in from the earliest stages of project planning.



10

OTHER KEY STAKEHOLDERS

(continued from previous page)

Training/Education Staff

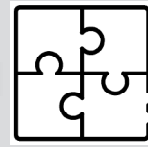
Education is a key service offered by many telehealth programs. So it's important to involve the Training/Education Staff in early program planning, then maintain regular communication along the way. Input from this team can help you create momentum for future development efforts. These skilled individuals can also help identify effective methods for training your telehealth staff and clinical presenters. Once they support your program, they may even be willing to help build awareness through their various educational initiatives.

IT Staff

The importance of partnering with this group cannot be overstated. Telehealth services will impact your organizational infrastructure, and this group can ensure that everything keeps running smoothly. Help them understand future plans, so they can arrange for the appropriate level of support. Often, IT staffers don't get to see the direct impact they have on patient care—so be sure to share plenty of success stories.

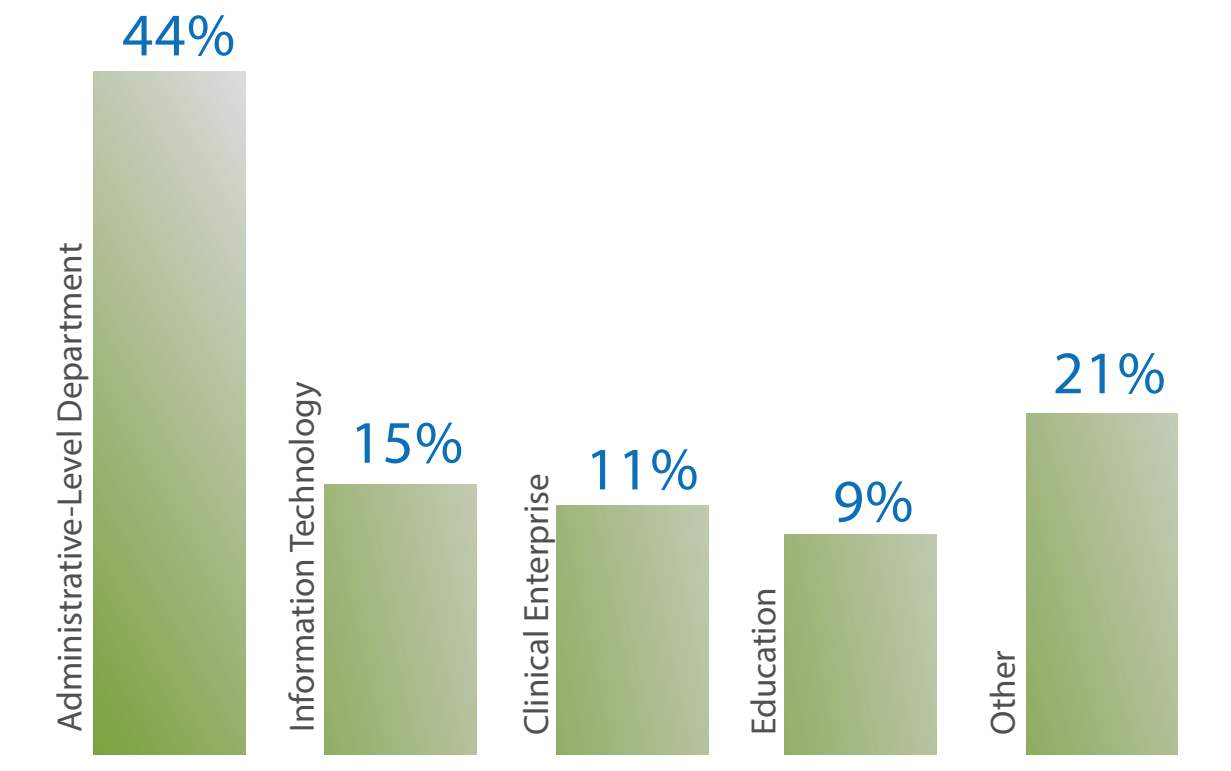
Many of these positions are imperative at both the patient site and the provider site. Plan for active communication to and from leadership, at both locations. A weakness at either end of the telehealth service link can negatively impact your level of program success.

ORGANIZATIONAL PLACEMENT & TELEHEALTH STAFFING PLANS



Organizational Placement of Telehealth

Many developing programs ask about the ideal placement within the structure of your organization. In May of 2007, the University of Kentucky—Kentucky Telecare Telehealth Program surveyed telehealth personnel across the country to gain insight on this topic. The results indicate that there's no one "best" answer. Most likely, a range of factors will determine the best fit in each circumstance. Survey results indicated the following:



ORGANIZATION & STAFFING, continued

As you initiate your telehealth program, it's likely that staffing resources will be located across several established organizational departments. One or two individuals will probably serve as the leader(s) responsible for the program's overall success.

In your particular case, however, it might make sense to place elements of your program under another department's control. Such elements may include the following functions:

Credentialing and Privileging

Instead of taking on these complicated processes specific to telehealth, you may be able to coordinate relevant tasks with current credentialing personnel.

Technology

Your current IT department may already have effective procedures in place for understanding hardware installation, upgrades, networks, and associated tracking requirements.

If you assign such responsibilities to existing departments, consider appointing a specific individual to the role of designated telehealth lead. As this person becomes increasingly knowledgeable about your specialized telehealth needs, he or she will become your "go-to" resource for arising concerns.

Developing Your Staffing Plan

Now that you understand common telehealth functions and roles, it's time to develop your staffing plan. The size of your team depends upon the size of your organization, and your anticipated initial program volume. At the beginning, a given individual may hold multiple roles—but be careful not to overload any one person with too many responsibilities, which can negatively impact program success. Divide these responsibilities across multiple individuals, to encourage more widespread commitment and buy-in. At some point, as your program continues to expand, it may be necessary to create a standalone telehealth team.

Role responsibilities tend to be fairly consistent, even though actual program structures can vary significantly. Look at the sample matrices shown in this guide to identify key responsibilities. These tables can help you define larger functional group responsibilities, and also add specific tasks as evolving needs may warrant.

SAMPLE STAFFING MATRIX

Identified Staff Role/Position							
Functional Area	Project Manager	Program Manager	Program Coordinator	Patient Presenter	Referring Clinician	IT Staff	Clinical Director
Program Development /Project Management	X						
Program Management		X					
Program Operations /Site Coordination			X		X		
Clinical Direction and Oversight							X
Clinical Referrals					X		
Clinical Service Provision							X
Patient Presentation				X			
Technical Support			X			X	

Identifying Necessary Skills & Knowledge

Your selected staff members will need to learn some new skills and expand their knowledge base to address the various technical and clinical aspects of telehealth. Some will need to operate equipment and medical peripherals. All will need to collaborate with clinicians and patients using video conference technology.

Review the Skills and Knowledge Area Matrix in the template section of this guide for an overview of these critical skills, according to role. This will help you understand necessary training, and may also help you identify certain candidates for a particular role or function.

Assigning Responsible Staff by Functional Area

The table below lists high-level functions you should address as you begin to establish and/or expand your telehealth program. Use individuals assigned to your telehealth team, or choose other department members and provide insight/training as necessary.

Function	Responsible Position	Assigned Staff Member
Project Management		
Program Management		
Operations/Coordination		
Clinical Direction		
Clinical Referrals		
Clinical Service Provision		
Patient Presentation		

Staffing-Related Program Challenges

Staffing demands can make it challenging to maintain a successful, progressive telehealth program. It's best to incorporate consistent review, tracking, and management mechanisms into your ongoing strategy. Common issues are discussed below.

1. Finding The Right People

Successfully implementing telehealth requires flexibility, and a commitment to change. Often, the first challenge is finding interested and enthusiastic individuals who are dedicated to making the program work. Make sure key staff members exhibit a flexible work style, a patient-centered service focus, a willingness to learn new technologies, and the perseverance to keep things running smoothly. They must embrace the fact that even promising new initiatives can be complicated. With hard work and clear communication, however, positive opportunities abound.

2. Staff Retention

Many programs, particularly rural health clinics, report that staff turnover is an ongoing challenge. If you prepare yourself for this possibility from the moment you initiate your telehealth program, you increase your long-term chances of self-sustainability. Perhaps most importantly, always consider how much program success may be tied to any single individual. Consider ways to diversify skills and knowledge by cross-training. Make sure detailed policies, procedures, and job descriptions are in place. All these preparations can help minimize the impact of staff transitions.

3. Obtaining Adequate and Appropriate Training at The Right Time

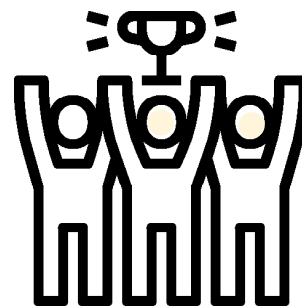
Ongoing staff training is a necessity. As vacancies occur and new telehealth program team members are hired, they'll need to clearly understand both the clinical and technical aspects of your program. When use of specialized telehealth equipment is infrequent, brushing up on skills is especially imperative. As you develop new programs, bear in mind the need for strategic training practices. This guide contains a detailed matrix indicating key skill sets required by different telehealth team members. Take advantage of CTRC training videos to keep everyone up-to-speed. Also make use of online and in-person training programs from the National School for Applied Telehealth, the University of Minnesota, and the University of California.

4. Budgeting for Required Staff

It can be challenging to identify ongoing budget dollars that can support your telehealth program over time. Initial startup funding is often available from local, state, federal, and/or foundational grants intended for pilot projects. But on a longer-term basis, your careful evaluation and tracking activities will prove their worth. They can help you demonstrate dollars saved, revenue gained, turnover reductions, patient volume/satisfaction trends, and more. This paves the way for additional operating dollars that can sustain the program and retain the skilled staff members you need most.

STAFFING: CONCLUSIONS & PROMISING PRACTICES

As you determine the appropriate staffing structure for your telehealth program, remember that there are no carbon copies. Each organization has its own unique history, culture, needs, and structure. Additionally, every team member brings unique skills and interests to their role. Understand these dynamics, then make sure all key program requirements are being met. This will help you develop the optimal staffing structure for your specific situation.



Remember that your ultimate goal is meeting the needs of patients, and the clinicians who serve them. Let this objective guide and shape your decisions. Also remember these promising practices:

- Make sure the project management function is assigned to a specific staff member or contractor.
- Contractors with telehealth program experience can assist newer programs with both project management and program development.
- Find training programs that support different staff functions.
- Explore ways to regularly assess staff skill levels, and to provide immediate training to newly assigned staff.
- Assign more than one skilled staff member to patient presentation.



STAFFING TOOLS & TEMPLATES:

- Template: Staff Positions Responsible for Functional Areas
- Template: Staff Assignments by Functional Area
- CTRC Document: Skills and Knowledge Area Matrix
- Sample Duty Statements: Program Manager, Telehealth Program Coordinator, and Clinical Presenter

Make full use of these resources, many of which are discussed on the previous and subsequent pages of this Staffing Guide. Find additional resources at www.caltrc.org.

CTRC Skills & Knowledge Area Matrix

The tables on the following pages list important skills and knowledge areas for your telehealth program staff. Six common roles are profiled—but note that in some circumstances, multiple roles may be assigned to one person. Please continue reading for role definitions and sample duties. Note that these resources are only intended as examples. Specific roles and responsibilities may differ from one program to another.

