

Chapter 2

Conducting a Telehealth Needs Assessment

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Chapter Summary

Purpose This chapter is organized in a step-by-step manner that will lead readers through the process of conducting an initial assessment of needs to inform telehealth program development. As the name suggests, a needs assessment defines the specific needs of a target population and program, while identifying potentially inaccurate assumptions regarding the value, purpose, or intent of establishing new services. We start by discussing why this process is essential to developing successful telehealth programming regardless of scale. We then review a streamlined approach based on an example of a psychologist who is the mental health manager of a small rural clinic interested in establishing limited clinical videoconferencing (CV) services. This example is included to keep the first pass of material as simple and accessible as possible. The chapter then covers another scenario with greater scope and complexity by focusing on the perspective of a director of telehealth who is tasked with implementing telehealth programs across a large hospital system.

Context The information is helpful to clinical managers, administrators, and clinicians because it is easy to assume that the gaps in services to be addressed by proposed CV programming are self-evident or face-valid. However, experienced program managers know that carefully considering, defining, and confirming clinical, programmatic, and regulatory needs before program planning and implementation prevents wasted time and resources. More specifically, we denote how critical gaps in program-

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ming and barriers to change can be identified through data collection and analysis, before jumping to solutions or implementation strategies built on impressions rather than facts.

Tools The chapter provides a number of data collection and decision-making tools for novices and experts in telehealth program development. It includes guided questions to appropriately scale an initial assessment, a list of patient,- provider,- and organization-related questions to identify and prioritize clinical needs, a checklist for identifying common useful sources of data that may already exist, a list of data sources commonly developed for needs assessments and accompanying major factors included in final reports, a table identifying and defining common types of cross-state licensure agreements for telehealth, a list of exceptions to state licensure requirements, and a list of telehealth recourse centers by geographical location with links to their websites. For investigating needs associated with larger programs, the chapter provides comprehensive checklists for conducting a needs assessment in three multifaceted phases, and tables that identify the pros and cons of employing different types of needs assessment data gathering methods.

2.1 Defining a Needs Assessment

A needs assessment is the first critical step towards building an effective and sustainable telehealth program. Ryan Watkins and colleagues define a needs assessment as “an approach that helps people make informed and justifiable decisions that accomplish desired results” [1]. It is a systematic process for identifying and addressing needs or the gaps between current conditions and desired results. The discrepancy between current and desired results must be measured to appropriately describe the current “need.” Simply put, a needs assessment is a tool for making better decisions.

2.2 Why Perform a Needs Assessment?

Telehealth programs are often started because there is some obvious unmet health-care need that might be addressed through CV services. Perhaps the need is primarily patient-oriented, such as patients at a particular rural clinic requiring better access to medical center specialty services. Perhaps the need is more program-orientated, such as a program wanting to expand the relevant catchment area. Or perhaps there is a more targeted and specific goal, such as implementing CV home monitoring of chronic disease patients in order to reduce hospital and emergency department admissions. Whatever the reason, your first task is to determine what the most

pressing needs are for your patients and community and to figure out if telehealth can really address those needs.

You may ask why you should perform a needs assessment if you already have made up your mind to incorporate telehealth or have been given a directive or grant to start a telehealth program? After all, you are already familiar with your clinic or hospital and the needs of patients, right? Why not just start buying equipment and begin implementing so that you can get services to patients and help staff as quickly as possible? Getting it right (or close to right) the first time around saves time and money, which is important when dealing with something as costly, labor intensive, and complex as CV program implementation. The most successful CV programs take the time to carefully identify and define program needs before beginning. If you make decisions without necessary information, many of your decisions will have to be revised [2, 3].

Too many managers make the mistake of equating efficiency with decisiveness in quickly selecting a solution and plowing ahead. Ultimately, because of the costs of changing course after resources are allocated, it can be difficult to adjust to new realities, leaving many projects to falter until they ultimately fail [1]. Research shows that the tendency to implement the first plausible solution, dubbed by Paul Nutt, “an emergent opportunity,” leads to less-successful results from your decisions than if you follow through with a complete needs assessment, which he refers to as “discovery decision making” [4].

