Baseline Assessment Manual

Facilitating data collection to determine the availability of oxygen and pulse oximetry in health facilities

For use by:

Decision-makers

Implementers

May 2020

This resource is part of the **Oxygen Delivery Toolkit: Resources to plan and scale medical oxygen.** The materials provided within the toolkit can be used together or separately, as needed. The complete Oxygen Delivery Toolkit includes the following resources:

- *Oxygen is Essential: A Policy and Advocacy Primer*
- *Health Facility Standards Guide*
- *Baseline Assessment Manual*
- *Consumption Tracking Tool*
- *Procurement Guide*
- *Quantification and Costing Tools*
- *Reference Pricing Guide*
- *Electricity Planning Guide*
- *Asset Management Guide*
- *Global Financing Facility Medical Oxygen Investment Guide*

The toolkit is available at www.path.org/oxygen-delivery-toolkit.

Acknowledgments

Oxygen Delivery Toolkit disclaimer

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Introduction

A comprehensive survey of existing oxygen availability in a health care facility and barriers to its proper access is an essential step in ensuring that a reliable oxygen delivery system exists and benefits all patients. Such an assessment depends on collecting honest and accurate information from health workers, health facility administrators, and maintenance workers. Accurate data equips decision-makers and implementers with better understanding of the current status of oxygen delivery systems and barriers to access, enabling evidence-based planning. Therefore, selection and training of those involved in data collection, as well as the activities they carry out, are critical steps toward ensuring that reliable access to oxygen is not compromised.

This *Baseline Assessment Manual* provides operational training and related resources for those involved in conducting a baseline assessment. The manual consists of the main training guide and two supporting resources—the baseline assessment survey and the baseline assessment training PowerPoint. The survey described in this manual has been designed as a baseline survey to understand the current oxygen situation in a health system. It is important to note that once the initial baseline assessment is completed, the survey may be repeated in part or in whole to track changes in variables of interest to policymakers. Whether the data are used for future planning, tracking change over time through repeated surveys, or both, collecting accurate information that documents the true status within health facilities is essential.

Training guide

1. Training purpose and content

You have been invited to this training because of your experience with oxygen equipment and conducting surveys. Some of what will be covered in this training may be a review of information you already know. Regardless of the experience you bring to this work, there is always more to learn, especially regarding electronic data collection and unique aspects of this evaluation that you may not have seen before. For those who do have more experience, please feel free to offer advice to your less experienced teammates. We will all learn from one another, and everyone should feel free to share their personal knowledge with the group.

The first component of the training covers the basic principles of good surveying: how to introduce oneself, how to talk to respondents, how to handle impatient or unresponsive respondents, how to properly probe for answers, how to properly record answers, etc. Next, we will move on to a specific review of the survey itself. This training is designed to ensure participants learn the survey questions, both their meaning and the rationale for their inclusion in the assessment tool

We will work in a large group and one on one. We expect everyone to actively participate in practice interviews and role-playing scenarios in smaller group settings.

2. Training expectations

Please follow all training components closely. At any point, feel free to ask the facilitator to slow down or repeat something that is unclear. All work will be completed as a partnership. Survey administrators will ensure enumerators are supported and given all the information and skills necessary to become strong data collectors. This will only be possible if you are active and engaged in your learning process. The following steps could help you be successful during this training:

- Ask questions.
- Make comments and suggestions.
- Reach out to and learn from people in leadership positions.
- Talk to your fellow enumerators.
- Review materials prior to the training session (the night before).
- Arrive on time.

3. Training schedule

	Day 1	Day 2	Day 3
8:00	Introductions	Continue survey review: finish walking through ward-level questions	Review itinerary for field work
8:15	Meet the management team		
8:30	Introduction to the project		
8:45	Surveying protocols	Continue survey review: walk through the central oxygen systems section	• Walk through the survey as a group • Each enumerator asks a question, and the facilitator provides answers
9:00			
9:15			
9:30	Expectations for training		
9:45			
10:00	Tea	Tea	Tea
10:15			
10:30	Overview of data collection, instruments, day-to-day field schedule	Continue survey review: walk through the maintenance section	• Walk through the survey as a group • Each enumerator asks a question, and the facilitator provides answers • Energizer
10:45			
11:00			
11:15	Overview of the general surveying practices, coding, etc.; introduction to tablets		
11:30		Energizer	
11:45			
12:00	Start survey review: walk through the first section	Pair off and interview the partner	Ask and address outstanding questions on the survey
12:15			
12:30			
12:45			
1:00	Lunch	Lunch	Lunch
1:15			
1:30			
1:45			
2:00	Continue survey review: finish walking through facility-level questions on tablets	Review observations from the first part of partner interviews	Review answers from morning session
2:15			
2:30		Resume partner interviews	
2:45			
3:00			
3:15			
3:30	Discuss best practices for interviewing	Review observations from the second part of partner interviews	Depart for field
3:45			
4:00	Continue survey review: walk through ward-level questions on tablets	Complete partner interviews	
4:15			
4:30			
4:45			
5:00	Debrief and wrap up	Debrief and wrap up	

4. Key personnel involved in baseline assessment survey

All personnel involved in a baseline assessment survey are essential to collecting high-quality data and making effective policy decisions that reflect the actual situation in health facilities. The goal of this team structure is to enable collection of the best data possible.

Field manager

The field manager oversees all aspects of the survey, with a focus on ensuring completion of all data collection tasks on a daily basis. The field manager is responsible for making the daily schedule for survey teams, arranging appointments for health facility visits, and managing permissions with officials.