CONTINUE TO THE
SKILLS & KNOWLEDGE
AREA MATRIX

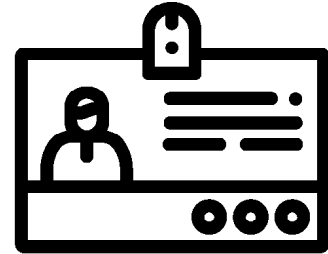
SKILL OR KNOWLEDGE AREA	Program Manager	Telehealth Site Coordinator	Patient Presenter	Referring Clinician	Remote Practitioner	Technical Specialist
Understand the benefits of telehealth program	++++	++++	++++	++++	++++	++
Prepare a needs/market analysis	++++	++	+	+	+	+
Business model development & sustainability	++++	++	+	+	+	+
Organizational readiness	++++	++	+	+	+	+
Strategic planning & telehealth applications	++++	++	+	++	++	+
Project management for telehealth	++++	+				+
Managing organizational change	++++	+++	++	++	++	++
Impact of telehealth on organizational operations	++++	++++	+++	++++	++++	++
Legal considerations	++++	++++	++	++++	++++	+
Privacy and security	++++	++++	++++	++++	++++	++++
Reimbursement	++++	++++	++	+++	++	+
Practices of successful programs	++++	++++	++++	++++	++++	++++
Evaluation of program operation & effectiveness	++++	+++	++	++	++	+
Management reporting	++++	+++	+	+	+	+
Telehealth applications	++++	++++	++++	++++	++++	++
Telehealth technologies	++	++	++	++	++	++++
Equipment types	++	++	+++	+++	+++	++++
Equipment specifications & standards	++	++	+	+	+	++++

SKILL OR KNOWLEDGE AREA	Program Manager	Telehealth Site Coordinator	Patient Presenter	Referring Clinician	Remote Practitioner	Technical Specialist
Equipment selection	++	++	++	+++	+++	++++
Operation of telehealth equipment	++	+	+++	+	++	++++
Equipment maintenance	+	+	+	+	+	++++
Equipment troubleshooting	+	+	++	+	+	++++
Telecommunications fundamentals	+	++	++	+	+	++++
Video standards and specifications	+	+	+	+	+	++++
Telecommunications installation	+	+	+			++++
Telecommunications operation	+	++	++			++++
Telecommunications maintenance		+	++			++++
Troubleshoot telecommunications connections		++	++		+	++++
Service level agreements	++	+	+			++++
Telehealth specific clinic operation procedures	+++	++++	++++	+++	+++	+
Scheduling follow-up	++	++++	++++	++	+	
Telehealth specific referral procedures	++	++++	++++	++++	++++	+
Managing medical records	++	+++	+++	++	+	
Reimbursement	++	++++	+	+	+	
Clinical protocols	++	+++	++++	++++	++++	
Role of patient presenter & working w/ presenters	+	+++	++++	++	++++	
Performing telehealth consultations	++	++++	++++	++++	++++	
Inform patients about telehealth process		++	++++	++++	++++	+
Using the telehealth equipment	+	+++	++++	+	++++	++++
Data collection	++	++++	++	+		++

COMMON TELEHEALTH STAFF MEMBERS - DEFINITIONS

Program Manager

The program manager oversees and manages all program activities, leading the telehealth team. He or she represents the group, and advocates on its behalf. The manager reports on the function and progress of services, directs process improvement activities, negotiates budgetary issues, recruits staff, and sets team priorities.



Telehealth Site Coordinator

The telehealth coordinator manages day-to-day clinic operations. He or she develops operational protocols, schedules medical specialists for telehealth consultations, confirms the presence of patients to be seen, ensures that necessary patient clinical records are available, and verifies that equipment is functional prior to consultations.

Patient Presenter

The patient presenter works with the remote practitioner to present the patient. This person introduces the patient to the practitioner, and explains the visit to the patient. The presenter provides and documents California-mandated written and verbal patient consents, and makes sure patient charts are available. During live consults, this individual is the extended “eyes and ears” of the practitioner at the other end of the connection. When store and forward equipment is used, the presenter captures digital images and necessary clinical information for the remote practitioner.

Referring Clinician

The referring clinician determines when a patient needs to be seen by a remote practitioner. The clinician screens patients who may be suitable for telehealth, and initiates specialty service consults.

Remote Practitioner

The remote or consulting practitioner conducts the actual telehealth visit.

Technical Specialist

The technical specialist has sufficient technical skills to set up and maintain all telehealth equipment. This person makes sure that telecommunications and networking issues are addressed and resolved. He or she should be readily available when technical difficulties arise during live exams.

SAMPLE DUTIES STATEMENTS

PROGRAM MANAGER

DUTIES & RESPONSIBILITIES

- Reviews and establishes departmental policies, procedures, and plans.
- Works with leadership to develop and direct organizational telehealth priorities.
- Collects, analyzes, maintains, and reports statistical data to identify, diagnose, and correct issues affecting performance.
- Designs methods and procedures for efficiency, productivity, and control of operations to coordinate day-to-day activities.
- Provides planning, consultation, and advisory services on telehealth development issues to determine applicability to organizational needs.
- Maintains effective communication and awareness by consulting with physicians, clinical offices, affiliates, and department directors and/or representatives to discuss telehealth needs.
- Prepares the yearly departmental budget, ensuring that ongoing budget objectives are achieved and that cost/expense objectives are met.
- On a regional and national level, represents the organization and related planning groups on appropriate telehealth-related activities.
- Supervises the administration of telehealth-related grant funds.
- Serves on all grant-related funding committees (federal, regional, state, and local).
- Remains knowledgeable on public policy issues and possible telehealth-related impacts.
- Actively advocates and builds awareness for telehealth at all levels of government.
- Balances limited resources with conflicting priorities.
- Coordinates efforts with educational departments on the broadcast availability of video conferencing programs.
- Approves the purchase, license, or other acquisition of organizational telehealth-related systems to encourage cohesion and compatibility.

SAMPLE DUTIES STATEMENTS, continued

▶ TELEHEALTH COORDINATOR

DUTIES & RESPONSIBILITIES

- Liaises with primary care physicians and their clinical staff.
- Assists clinicians with telehealth applications.
- Promotes awareness of telehealth usage among medical staff, the nursing community, and allied health professionals within the organization and the region.
- Develops and coordinates clinical efforts within the organization, and at partner sites.
- Works with the program manager and other stakeholders to conceptualize and develop clinical applications.
- Assists clinicians during consultations when necessary.
- Trains rural partner site nurses, physicians, and care extenders to perform clinics.
- Becomes familiar with issues and concerns that may arise regarding patient billing.
- Assists with educational program development, and helps presenters as necessary.
- Participates in and develops appropriate documentation for usage, satisfaction, and other relevant statistical/quality data.
- Travels to partner sites to promote rural clinician program involvement.
- Works in cooperation with all telehealth staff to develop appropriate guidelines, policies, and procedures.

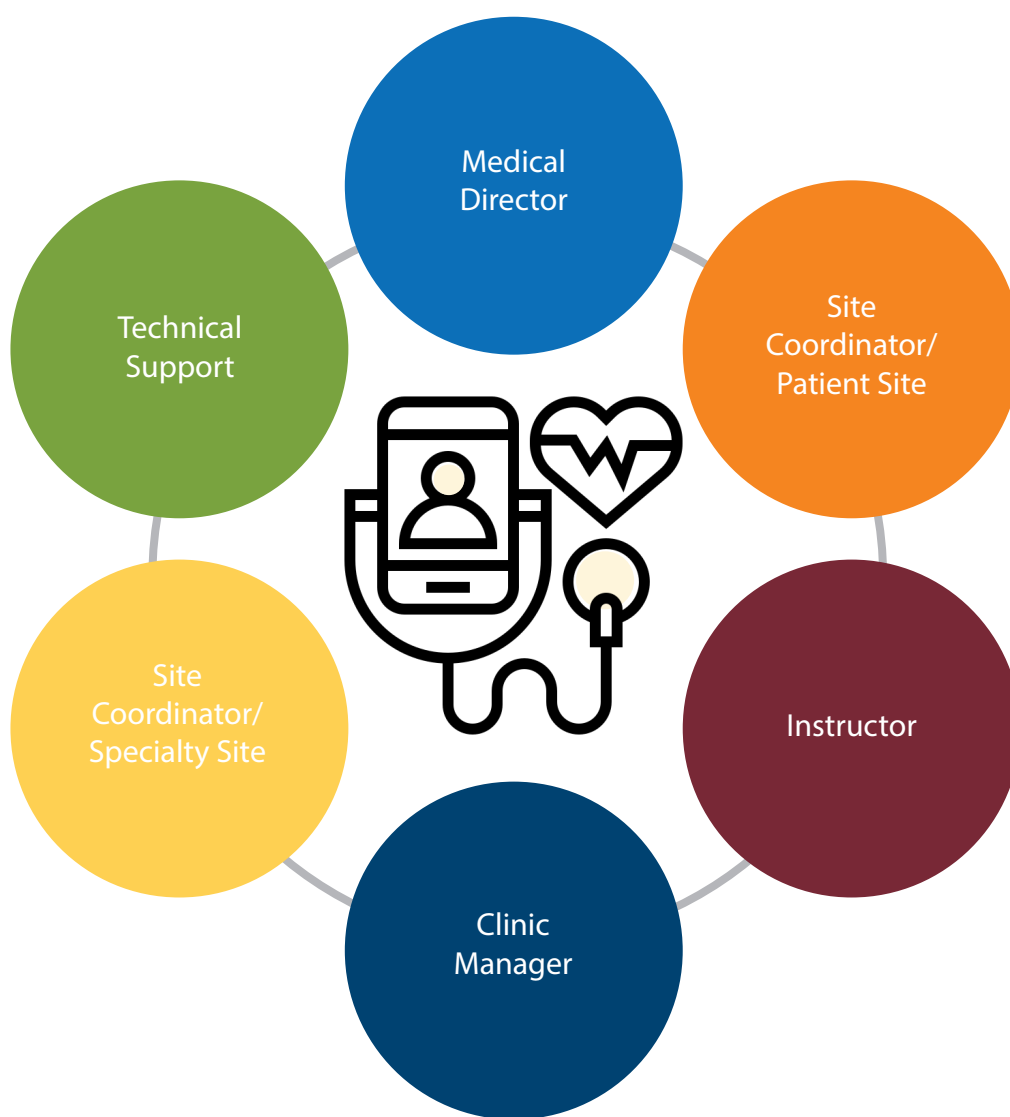
▶ CLINICAL PRESENTER

DUTIES & RESPONSIBILITIES

- Remains present prior to and during every telehealth visit, to inform and introduce all parties.
- Conveys information clearly to remote physicians using excellent verbal and written communication skills.
- Maintains patient confidentiality.
- Locates and presents information from the medical record as directed by the attending physician.
- Makes sure required clinical follow-up, diagnostic testing, and medication processing are completed.
- Operates and troubleshoots telehealth equipment.
- Communicates with Telehealth Coordinator to provide feedback on existing procedures that may interfere with smooth telehealth operation.

SAMPLE TELEHEALTH JOB DESCRIPTIONS

From the Medical Director to the Site Coordinator, your telehealth team has a unique set of duties and responsibilities—often, in addition to their traditional roles within the organization. This requires an elevated skill set, which is reflected in the sample job duties and job descriptions you’ll find on the following pages.



SAMPLE JOB DESCRIPTIONS, continued



MEDICAL DIRECTOR

PURPOSE

To oversee all clinical activities (including clinical quality improvement), serving as a liaison between referring and consulting physicians.

DUTIES

- Oversees the implementation plan of sites, specialties, and other telehealth clinical/educational services.
- Helps coordinate clinical activities with participating specialists.
- Evaluates scopes and other peripheral devices for clinical appropriateness.
- Provides guidance on the potential uses of telehealth, while outlining technological opportunities/limitations.
- Evaluates and researches equipment utilization, cost-benefit analysis, clinical efficacy, and outcomes.
- Participates in policy development at the local, state, and federal levels.
- Incorporates telehealth as a strategy in the areas of rural health and affiliation development.
- Educates the medical community about telehealth's relevant applications and opportunities.

SAMPLE JOB DESCRIPTIONS, continued



SITE COORDINATOR/PATIENT SITE

OVERVIEW

Serves as point-of-contact for telehealth activities at health care facility. Operates telehealth program at individual site. Schedules appointments, sets up and tests equipment, collects evaluation data, and supports physicians and other providers during consultation. Also promotes the program in the local community.

PROGRAM COORDINATION

- Serves as the primary contact for scheduling of telehealth and videoconferencing equipment.
- Organizes on-site training for users of telehealth, videoconferencing, and remote monitoring systems.
- Works with appropriate site staff to bill for telehealth services.
- Organizes system demonstrations for visitors.
- Facilitates basic technical support and general system maintenance.
- Works with the technical support team to address problems and system development issues.
- Helps with data collection and report generation.

TELEHEALTH CLINIC ADMINISTRATION

- Triage incoming telephone calls, obtaining sufficient information to make an appropriate telehealth referral and schedule the teleconsultation.
- Prepares consult room and equipment prior to scheduled consults.
- Makes sure successful video connection has been established.
- Stands by during consult to provide technical assistance when necessary.
- Creates and distributes telehealth clinic schedules, promotional material, documents, consent forms, satisfaction surveys, and various informational items to on-site medical staff and patients.

SAMPLE JOB DESCRIPTIONS, continued



SITE COORDINATOR/PATIENT SITE

PATIENT CARE COORDINATION

- Answers patient/family/referring physician questions within the realm of expertise, and efficiently relays information.
- Makes sure all outstanding issues/questions are resolved.
- Acts as liaison between referring physicians, patients, staff, consultants, patient accounts, funding sources, and other departments/services as needed.
- Helps consulting physician with scheduling patients for clinic appointments/procedures or direct hospital admissions, as appropriate.

EDUCATION & OUTREACH

- Facilitates operation of continuing education programming, using telehealth equipment.
- Schedules telehealth facilities and prepares educational sessions.