2.3 The Scope of Your Needs Assessment

A needs assessment can exist anywhere on a continuum from short and simple to ongoing and complex. Needs assessments can be scaled for any size project, time frame, or budget. So what kind of needs assessment is right for you?

A good rule of thumb for determining the size and scope of your needs assessment is to let the decisions to be made be your guide. In other words, clearly establish what decisions have to be made, and reverse engineer your needs assessment on the basis of the information needed. If you are a solo practitioner then you may be able to determine this independently. If you are part of a larger organization go to your supervisor, collaborators, or other leaders in your organization to help clarify how they would like to use the results of an initial needs assessment. Figuring out where you are going can help you know where to start. For a bigger project in a large organization it may be necessary for you to gather a team that will do the work of developing a needs assessment. The point is this—you can spend more or less time on any of the steps in a needs assessment depending on your situation, just don’t skip any of the steps.

This chapter is organized in a step-by-step manner that will lead the reader through the process of conducting a needs assessment. We start by reviewing a streamlined approach based on the fictional narrative of a psychologist who is the mental health manager of a small rural clinic. This is done to keep the first pass of

this material as simple and accessible as possible. The chapter then covers another fictional scenario with greater scope and complexity by focusing on the perspective of a director of telehealth who is tasked with implementing telehealth programs across a large hospital system. Outlines and specific steps to guide this second, more comprehensive approach, are presented. If you are already familiar with CV and needs assessments or are in the position of managing a telehealth program across a large healthcare system feel free to skip ahead to Sect. 1.9 for a more comprehensive and complex discussion of telehealth program development.

2.4 Starting Your Needs Assessment: Identify, Analyze, and Decide

Although we have laid out the approach to starting a telehealth program in a step-wise manner please keep in mind that in reality these tasks may not proceed in a chronological stepwise manner. The following example illustrates this point. Suppose that you have identified a patient population with a huge need that can be well served through a CV program offering evidence-based specialty mental health services. However, when you try to get “buy in” or assess the “readiness” of this service you find that either the leadership does not support it or no “clinical champions” within the staff of that service emerge to help get the program going. Even though you may have determined that this is a great need with a perfect CV solution you still need to get “buy in” to make it work [2]. It would be prudent of you to recognize and address this issue so your telehealth initiative and its expensive equipment don’t end up collecting dust. The issue of “buy in” and organizational “readiness” is discussed in more detail in Sect 1.10.1.

The following sections present a fictional scenario that will illustrate the steps of a basic needs assessment. Imagine a mental health manager of a small rural clinic that has been asked by the director of a regional medical center to decide if she wants her clinic to be included in a grant that has been awarded to start CV programs in the hospital system. They want to provide specialty care and expertise from a large tertiary care medical center to her small rural clinic. So what is the next step? Any needs assessment can be compartmentalized into three basic steps: (1) *identify* needs by collecting information, (2) *analyze* the information collected, and (3) *decide* what to do next.

2.5 Identifying the Need

This seemingly simple approach (identify, analyze, decide) is specifically designed to help focus managers on understanding a situation before generating solutions. Of course, no one would argue against the proposition that one must understand and define needs before making decisions on how to implement or address those

needs. We all agree that healthcare decisions should be well informed and justified [1]. Even so, as experts in healthcare, we all also are tempted from time to time to believe that we already know what is going on. We all often, knowingly or unknowingly, jump to conclusions based on our experiences or beliefs. Accordingly, this 3-step mantra (identify, analyze, decide) is less a comprehensive road map for successful needs assessment implementation than it is a reminder to catch ourselves when we have decided something about future programming without due diligence. If you are a manager contemplating CV program development, then you might already be surprised by how much planning or pre-planning you are doing in your mind without adequate information. Creative contemplation regarding the future is important and having a vision is key to effective leadership, yet the nitty-gritty of CV program development should be informed by data not fantasy, no matter how experienced the dreamer is.