SKILLS/KNOWLEDGE/ABILITIES

- Strong verbal and written communication skills.
- Experience working in a clinical setting with technicians, nurses, and physicians.
- General knowledge of patient scheduling and billing systems.
- Computer skills, with the ability to learn and understand general telehealth system technical dynamics. With training, ability to provide and/or facilitate technical support.
- Proficiency or ability to learn word processing, spreadsheet, database, email, and internet programs (Excel, Word, Access, etc.).
- Sufficient organizational skills to prioritize workload, meet deadlines, carry out project assignments, and accurately document activities.
- Demonstrated ability to communicate effectively with physicians and clinical staff.
- Ability to positively represent telehealth to the external community.
- Ability to demonstrate tact, courtesy, and diplomacy when dealing with individuals at any level.
- Ability to maintain confidentiality, exercise discretion, use mature judgment, and work independently.
- Ongoing commitment to excellence.

SAMPLE JOB DESCRIPTIONS, continued



SITE COORDINATOR/SPECIALTY SITE

OVERVIEW

This position reports directly to the Telehealth Clinic Supervisor, and has primary responsibility for the clinic's daily operations. The telehealth program uses systems designed for clinical episodes, but also manages lower-end videoconferencing systems for administrative meetings and distance education. This position is therefore responsible for multiple levels of equipment usage. The Site Coordinator also helps with various front office services. These include reception, scheduling, registration, authorizations/referrals, billing support, medical records, database creation, management, report generation, and administrative support.

PURPOSE

Provides support for all activities involving specialty telehealth consultation services at various consult sites across the specialty center campus. Makes sure these sites adhere to registration, referral authorization, delivery, and evaluation protocols. Collects data for analysis. Supports physicians and other providers during consultations. Also provides basic registration, billing, and database management/reporting services. Assists with basic video equipment troubleshooting as needed.

DUTIES

- Answers referring physician questions within the realm of knowledge, and efficiently relays information to the proper clinician. Provides follow-through to make sure all issues/questions are resolved.
- Serves as primary contact for scheduling telehealth consultations in the main hospital telehealth suites. Liaises between referring physicians, specialty physicians, and clinical staff.
- Prepares main consult room and equipment prior to scheduled visits. Verifies successful video connection, and provides technical assistance during consult when necessary.
- Communicates with telehealth clinic staff regarding consult and patient schedules, advising when changes are needed.
- Distributes clinic schedules, promotional materials, documents, satisfaction surveys, and various informational items to on-site medical staff.
- Responsible for all tasks related to smooth operation of the consult clinic.

SAMPLE JOB DESCRIPTIONS, continued



SITE COORDINATOR/SPECIALTY SITE

DUTIES, continued

- Triage incoming telephone calls, and obtains sufficient information to make a proper telehealth referral and schedule the teleconsultation.
- Responsible for patient registration, scheduling, and billing activities for all telehealth patients. Prepares bills, checks for completeness, and forwards to billing personnel for processing. Reconciles reports to resolve discrepancies.

ADMINISTRATION

- Adheres to performance standards specified in Operations Policy and Procedures Manual.
- Responsible for data collection, entry, and report generation using database software.
- Helps schedule faculty coverage for telehealth clinic.
- Participates in quality improvement and program development activities.
- Coordinates and participates in demonstrations from Program Coordinator, Department Manager, and Medical Director upon request.
- Provides backup coverage for clinic phones, and clinic-related activities at other telehealth consult suite sites as necessary.
- Other related telehealth duties, as defined by Clinic Supervisor.

TECHNICAL ASSISTANCE

- Independently troubleshoots minor technical issues, escalating to technical staff as appropriate.
- Coordinates with technical support team to address system-related problems and development needs.

SAMPLE JOB DESCRIPTIONS, continued

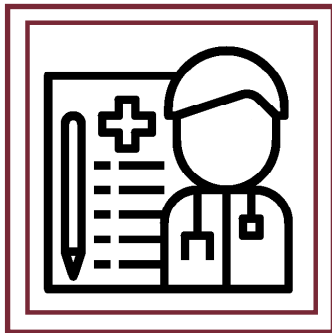


SITE COORDINATOR/SPECIALTY SITE

SKILLS/KNOWLEDGE/ABILITIES

- Excellent verbal and written communication skills, with the demonstrated ability to understand and convey information clearly.
- Telehealth clinic experience, and knowledge of various telehealth technologies preferred.
- Experience working in a rural clinical setting with technicians, nurses, and physicians preferred.
- Experience working in an academic clinical environment preferred.
- Experience working in (or with) correctional facilities preferred.
- Excellent computer skills, with the ability to learn and understand general telehealth system technical requirements.
- Ability to provide basic technical support, and to triage more difficult problems to appropriate staff.
- Proficiency with PC-based Excel, Word, Word Perfect, Access, and various internet browsers.
- Organizational skills to prioritize workload, meet deadlines, efficiently carry out project assignments, and provide accurate documentation of activities.
- Demonstrated ability to communicate effectively with physicians, clinicians, and technical staff.
- Ability to positively represent the specialty center in the external community.
- Necessary skill to exercise tact, courtesy, and diplomacy when dealing with any individual inside or outside the specialty center.
- Ability to recognize relationship challenges with referring sites and specialists, and to initiate appropriate resolution.
- Sufficient analytical skills to execute and complete complex projects within a matrixed organizational structure.
- Ability to analyze financial data and compile accurate reports to meet monthly deadlines.
- Ability to maintain confidentiality, exercise discretion, use mature judgment, and work without close supervision.
- Comfort level working in an isolated environment, without team assistance, for extended periods of time.
- Ongoing commitment to excellence.

SAMPLE JOB DESCRIPTIONS, continued



TELEHEALTH INSTRUCTOR

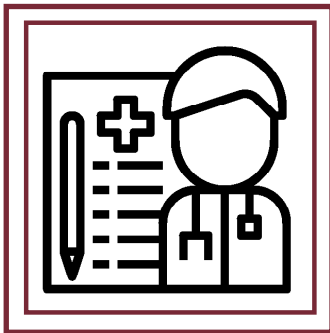
TRAINING & USER SUPPORT

- Conducts classes and independent training sessions, both on-site and at the specialty center.
- Also conducts training at remote locations utilizing pre-established guidelines and curriculum.
- Assesses training needs, and develops skill-appropriate sessions.
- Prepares a comprehensive, clear set of user instructions describing system and support processes necessary to maintain/verify functional operation.
- Helps prepare technical documentation for several levels of expertise: general users, system administrators, and programmers.
- Documents user questions, and develops a log system to track technical problems and develop solutions.
- Responds to phone and videoconference user questions in an organized and productive manner.
- Helps telehealth team members deploy multimedia presentations, which may require overtime or travel to remote sites.

SYSTEM TEST & INSTALLATION

- Collaborates with users to develop validation, performance, and acceptance criteria.
- Conducts testing to identify and coordinate corrective system modifications.
- Provides installation backup to meet all implementation deadlines.

SAMPLE JOB DESCRIPTIONS, continued



TELEHEALTH INSTRUCTOR

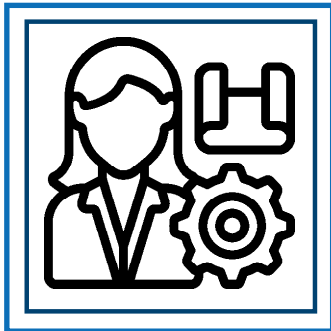
SYSTEM DEVELOPMENT

- Provides technical assistance to other development team programmers and/or user analysts.
- Coordinates directly with user management and other team members during development phases.
- Maintains knowledge of programming and analysis technologies as needed, to design improved computerized systems.
- Evaluates and suggests technologies/methodologies that may improve development/support efforts of the programming staff.
- Participates in site visits to evaluate location and technology infrastructure needs.
- Integrates various hardware components as necessary (including CPUs, monitors, speakers, microphones, cameras, scopes, VCRs, scanners, and printers).
- Updates program work order diagrams to reflect modifications.

SKILLS/KNOWLEDGE/ABILITIES

- Ability to work as a team member, with the communication skills necessary to effectively contribute to a creative group.
- Demonstrated ability to create and present oral/written materials to large and small groups.
- Ability to travel by car to remote locations, driving up to four hours each way.
- Ability to work independently, and to set/meet deadlines.
- Demonstrated technical writing skills sufficient to communicate complex systems to diverse audiences.
- Experience working in a clinical setting, and demonstrated ability to communicate effectively with physicians and clinical staff.
- Proven ability to train clinical and administrative staff members with various levels of technical expertise.
- Ability to remain focused on accomplishing goals, while adapting to diverse situations.
- Organizational skills necessary to set and meet deadlines.
- Ability to isolate and diagnose hardware/software problems in a LAN/WAN environment, and to recommend and implement the most effective course of action.

SAMPLE JOB DESCRIPTIONS, continued



SPECIALTY SITE CLINIC MANAGER

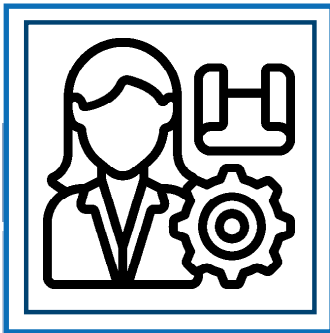
OVERVIEW

This position reports directly to the Medical Director, and has primary responsibility for daily operation of the outpatient telehealth clinic(s). The role supervises telehealth clinical staff, implements new clinical contracts, oversees process improvement, and coordinates with several specialty departments to ensure coverage for this virtual multi-specialty clinic.

CLINIC MANAGEMENT

- Directly supervises telehealth clinic staff.
- Acts as liaison between customers (specialists and remote site referring physicians) and clinic staff, to ensure clear communication and efficient operation.
- Makes sure all clinics are covered at all times (phone coverage and clinic coverage).
- Prepares annual employee evaluations for clinic staff.
- Provides coverage for clinic coordinators during sick or vacation leave.
- Develops communication and program marketing activities that introduce new clinical services or increase specialty clinic referrals, on an as-needed basis.
- Oversees design and maintenance of scheduling templates for clinic operations.
- Responsible for all decisions involving clinic cancellation due to technical difficulties, specialist release due to missed patient appointments, and/or releasing contracted customers from specific charges.
- Reviews clinic productivity and collection reports to prepare capacity projections and recommend specialty coverage, as appropriate.
- Negotiates with specialty departments and documents these agreements, ensuring appropriate follow-through in conjunction with finance team.
- Supports capacity planning recommendations by preparing and analyzing monthly reports on telehealth clinic appointment wait times.
- Oversees staff operations to make sure all patients seen in the clinic are registered prior to the consult, and that bills have been processed according to hospital ambulatory care standards.
- Makes sure all consults have been dictated, and that dictations and patient records are received as appropriate.

SAMPLE JOB DESCRIPTIONS, continued

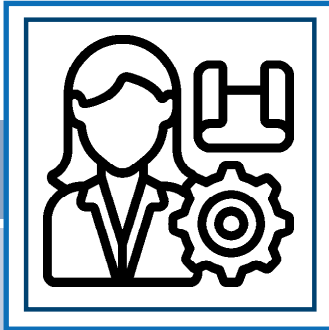


SPECIALTY SITE CLINIC MANAGER

CLINIC MANAGEMENT, continued

- Performs random audits at remote sites and in hospital medical records, as part of the program's overall clinical quality improvement activity.
- Ensures timeliness of patient scheduling.
- Monitors and analyzes clinic performance reports, making recommendations designed to improve or enhance clinic performance.
- Makes sure clinics and coordinators are equipped with all necessary programs, computers, and information services necessary to complete job duties.
- Makes sure telehealth equipment in each consult suite is adequate for the current need, and in reliable working order.
- Works with internal systems to produce regular reports on billing and collection activities.
- Supervises abstracting and billing function of the billing analyst. Makes sure coding and billing activities are in full compliance with ambulatory clinic standards for accuracy and timeliness.
- Performs billing and financial analysis, providing budget recommendations pursuant to purchasing or releasing specialty time.
- Partners with the Medical Director, acting as primary contact and liaison to the professional billing group for all process and policy issues.
- Analyzes insurance denial reports for process improvement. Works with professional billing group and/or clinic staff to address all pertinent issues.
- Audits patient database, comparing with clinic schedule and billing reports to make sure all patient invoices are processed.

SAMPLE JOB DESCRIPTIONS, continued

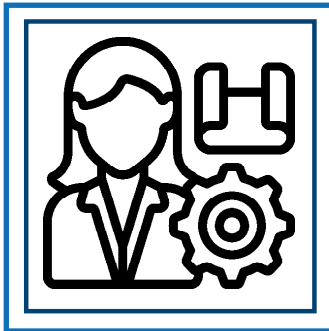


SPECIALTY SITE CLINIC MANAGER

PROCESS IMPROVEMENT & CUSTOMER SERVICE

- Works with technical team to automate as many clinic processes as possible. This includes resource scheduling, technical troubleshooting, remote site tracking, etc.
- Coordinates with technical support team to address problems and system development needs. This includes tracking technical issues, and jointly developing training procedures.
- Works with remote site coordinators and referring physicians to evaluate customer service levels for remote site coordinators.
- Acts as primary point of contact for job performance feedback from remote site coordinators.
- Assesses level of customer service for specialists. Works with teams to poll all specialists on their satisfaction with telehealth clinic operations and quality.
- Provides feedback regarding operational issues and administrative matters to medical director, and recommends further program development.
- Works with billing group to prepare quarterly reports on collections, by specialty and insurance provider. Produces quarterly collection reports for each specialty, comparing them to their respective department's overall collection ratio.
- Recommends, tracks, and reports on clinic-specific quality improvement measurements.
- Makes sure all regulatory and legal requirements are implemented in the telehealth setting.
- Communicates with remote sites to ensure a clear understanding of the telehealth legal and regulatory environment (JCAHO, HIPAA, reimbursement, etc.).