2.5.1 Identifying the Need: Determining Necessary Data

The first step in identifying needs is to determine what data are required. Clinical situations and ecologies vary too much for there to be only one or a few relevant questions. The manager in our current scenario is asked: Given the resources, would you like to participate in developing limited CV programming for specialty mental health care? From the manager's perspective, she considers two overarching questions that need to be addressed before providing her answer or recommendations. The first is: what disorder or population should be targeted in my clinic for specialty CV mental health services? The manager is aware that she is being asked to develop referral streams and programming for a limited resource, and so she is appropriately invested in identifying a high-priority population in her clinic. The second most relevant question for the manager is: will specialty CV care for the identified population in my clinic be feasible? Of course, questions of feasibility are paramount for any CV program development, but in the current circumstance, feasibility is a special concern because the manager would not want under-informed recommendations to contribute to the director or program being unsuccessful. In other words, there may be other clinics in the ecology where success might be more likely; accordingly, the manager places a high value on an accurate assessment of needs and feasibility in her clinic so that the director can make an informed decision about including her clinic.

The scope and focus of needs assessments will vary depending on the top information priorities. Moreover, appropriately scaled data collection should only target the top priorities. Although we may want to take on all of the unmet needs of the patients we serve, part of the needs assessment process is limiting and precisely defining the scope of what to recommend. One way to start is to target a specific illness or a particular geographic location. Using our scenario, and given that the manager already serves a relatively small population spread out over a large area, she decides that targeting a specific illness would probably be the best route to follow, rather than a geographical location.

Table 2.1 Patient, provider, and organizational questions to identify and prioritize needs

Relevant realms	Questions to address
Patient considerations:	What unmet healthcare needs do your patients have?
	Which of those needs could be met using telehealth?
	Among those diagnoses which ones are the most prevalent?
	Are your patients ready and willing to accept telehealth care?
	What additional services are your patients most likely to want/use?
	Is there demand for services as well as need?
	Which services are your patients most often traveling to the tertiary care facilities for? Could any of these services be delivered via CV to save the trip?
	If your patients have to travel to other sites to get consultations and services are they making the trip when referred or are they missing their appointments?
Provider considerations:	If they are missing their appointments why are they missing them?
	What diagnosis do your patients have that your clinic does not have the time/expertise to deal with effectively?
	What additional patient services do the other providers in the clinic most want?
	Are your providers ready and willing to provide telehealth care?
	What level of training for your providers will be available?
Organizational considerations:	What provider needs or opportunities might be met with telehealth? (e.g., training opportunities, frequent/timely collaboration with specialist providers)
	Are there resources allocated by organization to perform a needs assessment?
	What specialty services are best suited to telehealth?
	What are the range of technologies available to provide telehealth?
	What legal and reimbursement rules governing telehealth practice exist locally and regionally?
	Will your telehealth initiative be in line with your organization's mission or strategic plan?
	Does the tertiary care facility that we will be connected to via telehealth have the capacity to treat those diagnoses more effectively than we can?
	What telehealth services would be the most complementary to the services you are already providing?
	Are there any major organizational or technology barriers in the clinic or organization that should be addressed before starting development of this program?

Note that while it is important to value patient-centered factors, a needs assessment should also consider how telehealth can serve providers' needs as well. They will be the people facilitating and providing CV care, as well as shouldering the burden of starting something new [2, 3, 5]. While CV programs are often embraced once they are working smoothly, initially they can provoke anxiety, disrupt workflow, and threaten the status quo [6]. Table 2.1 provides a list of sample questions you can ask at the outset of your needs assessment to identify top patient, provider, and organizational priorities. If this list looks dizzyingly, keep in mind that you can pick and choose questions that suit your particular needs. Also, if you

Table 2.2 Identifying data that may already exist

1. Does your clinic collect metrics regarding patient demographics or clinical outcomes, are they available in an electronic medical records system (EMR)?
2. Are consults tracked in your system?
3. Does your larger hospital system track metrics and can you access those data?
4. Is there a way for you to review the number of patients with a specific diagnosis in your clinic through your EMR?
5. Does your hospital system have a strategic plan that contains data about areas for improvement that you could review?
6. Has your clinic or hospital system compiled any information that was used for internal or external regulatory reviews or grants that might be useful?
7. Does your billing department have information about the diagnoses, procedures, or payer mix through claims data that would be useful?
8. Is there any public health data for your clinic’s catchment area (local or state) that you could review?
9. Are there any U.S. government statistics that exist? Note, your clinic may operate in a federally designated specialty shortage area and so relevant data might be available (Mental Health HPSA Designation Criteria: http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/mentalhealthhpsacriteria.html provides all of the criteria used to determine a health professional shortage area)

are performing a large-scale needs assessment there are online toolkits with even more comprehensive question lists, see: <http://www.caltrc.org/knowledge-center/program-development/your-path-to-telehealth-success/> [2].