SAMPLE JOB DESCRIPTIONS, continued



SPECIALTY SITE CLINIC MANAGER

DATABASE MANAGEMENT

- Oversees clinic database, coordinating with programming staff to make necessary enhancements that support clinic operations.
- Reviews activity on referral status web page. Works with remote site coordinators to make sure all referrals/reports display correctly.
- Works with Excel pivot tables to prepare and analyze monthly reports (including clinic volume by specialty, clinic volume by location, and DNKA by site/specialty. Corrects all identified issues.

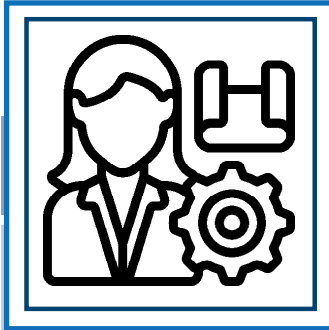
MISCELLANEOUS

- Acts as backup to lead instructor on an as-needed basis.
- Coordinates public relations outreach to hospital departments and remote sites. Participates in demonstrations to visiting news media, government officials, and partner hospital administrators/physicians.
- Other related telehealth duties as defined by the Telehealth Operations Manager, Chief Administrative Officer, and/or Medical Director.

SKILLS/KNOWLEDGE/ABILITIES

- Minimum two years of recent hospital ambulatory care or clinic supervision experience required. Demonstrated ability motivating staff to optimize individual and team performance.
- Completion of supervisory course desired.
- Demonstrated analytical ability to identify process performance issues, and develop recommendations using multiple information sources.
- Excellent verbal and written communication skills, with the demonstrated ability to understand and convey information clearly.
- Clear understanding of the legal and regulatory health care environment, with the specialized analytical skills to implement policies in a telehealth setting.
- Excellent PC-based computer skills, the ability to learn/understand general telehealth technical dynamics, and the skill to provide/facilitate technical support as necessary.
- Familiarity with Excel, Word, Lotus Notes, the internet, Invision, Signature, and hospital registration/scheduling/billing systems.

SAMPLE JOB DESCRIPTIONS, continued



SPECIALTY SITE CLINIC MANAGER

SKILLS/KNOWLEDGE/ABILITIES, continued

- Sufficient organizational skills to prioritize workload and meet deadlines, efficiently carry out project assignments, and accurately document activities.
- Demonstrated ability to communicate effectively with physicians, clinical team, and technical staff.
- Ability to exercise tact, courtesy, and diplomacy when dealing with individuals at any level, inside or outside the organization.
- Ability to maintain confidentiality, exercise discretion, and use mature judgment without close supervision.
- Ability to work with minimal direction, and to take initiative on follow-up activities.
- Ability to lead a team in a dynamic and highly visible unit, which requires a high degree of professionalism and flexibility.
- Ability to develop new operational processes, and to teach these procedures to team members, site coordinators, and clinicians.

SAMPLE JOB DESCRIPTIONS, continued



TECHNICAL SUPPORT

PURPOSE

Primarily, telehealth programs use technology-based systems and devices to deliver/disseminate health care services, education, and related information. These programs also integrate and maintain videoconferencing equipment that supports these core objectives. The Technical Support staff member makes sure these various systems operate smoothly and dependably.

HARDWARE/SOFTWARE-RELATED DUTIES

- Installs, configures, tests, and maintains application/operating systems and communication software in a diversified environment.
- Installs, configures, tests, and maintains videoconferencing hardware/software including PCs, NICs, hard drives, and RAM.
- Installs, configures, tests, and maintains software packages that support operating environments, application suites, and communication methodologies.
- Works with vendor technical support and related departments to resolve outstanding issues, ship/receive equipment, etc.
- Coordinates installation and tests circuitry associated with data and video communications (including—but not limited to—fiber, frame relay, and T1).
- Plans, coordinates, implements, and documents user validation, performance, and acceptance of installed applications at remote and local sites.
- Identifies, implements, and documents corrective modifications to ineffective or malfunctioning systems as appropriate.
- Sets up and maintains training environments and presentations, using appropriate equipment.
- Other hardware, software, installation, configuration, and/or maintenance duties as required or assigned.

SAMPLE JOB DESCRIPTIONS, continued



TECHNICAL SUPPORT

SYSTEM ANALYSIS/ADMINISTRATION/DEVELOPMENT

- Investigates/documents/implements application, data interchange, and interaction processes to ensure effective use of information.
- Implements/updates desktop applications as necessary, to fully integrate with enterprise applications, standards, and processes.
- Helps to maintain and upgrade web, file, and database servers as necessary.
- Implements new services as required.
- Helps to research/plan/document/implement system repairs and enhancements that support ongoing program growth.

USER SUPPORT & MISCELLANEOUS

- Helps users and other team members diagnose/correct system issues as necessary.
- Assists with information technology team activities where appropriate.
- Helps document/manage/move/ship/receive/inventory technical equipment, as required.
- Assists with installation, testing, maintenance, and training related to remote/field systems.
- Sets up and maintains training and presentation equipment as needs dictate.
- Supports other hardware/software/installation/configuration/maintenance duties, as required or assigned.

SKILLS/KNOWLEDGE/ABILITIES

- Ability to collaboratively communicate with and contribute to a cohesive, evolving team.
- Ability to function in a clinical setting, communicating effectively with physicians and clinical staff.
- Demonstrated organizational skills, with the flexibility to manage multiple deadline-oriented tasks.
- Knowledge and understanding of videoconferencing equipment, processes, and protocols.
- Formal training and/or proven experience in computer and peripheral troubleshooting. This includes disassembly, board/chip replacement, continuity, cabling, and system testing.

SAMPLE JOB DESCRIPTIONS, continued



TECHNICAL SUPPORT

SKILLS/KNOWLEDGE/ABILITIES, continued

- Ability to isolate and diagnose hardware/software problems in a LAN/WAN environment, and to recommend/implement the most effective course of correction.
- Extensive PC hardware experience (including—but not limited to—configuration/installation of SCSI/video/network cards, modems, motherboards, and RAM).
- Sufficient skill to perform IRQ and DMA troubleshooting/configuration.
- Ability to install/configure/maintain/troubleshoot all versions of Windows & DOS.
- Linux experience a plus.
- Ability to install/troubleshoot printers, peripheral devices, relevant drivers, and applicable software.
- Knowledge of TCP/IP utilities such as FTP, Telnet, ping, ARP, RARP, etc.
- Knowledge of inverse multiplexors, ISDN, TI, fiber, and frame relays.
- In-depth knowledge of MS Office Professional, and other office productivity software.
- Comprehensive understanding of computer capabilities/limitations.
- Ability to recognize processes that can be easily automated, versus those that cannot.
- Knowledge of analysis/design techniques necessary to compose a functional computerized application system.
- Ability to use logic and flow diagrams to describe system-related functional processes, at a level both end users and programmers can understand.
- Ability to work without direction in a networked computer environment.
- Ability to manage small daily technical projects, as appropriate.

ORGANIZATIONAL WORKFLOWS

Organizational Workflows

Telehealth Organizational Workflows



California Telehealth
Resource Center

2021 Edition

ORGANIZATIONAL WORKFLOWS

INTRODUCTION

Workflow varies from one organization to another. The following pages include scenarios and workflows that indicate how a typical telehealth clinic might operate. They are intended for use as a starting point as you develop your own operational protocols. You may notice certain differences and similarities between the duties of the patient site and the specialty site.

The flow charts illustrate how both the patient and specialty site clinics collaborate as a team to accomplish each patient consult. Your own operational workflow might differ slightly, but the general concept remains the same.

The appointments scheduling flow chart helps you understand typical expectations for scheduling turnaround times. It's often been used as a communication tool between the specialty site and the patient site, to establish realistic performance expectations.

The referral to billing process flow chart further illustrates various "back office" job duties of a typical telehealth team. You can use it as a template that helps document the workflow process within your own organization.

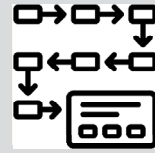
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ORGANIZATIONAL WORKFLOWS FOR TELEHEALTH PROGRAMS



In all cases, please refer to corresponding flow charts for event timing and site participation requirements. You'll find these charts on subsequent pages.

SAMPLE WORKFLOW: CONSULT | PATIENT SITE

Day of Consult

1. Telehealth Coordinator gives front desk receptionist the appropriate questionnaire packet to hand out when patient arrives (this may also be mailed to patient prior to appointment). Patient should arrive 30 minutes prior to appointment if filling out a questionnaire is required.
 - a. Patient must sign consent form (once per year).
 - b. Patient must complete medical history form (if not already done).
2. Telehealth Coordinator prepares exam room, and turns on telehealth unit 30 minutes prior to the consultation (or as early as possible). If peripheral equipment (derm camera/nasopharyngoscope/stethoscope, etc.) will be used during consult, these should also be turned on and tested prior to consult.
3. Telehealth Coordinator faxes completed history, consent form, and any additional last-minute test results to Specialty Site Telehealth Coordinator. Specialist requires these materials prior to beginning the consult.
4. Telehealth Coordinator asks specialist if he/she has received all necessary information before admitting patient to the consult room.
5. Once patient and primary care provider are in the room, the Telehealth Coordinator also remains in the room to assist with equipment as necessary.



SAMPLE WORKFLOW: CONSULT | PATIENT SITE, continued

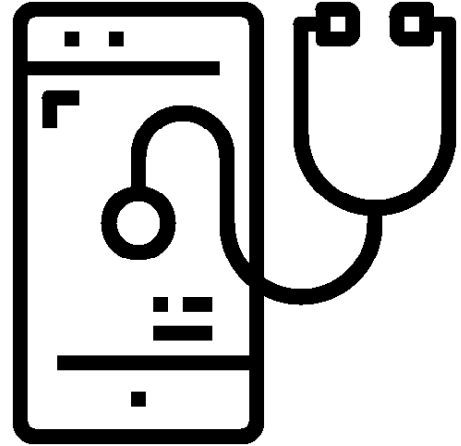
Post-Visit/Day of Consult

1. At this time, specialist may wish to send (via fax or electronic format) written instructions for patient. These are to be copied and distributed. You may ask patient to move to the waiting area while this information is prepared. Key elements:

- Patient
- Primary care provider
- Patient medical record

2. If equipment was used (cameras/scopes that have touched patient), clean and replace/store as appropriate.

3. If another patient is scheduled immediately following the previous appointment, ask specialist if you may room the next patient before proceeding.



Post-Visit/General

1. Telehealth Coordinator receives specialist's signed dictation. This should be placed in the referring provider's box for review, prior to filing in the patient's medical record.

2. Telehealth Coordinator reviews consult dictation from specialist. If a follow-up appointment and/or further tests are required, Telehealth Coordinator works with Primary Care Provider and the patient to complete. Telehealth Coordinator then faxes results to the specialty site, and schedules a follow up appointment.

SAMPLE WORKFLOW: CONSULT | SPECIALTY SITE

Day of Consult

1. Telehealth Coordinator receives faxed information from patient site, places it into patient's medical record, and places medical record into specialist's review box outside consult room.
2. Telehealth Coordinator asks specialist if any additional information is required prior to consult.
3. Consult begins. Telehealth Coordinator is not present in room during specialty consult, but remains nearby in case further information or technical support is needed.



Post-Visit/Day of Consult

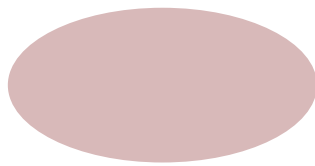
1. At this time, specialist may wish to send written instructions for the patient. Telehealth Coordinator should send these (via fax or electronic format) to referring site immediately following the consult. They should then be placed in the patient's medical record at the specialty site.
2. Staff member collects all specialist billing and dictation materials.

Post-Visit/General

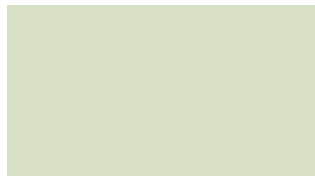
1. After the specialist reviews and signs dictation, Telehealth Coordinator sends the original to referring physician (via mail or fax). A copy should then be placed in the patient's medical record.
2. Telehealth Coordinator reviews consult dictation from specialist. If a follow-up appointment or further tests are required, work with Patient Site Coordinator to schedule appointment once tests have been completed and received.

TELEHEALTH WORKFLOWS: VISUAL FLOW CHARTS

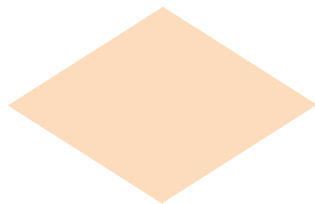
The flow charts on the following pages illustrate how both the patient and specialty site clinics collaborate to manage each patient consult. Your own operational workflow might differ slightly, but the general concept remains the same. Chart symbols are indicated below for reference.



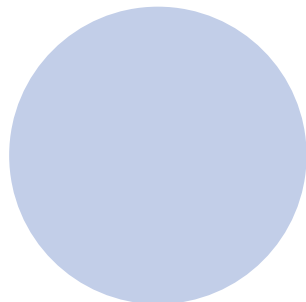
The start or end point
of a process



A step/task/activity
specific to a given
process



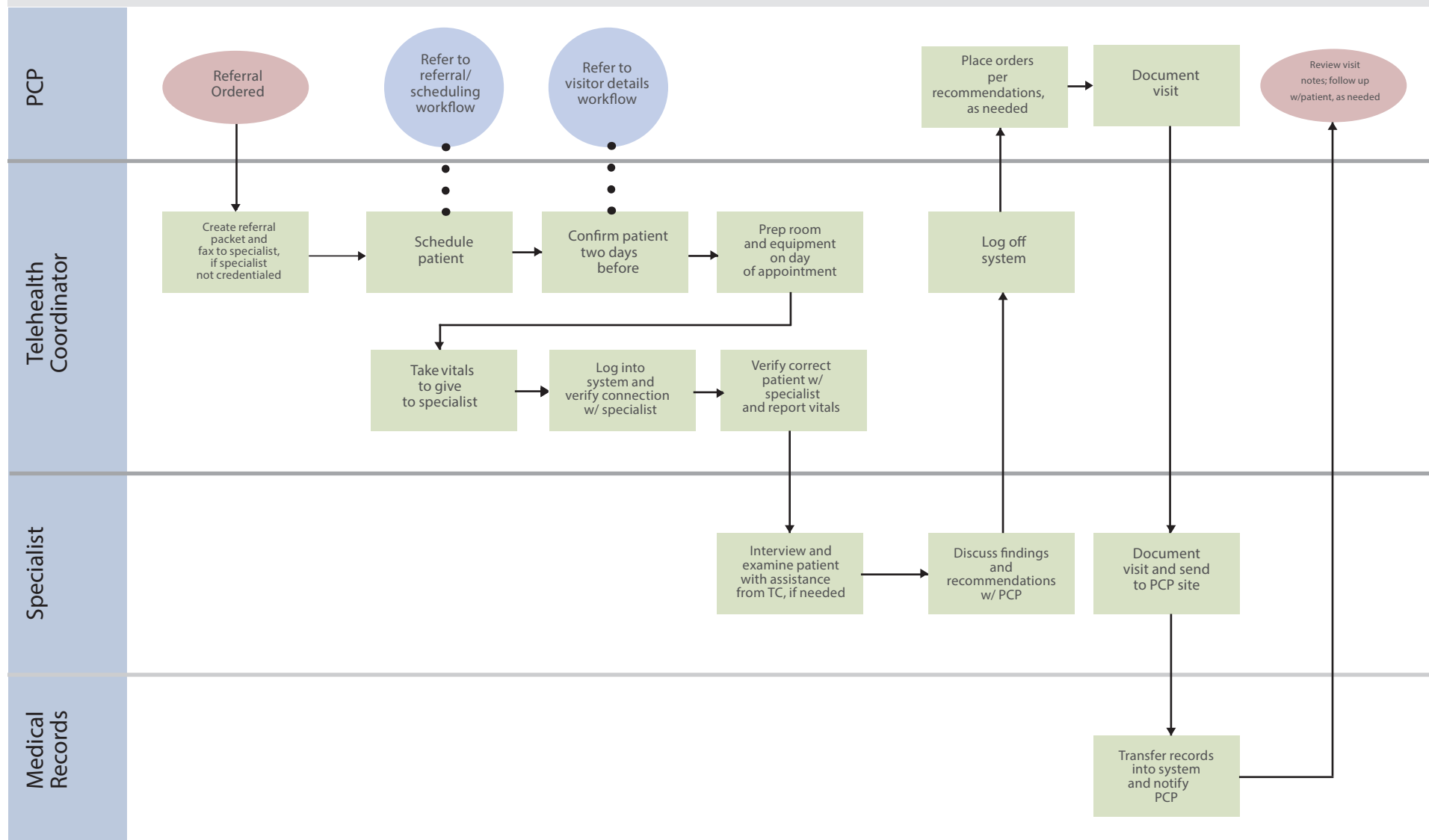
A process decision
point ("yes" or "no"
required here)



An activity connected
to another workflow

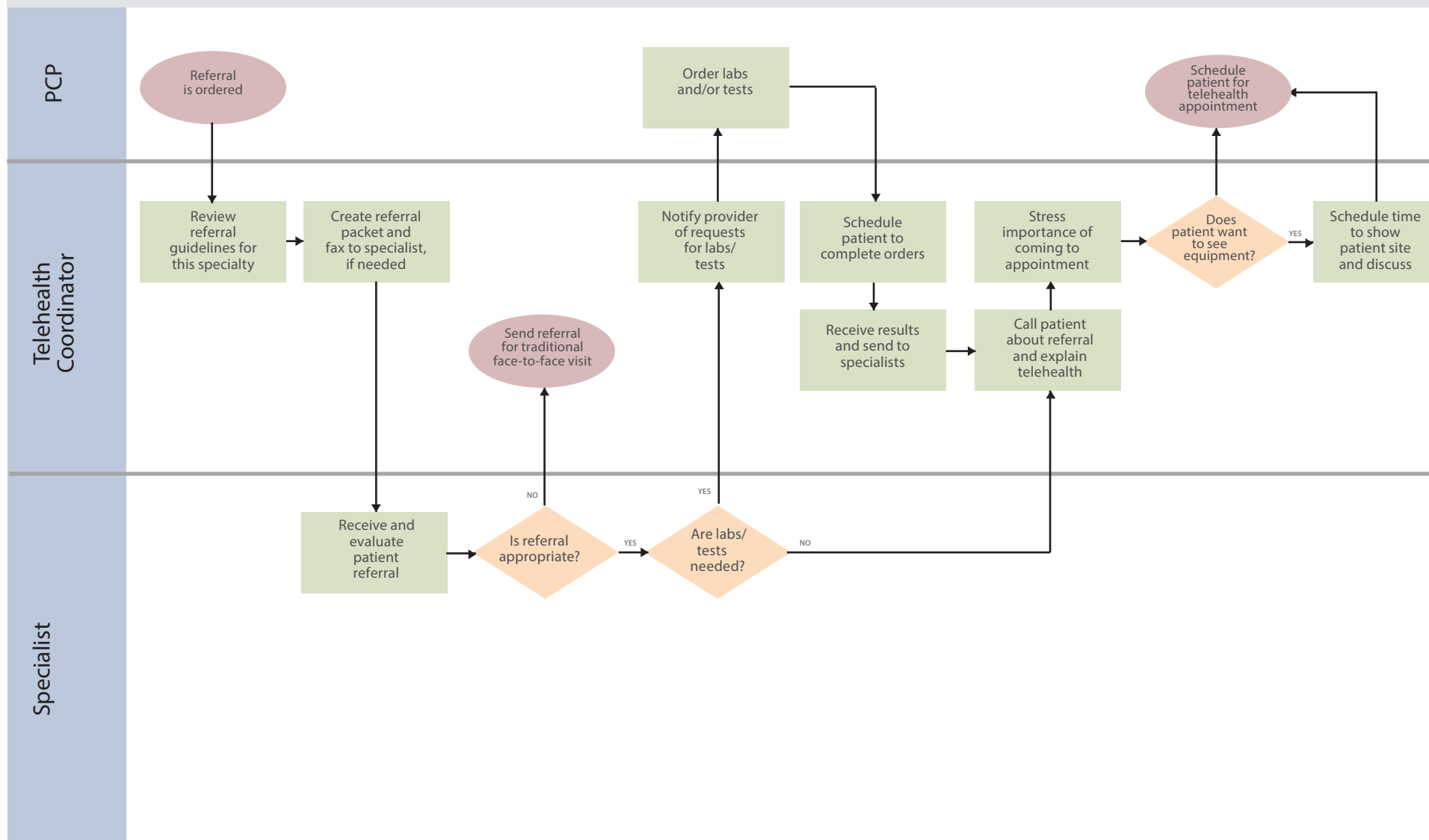
TELEHEALTH: GENERAL WORKFLOW

Overview of workflow for a typical patient referral to telehealth specialist services | November 9, 2017



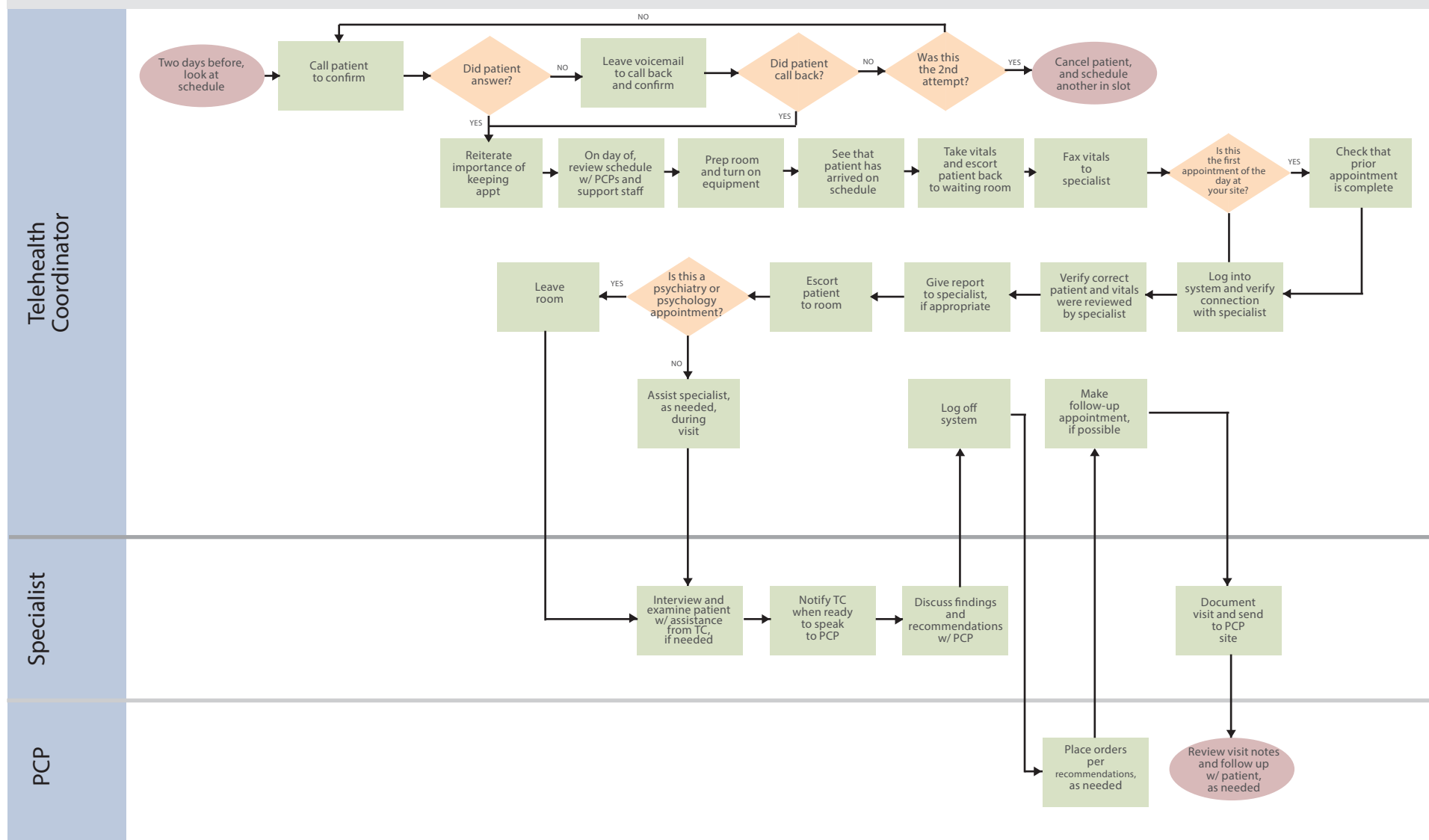
TELEHEALTH: REFERRAL & SCHEDULING FOR PATIENTS

Creating referral for telehealth specialists and scheduling patient for appointment | November 2017