2.5.2 Identifying the Need: Collection From Existing Data Sources

The second step in identifying needs is to determine what to access from already available sources of data. Knowing what questions you want to answer will inform what data you need, but also the availability or feasibility of obtaining data will necessarily limit what questions you can answer. Data can be divided into two groupings: Data that already exist and data you need to collect. Table 2.2 presents questions that are helpful in identifying data that may already exist. Considering these questions can assist managers to think creatively about potentially relevant information and can protect against missed opportunities. Note that Chap. 6 contains a thorough discussion regarding gathering data to support ongoing program evaluation; necessarily the information overlaps with the content of the present chapter and should be reviewed as an ancillary resource for data gathering strategies.

The advantage of obtaining data that already exists is that you may not have to expend very much time or energy to obtain it. The downside is that they may have been collected with a different purpose in mind and not be relevant to your question. It may be difficult or time consuming to analyze. It may also be difficult to verify the quality or accuracy of the information collected [1].

2.5.3 Identifying the Need: Determining What Data Need to be Collected

The third step in identifying needs is to specify what information is needed that is not already available. After you have surveyed what data already exist, you can start to think about what additional data should be collected from primary sources. A good way of identifying the sources of primary data is to review all of the stakeholders who will be affected by or take part in the telehealth program. In the present example of a small rural mental health clinic, this might be patients, other staff at the clinic (psychologists, physicians, nurses, physician assistants, medical technicians, clerks), and the administrator(s) who originally designated CV as an area of interest [7].

Knowing what questions should be answered in this scenario, the manager reviews the hospital system's strategic plan and notes that there has been a pledge by the hospital's chief of staff and director to significantly increase the provision of mental health services especially in federally designated physician shortage and rural areas. Following this cue, the manager asks the service chief if she can send some data from the electronic medical records system on the prevalence of different diagnoses among patients treated in the clinic.

The list provided by the service chief documents high levels of depression, substance abuse, and diabetes among the rural patient population accessing the clinic. The manager is aware that providing referrals for specialty mental health providers located at the medical center is a common practice in the rural health clinic, but that many of the patients never follow up with their mental health specialist appointments. Practitioners have heard from a number of patients that they do not want to travel all the way to the hospital for these services. Moreover, the manager remembers a number of articles citing the negative impact that untreated mental health issues have on patients' medical comorbidities. Accordingly, *it appears* as if the present system in place to provide mental health specialty care to the rurally-based patrons of the clinic is inadequate, may be contributing to an exacerbation of medical conditions, and might be solvable via CV. *At this point the manager has a decision to make; she can formally or semi-formally gather quantitative, qualitative, and literature-based data to support her assumptions, or she could become very interested in the scale of the problem and potential scale of the CV-based solution. The former decision would provide evidence to support CV program development; the later decision would provide additional and specific information to help her craft a goal-driven and successful program.*

There are several options open to her for gathering additional information. She could follow-up her initial request for medical center-level data with another request to discover the no-show rate of patients referred to mental health specialty care. She could task her local clinical staff to do a record review for the past month to ascertain how many referrals were made. She could schedule interviews with her staff, the director of telehealth, the chief of the medicine service, the director of the medical center outpatient mental health clinic, mental health specialty clinicians, clinical staff that work in a clinic similar to hers in another rural country, and

current or past patients. In addition to individual interviews, she could also host focus groups as described in a recent article [7]. Although she would have liked to survey the local patients, she was discouraged by the low response rate in the past and by the approval process needed to go through to send out surveys to patients. However, she decided that she could push out a simple survey to her staff through email, and could address remaining questions in a focus group with them. She also was able to buy her staff into conducting brief chart reviews to ascertain the number of referrals made and outcomes over the past month. Her staff were motivated by the prospect of having clinical help locally for chronic or high-needs patients.