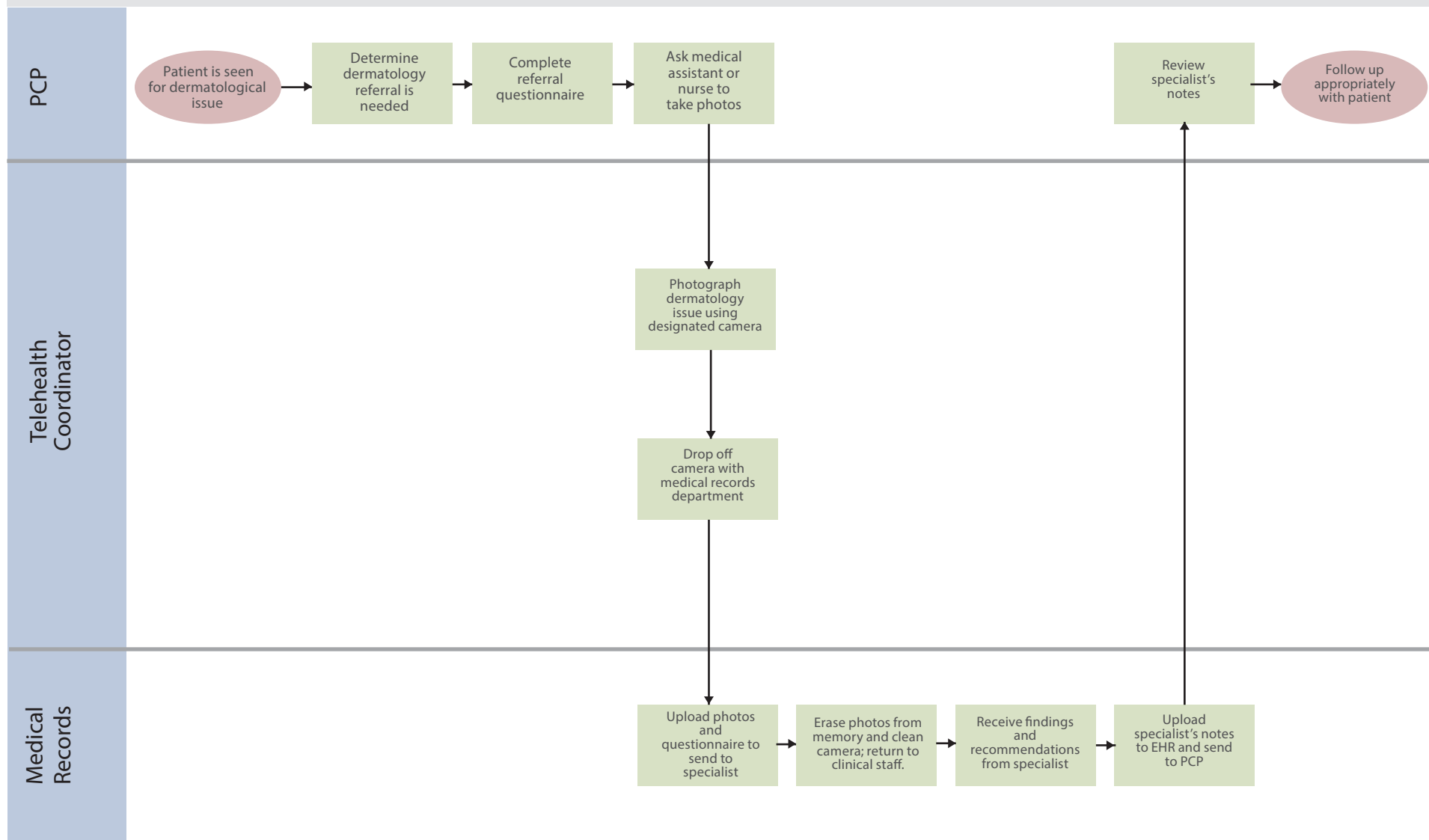
TELEHEALTH: DETAILED WORKFLOW

Workflow for a typical patient referral to telehealth specialist, from reminder calls through visit | November 2017



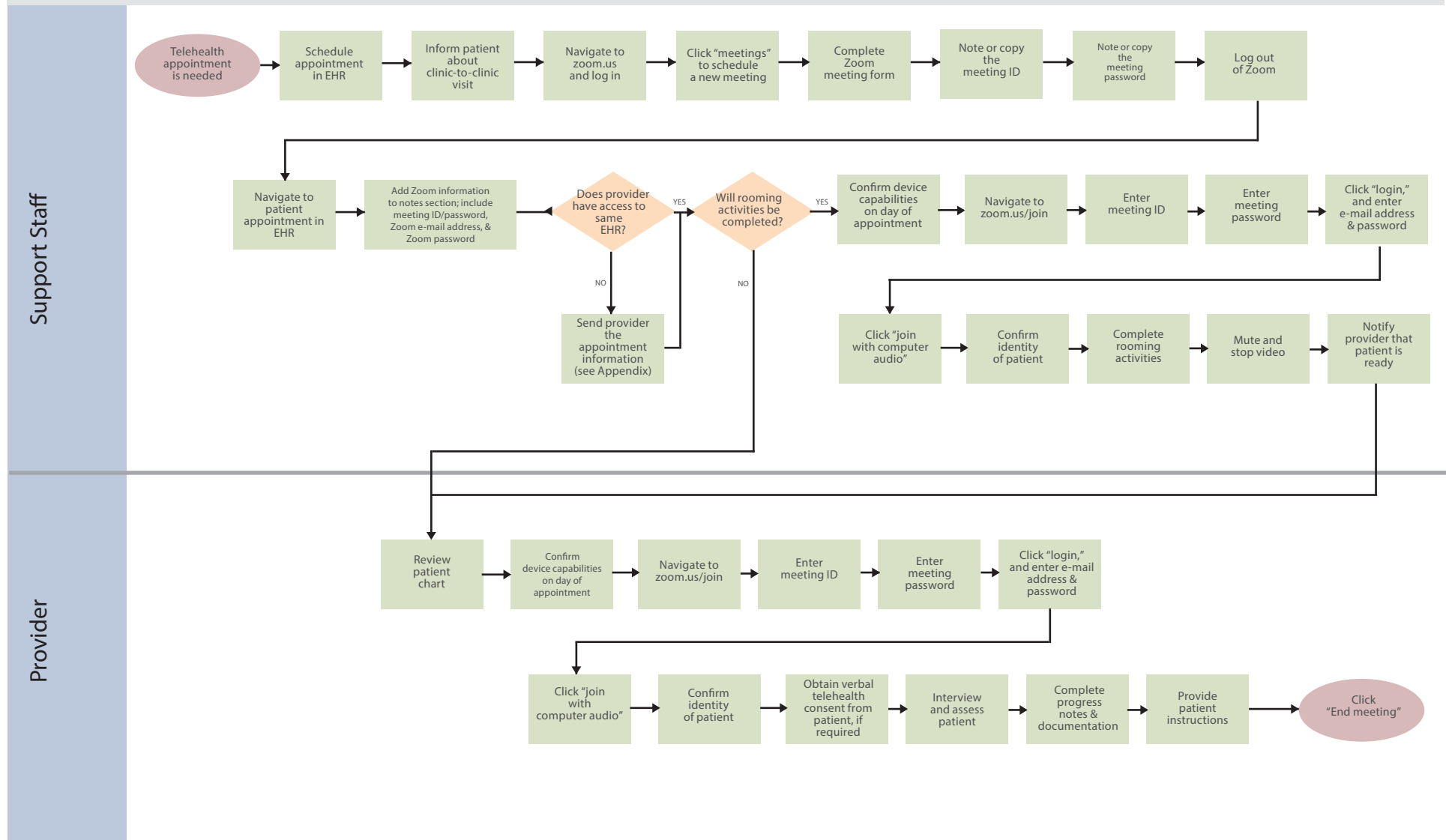
TELEHEALTH: STORE AND FORWARD DERMATOLOGY

Workflow for creating a dermatology referral using store and forward processes | November 2017



TELEHEALTH: CLINIC-TO-CLINIC NON-INTEGRATED ZOOM MEETING / AGNOS-

Workflow for visits to connect patient with provider/specialist in different location. Local site support staff facilitates visit via standalone (non-integrated) Zoom meeting | April 3, 2020



SAMPLE WORKFLOW: NOTIFY PROVIDER AT A DISTANT SITE

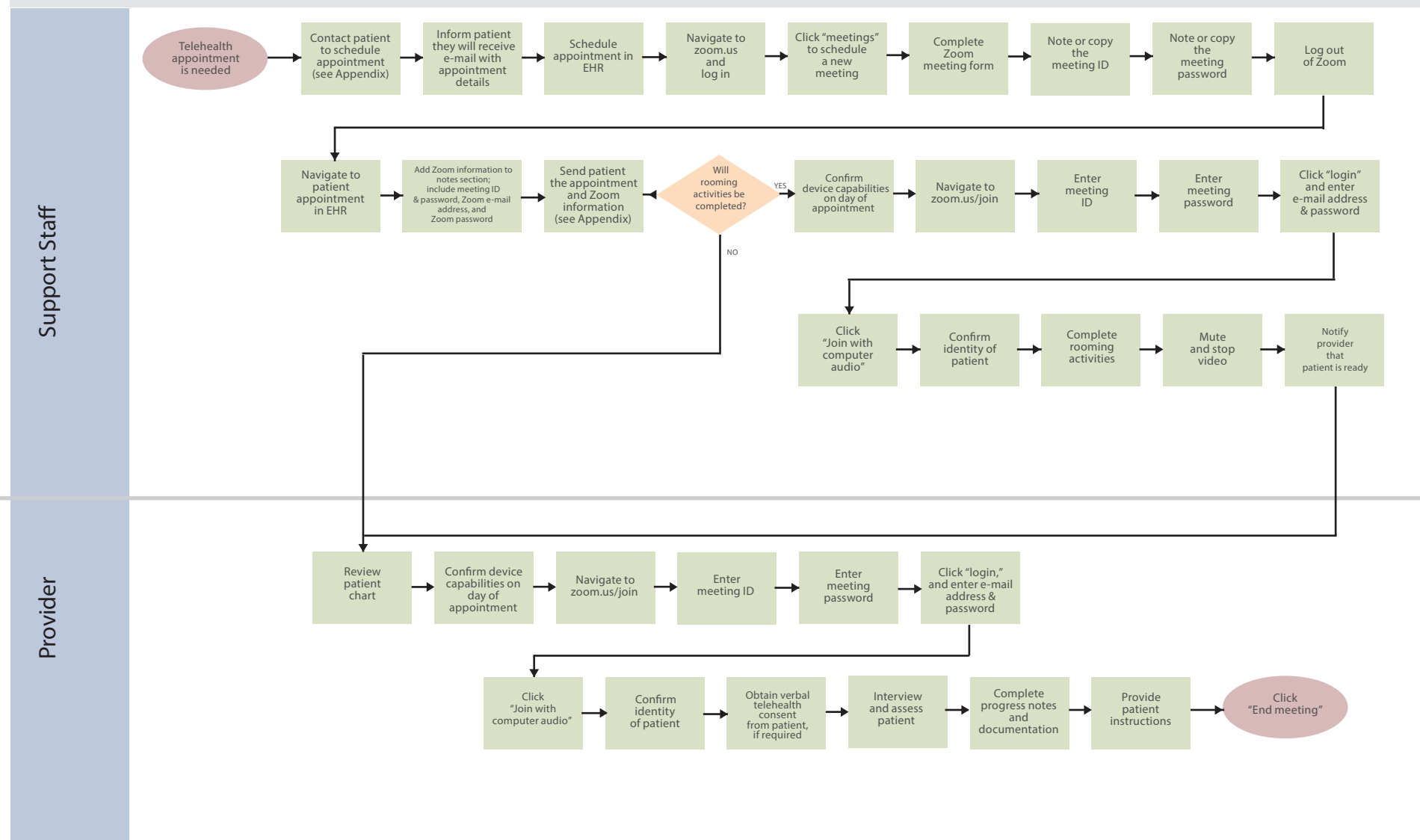
Day of Consult

1. Send patient the appointment information from confirmed email address provided by patient. Include:
 - a. Provider's name:
 - b. Date & time
 - c. Patient-specific Zoom meeting ID
 - d. Patient-specific Zoom meeting password
 - e. Clinic name
 - f. Clinic phone number
2. Add to email the following information:
 - a. Necessary equipment
 - Internet access
 - Mobile device (iPhone/Android/iPad/tablet/laptop) or computer with microphone/speaker/video camera.
 - b. Login procedure
 - Copy and paste this link to your internet browser: www.zoom.us/join
 - Use Google Chrome, if possible.
 - If using a mobile device, watch for Zoom app prompt.
 - Follow screen instructions to download.
 - c. Testing video capabilities
 - Visit <https://zoom.us/test>
 - Type patient-specific meeting ID (include for patient).
 - Type meeting password (include for patient).
 - Click "Join."



CLINIC-TO-PATIENT NON-INTEGRATED ZOOM TELEHEALTH / AGNOSTIC

Workflow for a clinic to schedule and complete a stand-alone (non-integrated) Zoom telehealth visit with a patient, who is not physically in the clinic. | April 3, 2020



SAMPLE WORKFLOW: PATIENT SCHEDULING

Prior to Consult

Once provider has determined a Telehealth visit is appropriate for patient, contact the patient or parent/guardian to ask whether they would like to schedule. If so, determine that patient meets telehealth visit criteria before scheduling.

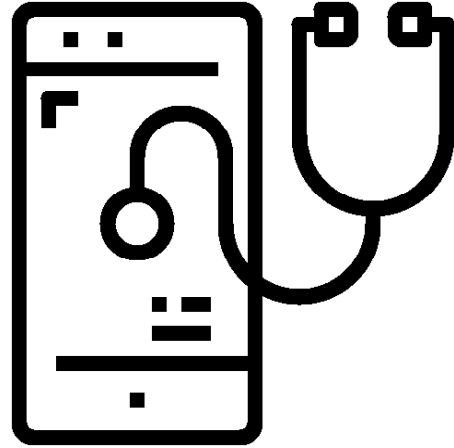


1. Contact the patient using this sample script:
“Your provider would like to schedule you for an online or virtual appointment. If you’d like to do this, I have just a few questions to determine if this type of visit would work for you.”
2. If patient would like to schedule a telehealth visit, patient must answer “Yes” to the following key questions to confirm that he/she meets the appropriate criteria prior to scheduling:
 - Do you have an email address?
 - Do you have an iPhone, Android, iPad, tablet, laptop, or computer with a camera?
 - Do you have internet in your home?
 - When you’re using your home internet, does it usually work dependably or not?
3. If “Yes” to all of the above, schedule a new telehealth visit or change existing visit in EHR. Let the patient know he/she will receive an email with instructions on how to join the visit. Video setup can be tested beforehand by visiting zoom.us/test.

SAMPLE WORKFLOW: PATIENT SCHEDULING, continued

Notify the Patient

1. Send patient the appointment information from confirmed email address provided by patient. Include:
 - a. Provider's name:
 - b. Date & time
 - c. Patient-specific Zoom meeting ID
 - d. Patient-specific Zoom meeting password
 - e. Clinic name
 - f. Clinic phone number
2. Add to email the following information:
 - a. Necessary equipment
 - Internet access
 - Mobile device (iPhone/Android/iPad/tablet/laptop) or computer with microphone/speaker/video camera.
 - b. Login procedure
 - Copy and past this link to your internet browser: www.zoom.us/join
 - Use Google Chrome, if possible.
 - If using a mobile device, watch for Zoom app prompt.
 - Follow screen instructions to download.
 - c. Testing video capabilities
 - Visit <https://zoom.us/test>
 - Type patient-specific meeting ID (include for patient).
 - Type meeting password (include for patient).
 - Click "Join."



ROOM DESIGN

Designing Your Telehealth Exam Room

Telehealth Room Design Guide



California Telehealth
Resource Center

2021 Edition

ROOM DESIGN INTRODUCTION

Because room design impacts telehealth service quality, it shouldn't be overlooked during telehealth program development. Good telehealth room design accomplishes two major functions:

1. It creates the necessary visual and audio clarity to support clinical examination and diagnosis from a distance.
2. It fosters a connection between the patient and remote provider sites, making patient-clinician interaction (not technology) the main focal point.

This guide provides proven, practical insights on the key components you should always consider when designing a telehealth room. It can help you choose the best room for providing telehealth services, and identify cost-effective modifications more easily. The guide also includes a time-saving template you can use to assess the design of any telehealth room. While most of this information focuses on patient exam rooms, the same fundamentals apply to remote clinician rooms. Find a companion video at www.caltrc.org.

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This Document was developed through a joint collaboration between the California Telehealth Resource Center (CTRC) and the University of Minnesota Great Plains Telehealth Resource and Assistance Center (GPTRAC/UoMN).

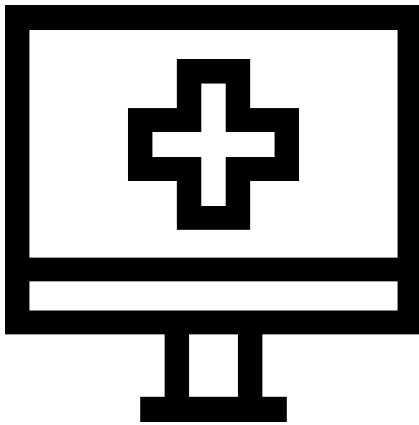
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OPTIMAL ROOM DESIGN FOR TELEHEALTH PROGRAMS



DESIGN CONSIDERATIONS/OVERVIEW



Technology + Convenience + Comfort

When designing a telehealth room, the main challenges are integrating technology into the regular exam flow and reproducing clear, accurate images at the consulting clinician site. The most important aspects to consider include:

- Room size & location
- Equipment & furniture placement
- Electrical & telecommunications connections
- Lighting
- Acoustics
- Wall color

Most patient sites adapt an existing room for telehealth. That's why it's so important to choose carefully—and to budget, if necessary, for room modifications.

Room Location

The telehealth room should be in a quiet location. Minimize exposure to noise from busy corridors, stairwells, parking lots, waiting rooms, the front desk, restrooms, and the like. This noise is readily picked up by microphones, which can make it difficult for the remote site to hear. Rooms without windows are the best option for high-quality image transmission. If the room you're considering has windows, install shades or blinds to reduce light and glare.

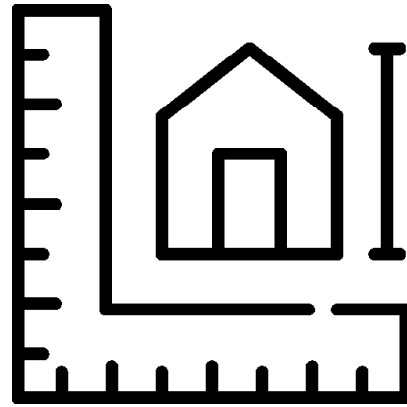
Room Size

While telehealth room sizes may vary, consider the service you're providing and the necessary types of equipment. For example, clinical or patient education programs require conference seating for multiple participants. In contrast, specialty consultations need examination tables and sufficient space for just a few people. Read through the functional suggestions on the following pages.

Room Size, continued

Telehealth Patient Examination Room

A telehealth exam room should be large enough that clinicians can move around and work with patients comfortably. It should readily accommodate an examination table, a couple of chairs, necessary telehealth equipment, the patient, and the Patient Presenter. Both the chair(s) and examination table should be within camera view. Remember that the Patient Presenter needs to move around the patient, and use the scopes easily. Most exam rooms should also contain a work surface for charting, a phone, and a computer. In some cases, fax machine availability is also helpful.



The size of the room impacts the camera viewing area. The distance between walls determines proximity of the camera/microphone to the patient. Ideally, the telehealth camera should be positioned 6-8 feet from the patient. The camera needs the ability to pan out, so that both the patient and Patient Presenter are clearly in view. It also needs to zoom in for patient close-ups. A room that's too small forces the camera closer to the patient, which can limit the consulting clinician's view.

Remote Clinician's Consultation Room

The remote clinician also needs to consider room design, taking into account the same factors that impact the patient exam room. Room size can generally be smaller for a remote clinician site, since there's no need for a patient exam table. However, camera placement and viewing angle are still important. See the Equipment Placement section for details.

Clinical Education Room

Many telehealth programs offer clinical education programs for clinicians and/or patients. A well-designed education room follows general classroom guidelines. Accordingly, writing tables for attendees are important—as are lecterns and white boards. Videoconferencing challenges include adequate audio feeds, camera coverage, and viewing monitor size.

Some patient sites use the patient exam room to view clinician education programs. This may be necessary if a unit can't be moved to a conference room. Attendees may find this uncomfortable, however, and it can impact overall technology acceptance. Some programs install lines in both an examination and conference room to facilitate educational programs. Just remember that the small screen typically used for exams may provide insufficient imagery for a conference room. It's never too early to start planning and budgeting for your requirements in this area. Careful preparation makes it easier to accommodate both sets of needs.

EQUIPMENT PLACEMENT & LIGHTING

Overview

Once you've selected the appropriate room, evaluate its layout for placement of your telehealth equipment. The goal is to optimize the camera's view of the patient. This permits staff to enter and exit without interrupting the visit, while allowing the presenter to easily access scopes and peripherals. Consider creating a sketch of the room showing doors, windows, electrical outlets, and existing telecommunications connections.

Positioning the Exam Table

Position the camera and exam table so the Patient Presenter can see both the patient and monitor when using scopes that transmit images to the remote clinician site. Include space for a chair, where the patient usually sits at the beginning and end of the visit. Also make a second chair available, in case a family member accompanies the patient.

Never place the exam table or patient chair directly in front of a window, if at all possible. Backlighting can darken the patient image at the remote clinician site. Shades and blinds aren't normally sufficient to reduce this darkening effect. Similarly, don't position the remote clinician in front of a window unless backlighting can be adequately minimized. The patient and clinician need to have a clear view of one another.



EQUIPMENT PLACEMENT & LIGHTING, continued

Positioning the Camera

Position cameras so that both participants are looking directly at one another during a video call. If the camera is placed too close to the participant—or mounted too high above the monitor—either individual will appear to be looking down at the monitor, rather than directly at the remote participant. The remote clinician site should be particularly aware of this effect when using a desktop computer with a camera mounted atop the monitor. If the distance is too short, the clinician will seem to be looking down the whole time. Additional camera dynamics are discussed on the following pages.

PROMISING PRACTICE:

A clean and uncluttered background optimizes camera function, and improves the view at the remote site. Wires, telephones, fax machines, monitors, computers, peripheral devices, and furniture can contribute to a messy and inefficient workspace appearance. Do everything possible to arrange and store these items in an organized, efficient way.



Camera Placement: a Noticeable Impact

In the figure on the left (below), can you tell that the patient is looking directly at the consultant? Probably not, because the camera is mounted too high. Try mounting the camera at roughly the same height as the patient's line of vision. This produces a clearer view of the patient, and helps the consultant maintain consistent eye contact throughout the visit.

No



Yes



EQUIPMENT PLACEMENT & LIGHTING, continued

Electrical & Telecom Outlets

Install or expand telecommunications and electrical outlets based upon the optimal location for the exam table and telehealth unit. Position telecommunications outlets near the unit to avoid long runs of cable across the floor. Depending upon its complexity, your equipment may require multiple outlets. Generally, a standard 120v outlet with a surge protector is sufficient for telehealth equipment.

Optimal Lighting

Lighting is perhaps the most critical factor in designing a telehealth exam room. It impacts the clinician's ability to see the patient clearly, with true color reproduction—which is vital for accurate patient evaluation. Your goal is to create images with even lighting, accurately reproducing colors. Do everything possible to avoid overly dark or shadowed images.

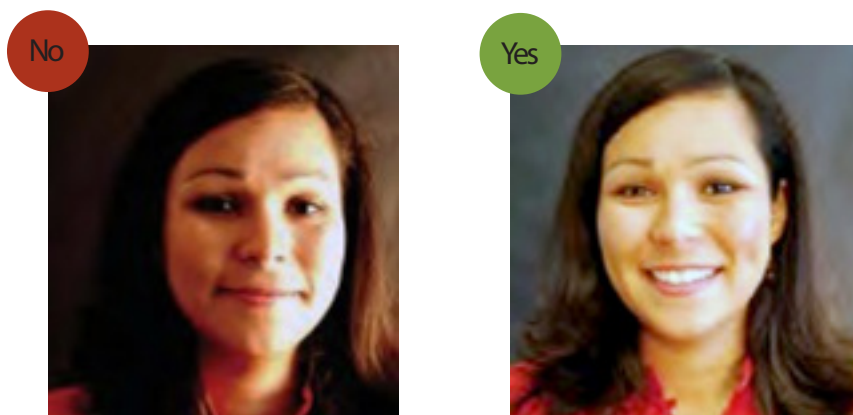
Lighting Fundamentals

A diffused light source is the optimal choice. This type of light doesn't create excess shadows, and depicts colors accurately. Ideally, your telehealth examination room will have both direct and indirect lighting. Try to position a good source of diffused light in front of the patient, shining diagonally toward the patient. Placing the light source in front reduces the facial shadows that often occur with overhead fluorescents, or backlighting from windows. Spotlights or harsh directional lighting can also create unwanted shadows, as shown in the images below.

In summary:

- Use diffused, soft light positioned in front of the patient
- Avoid backlighting from windows, or overhead lights
- Avoid harsh lighting sources wherever possible
- Consider full-spectrum lighting for the most accurate colors
- Use supplemental lighting when necessary

Remember, good lighting can dramatically improve image quality—even when you're using less-expensive cameras.