2.5.4 Identifying the Need: Data Collection

The fourth step of identifying need is actually collecting the information that was previously unavailable. The manager educates herself on basic focus group techniques and conducts the group during an extended lunch break in the clinic. She makes her best effort to stay on topic while starting with open-ended questions and narrowing questions to get more specific answers as different themes emerge. She encourages colleagues not to provide solutions, but rather to focus on what needs have not been met, to outline the scope and character of the problems. She shares the outcomes of the local chart review and assesses the staff's reaction to the needs that are identified. This includes the demographic and diagnostic information describing the need for specialty consultations for depression, substance abuse, and complications of diabetes (nephrology, podiatry, ophthalmology, vascular surgery, etc.). She discusses possible reasons for the low adherence to and availability of those consultation appointments. Her discussion reveals several themes, one of which is that other providers share her feelings of being ill equipped to help patients with depression and/or substance abuse especially when they are co-occurring with complicated medical diagnoses that need to be addressed in brief visits.

Armed with this information she schedules interviews with her administrator, the head of outpatient mental health, and a peer mental health manager in another clinic who has been given the same task by the service chief. During these conversations she finds out that proposed services will include hiring mental health providers with specialized training in treating depression and substance abuse. Given the difficulty of reaching patients in rural clinics, the mental health outpatient director is eager to collaborate with her on the project. She is also able to convince this director to lend her a psychologist who is adept at getting clearance for patient interviews and who can conduct a focus group with patients. This seems like a good opportunity given this psychologist's experience in running groups with patients and given that she does not have funds to hire an outside consultant.

From the patient focus group she determines that there is indeed interest among this group of patients in receiving CV specialty services. Very few of them report being willing to travel the distances required to receive those services and some allow that they might have been able to prevent worsening of their health if they

had followed up with specialty services earlier. They also complain that although there are some specialists who travel to your clinic one day every other week, these hours are so limited that your patients often get frustrated with trying to schedule an appointment and often give up on trying to do so. You find that this focus group is helpful in illustrating the gap between current and desired results and demonstrating that if telehealth services were available, patients would be willing to try these services, especially for mental health.

2.6 Analyzing the Information

Now that all the information is collected, it is time to make sense of it. Some of the data are quantitative in nature and so can be analyzed with simple statistics and displayed with charts. Some of the data are qualitative and so require a different medium of presentation (e.g., patient and provider direct quotes illustrating certain perspectives), and some are qualitative that can be quantified (e.g., “68% of the focus group demonstrated an openness to CV services”). After some interviews with the representatives of several specialty services, the manager realizes that many of them are not yet willing, prepared, or adequately staffed to offer telehealth services to her clinic. These data need to be analyzed and reported on in a sensitive manner so as to not have the effect of pointing fingers or burning bridges. Even so, it is important information that underlies a previously unidentified and incorrect assumption regarding the readiness of the system to innovate. Analysis also revealed a common concern among specialty SUDs and depression providers that some of the services require the performance of procedures that are either not available locally or would require more expensive and complicated redesign than using just clinical videoconferencing for mental health services (e.g., urine capture and analysis). This finding is noted in a running list entitled, “unforeseen potential barriers to effective CV programming.”

As noted, a needs assessment should be designed to identify the gap between a current level of need being met and a proposed level of need to be met. That is to say, it is not enough to demonstrate needs; good needs assessments will also fill in the gaps regarding how much additional need could/should be met with the proposed programming. We cannot expect CV programming to solve all patient needs and so specific benchmarks for success are required to inform program development. Chapter 6 addresses program goal setting within the context of data analysis (Sects. 6.2, 6.4, and 6.9 are especially relevant).

Analysis of data in the context of a needs assessment is more than just reporting a list of outcomes. The information should be organized and, as much as possible, that organization should be designed to answer the specific key questions at hand. Perhaps findings illustrate a number of positive and negative themes regarding the proposed change, staff ambivalence, or strong advocacy. Perhaps findings illustrate that some of the proposed goals can likely be met, but others are not feasible without a more integrative plan or additional resources. Whatever the case, analysis

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