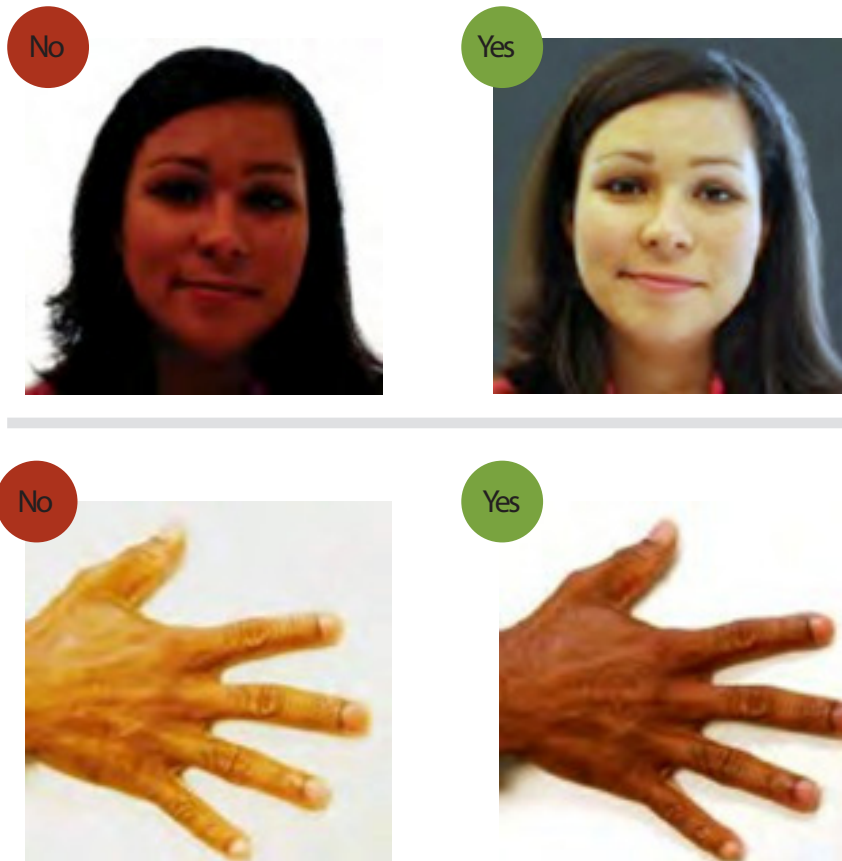
LIGHTING IMPACTS: ADDITIONAL VISUALS

Other Lighting Insights

In most patient examination rooms, overhead fluorescent lighting is pretty standard. On its own, unfortunately, this type of lighting isn't always optimal for telehealth visits. Fluorescent tubes can be an excellent source of diffused light, if you can manage to place them in front of the patient. But fluorescent lighting by itself normally creates washed-out images, so you may need an additional source of illumination. Another alternative is buying full-spectrum fluorescent tubes, which transmit colors more accurately.

While certain specialists depend upon accurate color reproduction more than others, it's always a key consideration. Dermatologists, in particular, need to see precise colors. Remember that color is often impacted by the white balance of the camera or peripheral scopes, so appropriate lighting correction is important.

The images below show the same subject in two different lighting scenarios. In the upper right-hand image, additional lighting from a supplemental source brightens the picture considerably. The lower left-side image of the hand is washed out by ceiling-mounted fluorescent lights. On the right, supplemental lighting noticeably improves color accuracy.

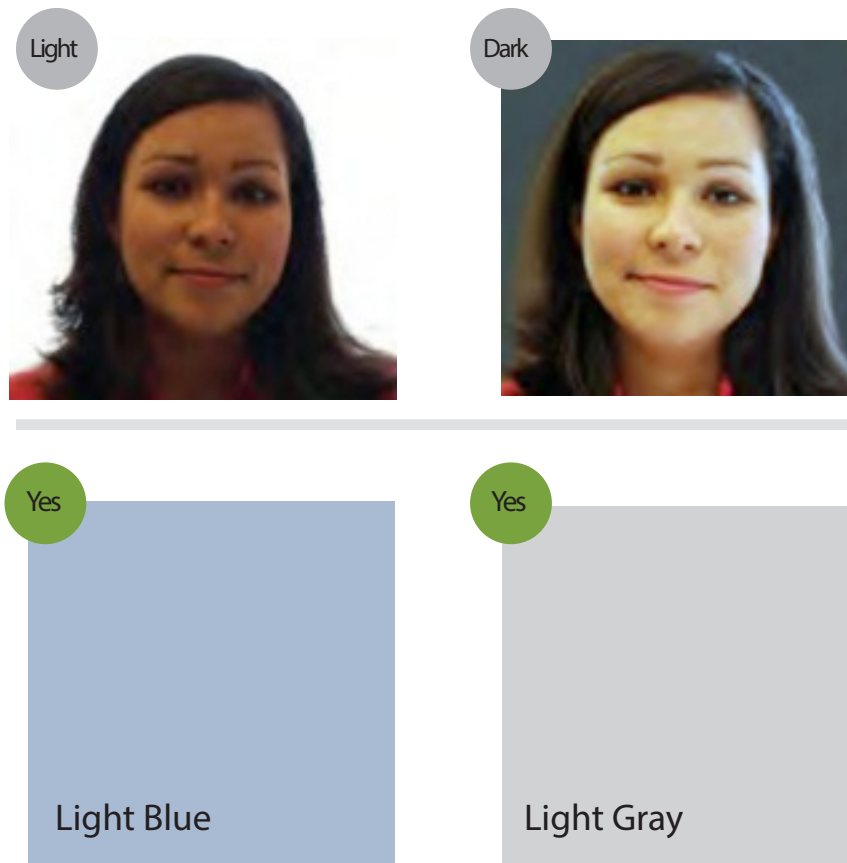


A WORD ABOUT WALL COLOR

More Important Than You Think

Wall color has a surprisingly strong impact on video appearance. White or light walls contrast with faces, and can visually darken them. This makes features harder to see at the remote site. Conversely, darker wall colors can actually brighten up faces. This happens because the automatic aperture settings on video and still cameras react to the darker wall color. When walls are light, these settings let in less light. But if walls are too dark, the settings admit so much light that faces can appear washed out. As illustrated in the photos below, a robin's egg blue or light gray background tends to work well with all skin tones. Whichever color you choose, use a flat finish (verses gloss or satin) to minimize reflection from the wall itself.

It's generally best to test your selected color before painting an entire wall. Different lighting conditions can impact the color's shade on-camera. Visualizing this on the remote end can help narrow down your ideal color options for a given space. Also remember that you don't need to paint an entire room in your chosen color. Focus on walls that serve as a backdrop for the various camera views.

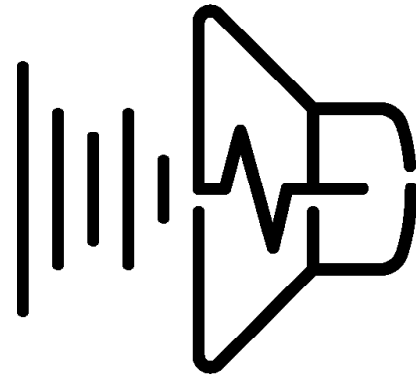


OTHER KEY CONSIDERATIONS

Acoustics

Good acoustics are an important part of telehealth room design. Rooms that echo make conversation between the patient and remote clinician difficult. Poor acoustics can often result from:

- High ceilings
- Uncarpeted floors
- Bare walls
- Office/ambient noises
- Equipment fans or motors



Install materials that absorb or dampen sound to help improve room acoustics. Helpful additions include carpeting, drapes, tiles, wall adornments, and/or special paint. If the remote clinician's room isn't normally used for patient examinations, carpeting and drapes may be an option. But if your clinical exam setting doesn't lend itself to these elements, try acoustic tiles instead. Install a few on the ceiling, or around the tops of each wall. You can also purchase sound-dampening wall paint.

Before selecting your sound-dampening solution(s), be sure to verify any facility licensing requirements. Also consider the amount of outside noise your chosen setting might experience on a daily basis. Too much external noise can disrupt patient visits no matter how many sound-dampening options you implement.

Reduce unwanted fan noise by installing telehealth equipment inside a cart or case. Just be sure you choose a solution that allows for proper air flow. Otherwise, your equipment can overheat and potentially malfunction.

Mobile Units

Telehealth mobile units are becoming increasingly popular. In particular, their portable design helps disaster response and mobile clinics to reach migrant or remote populations.

When setting up a mobile telehealth vehicle, consider many of the same factors that impact room design. Lighting, acoustics, and equipment placement become even bigger issues when your patient site is changed or moved regularly.

Some mobile programs don't have a telehealth-equipped vehicle. These programs move equipment from one location to another, then set up everything upon arrival. If that describes your situation, consider using the checklist in this guide with each new setup. Using one or two standard floor configurations is also a good way to facilitate successful consultations.

TELEHEALTH ROOM ASSESSMENT & DESIGN WORKSHEET

OVERVIEW

Type of telehealth room: ☐ Patient Exam ☐ Remote Clinician ☐ Educational Classroom

Types of clinical services you plan to provide: _____

Special space and/or lighting considerations related to these services: _____

Name of room being assessed: _____

How many people does this room need to accommodate? _____

ROOM DESCRIPTION

How quiet is the room? _____

How easily accessible is the room? _____

Is there minimal exposure to office and/or outside noise? _____

Is the room close to regular clinic operations? _____

EQUIPMENT TYPE/PLACEMENT

Identify the equipment needed in this room.

☐ Telehealth unit / Size _____

☐ Exam table

☐ Patient chair

☐ Other chairs / Number _____

☐ Work table

☐ Desk

☐ Computer

☐ Specialized lighting

☐ Peripheral equipment

☐ Telephone

☐ Fax machine

Placement of plugs/
lines will not interfere
with movement or create
hazard.

Camera can be placed to
provide full view of patient.

Camera can be placed to
create eye-to-eye contact.

Scopes and peripherals
can be accessed easily.

Room is large enough to
accommodate necessary
equipment, with adequate
room for the Patient
Presenter to move around
comfortably.

YES NO

☐ ☐
☐ ☐
☐ ☐
☐ ☐
☐ ☐

Required room modifications: _____

Estimated cost of room modifications: _____

TELEHEALTH ROOM ASSESSMENT & DESIGN WORKSHEET, continued

LIGHTING

YES NO

Does the room have windows?

--	--

If windows, can shades or blinds mitigate lighting impact?

--	--

If windows, can the exam table be placed to avoid backlighting?

--	--

Does lighting provide adequate direct/indirect illumination?

--	--

Does direct light source shine diagonally toward patient?

--	--

Is supplemental lighting adequate?

--	--

Are full-spectrum light bulbs needed?

--	--

Required room modifications: _____

Estimated cost of room modifications: _____

ROOM COLOR

YES NO

Is paint color appropriate for telehealth?

--	--

Is paint finish flat?

--	--

Required room modifications: _____

Estimated cost of room modification: _____

ACOUSTICS

YES NO

Does room have minimal outside noise?

--	--

Does room have a lot of echo?

--	--

Are equipment noise levels minimal?

--	--

Do facility license requirements permit modifications?

--	--

Required room modifications: _____

Estimated cost of room modifications: _____

GENERAL SETUP

YES NO

Is the room clean, and free of clutter?

--	--

TOTAL estimated cost of room modifications: _____

ADDITIONAL RESOURCES

Marketing/Clinical/Policy Resources

ADDITIONAL RESOURCES FOR TELEHEALTH PROGRAMS



MARKETING

CTRC publishes a no-cost Marketing Guide that provides proven strategies for promoting your telehealth program. It's a great way to engage your community and grow your telehealth patient volume over time. Download your copy at caltrc.org.

CLINICAL GUIDES

For additional insight into telehealth guidelines and promising practices, visit the links below. CTRC is a completely objective and impartial resource. Please note that this list does not represent an endorsement of any specific organization, nor is it all-inclusive.

American Academy of Dermatology Clinical Guidelines:

<https://www.aad.org/member/clinical-quality/guidelines>

American Medical Association Resource Page:

<https://www.americantelemed.org/resource>

American Telemedicine Association Practice Guidelines Archive:

https://www.americantelemed.org/resource_categories/practice-guidelines

Northeast Telehealth Resource Center Guidelines/Standards/Policies:

<https://www.telehealthresourcecenter.org/wp-content/uploads/2018/07/Resources-for-Clinical-Tele-health-Guidelines-Standards-Policies.pdf>

Southwest Telehealth Resource Center Standards & Guidelines:

<https://southwesttrc.org/resources/standards>

Telebehavioral Center of Excellence Clinical Guidelines:

<https://tbhcoe.matrc.org/clinical-guidelines>

POLICY

The Center for Connected Health Policy produces a 50-State Telehealth Laws document twice per year. Download the latest version by visiting their website:

<https://www.cchpca.org/telehealth-policy/current-state-laws-and-reimbursement-policies#>