Team leaders

Team leaders work to lead teams of four to six enumerators. Team leaders oversee quality, assist the field manager with logistics, and manage relations with local officials.

Technical director

The technical director is responsible for the design, programming, troubleshooting, and analysis of the survey. The technical director can assist with questions about using the tablets, completing surveys, and uploading survey data.

Enumerators

This is the title used for professional surveyors. Enumerators will interview respondents in health facilities to collect data for the study.

5. Expectations for conducting a baseline assessment survey

When conducting a baseline assessment survey, it is best to follow a survey protocol. This manual outlines one such protocol. While the activities discussed during training may seem simple and straightforward, they may be challenging in a real-life setting. Problems will come up, and the team will need to find solutions while collecting data. For every potential problem, there is more than one potential solution. Alone, any member of this team could solve many of these issues in their own way. However, the most crucial characteristic of good data is consistent and uniform data collection. As a team, the goal is to always collect the same data in the same way, every time. That means asking the questions as they are written and probing to ensure that the response has been understood correctly. Every time a problem or situation arises, it should be resolved consistently among enumerators and across teams.

It can be very challenging to manage thousands of surveys if responses are not collected in a consistent manner. The protocols contained in this manual address most of the issues that might arise in the field.

In the event of problems, a process should be put in place to immediately escalate concerns with other members of the project team. Typically this would involve contacting project leadership or the technical director as a start.

Expectations for the survey

Working days: During the survey, work will be from Monday through Friday, when health facilities are open. Data collection will begin the day after training ends.

Hours: Be present at the meeting point at 7:00 a.m. or earlier. Teams will leave the office by 7:30 a.m. each morning and will sometimes not return until 5:00 or 8:00 p.m. in the evenings.

Survey length: Conduct, on average, at least one survey each day. Smaller facilities take about half a day to complete. Very large facilities may take up to two days.

Be prepared: Wear comfortable shoes that are easy to walk in. Take good care of the supplies you are given—survey tablet, pens, folders, etc.—and have them with you at all times.

Commitment: Every enumerator on the team is expected to work for the duration of the project.

Pay attention to detail: There are lots of details to learn, from clicking the right buttons on the tablet to completing accurate notes. It is expected that enumerators will pay attention and complete every detail.

Work efficiently in teams: Work together with your teammate to complete surveys efficiently and accurately. There should be no time when one team member is watching the other. When one member is speaking with a respondent, the other should be tracking down the next respondent or inventorying medical equipment to continue the survey quickly.

6. Survey guidelines and code of conduct

Below are the guidelines to follow during the survey. These guidelines are identified from best practices in administrating surveys and are in place to ensure the collection of high-quality, reliable data. Discuss any questions with the technical director and field manager.

1. High-quality enumeration is essential to collecting high-quality data. Enumerators will be selected to work on the survey based on their ability to follow instructions and protocols; their work ethic and reliability; their being a good team player; and, most importantly, the skill with which they conduct surveys.

2. Tablets are to be used for collecting data only. The tablet must not be used to access the internet, to download apps, or for any purpose other than collecting data. We will track any non-data-collection usage.

3. Except for illnesses, any person who is tardy or absent from duty during any part of the training or any part of the fieldwork (whether it is a whole day or part of a day) without prior approval from their team leader may be dismissed from the survey. If you do get sick or have a true family emergency, inform the team leader immediately.

4. Your conduct must be professional, and your behavior must be congenial in dealing with the public. We are only able to do our work with the good will and cooperation of the people we interview. Therefore, any behavior from any member of the team that is deemed aggressive, abrupt, or disrespectful toward either health facility staff or fellow team members will be reason enough for immediate dismissal.

5. Similarly, for the survey to succeed, each team must work closely together. Any team member who, in the judgment of the team leader, creates a disruptive influence on the team will either be transferred to another team or dismissed altogether. This might include abusing alcohol or using illicit drugs, arguing or fighting, spreading rumors, speaking badly about fellow team members, or generally causing trouble.

6. It is critical that the data gathered during the fieldwork be both accurate and valid. Field staff may be dismissed at any time during the fieldwork if their survey is considered inadequate for the high quality this survey demands.

7. Where vehicles and fuel are provided, they must be used strictly for the survey and official use only. Any person using the vehicle for an unauthorized personal reason will be dismissed from the survey. While moving in vehicles funded by the project, any person who is not related to the project should not be allowed to come aboard.

8. Every survey is strictly confidential. You should feel free to discuss challenges faced in the field with your teammates and team leaders, but any careless conversations that lead to the release of confidential information will lead to immediate dismissal.

9. Any attempt to flout any regulation set by management or compromise the quality of work through cheating or falsification of data will constitute a fundamental breach of trust and will be treated with utmost seriousness. Any member who tries to do such should be reported by team members and will be summarily dismissed.

7. Guidelines on interviewing health facility staff

Each interview should be viewed as a new source of information; avoid treating it as a mechanical process. Interviewing skills develop with practice, but there are several general guidelines as outlined below:

1. **Dress the part:** Present yourself as a professional unit that respects the communities we visit and individuals we work with. Under no circumstances should you be present in a health facility with inappropriate clothing.

2. **Act the part:** Present yourself using utmost professionalism at all times. This includes but is not limited to providing a proper greeting, sitting up straight, ensuring that the respondent is comfortable (not standing the whole time), listening with interest, never interrupting the respondent, and never answering a personal phone during a survey.

3. **Make a good first impression:** Your first responsibility as an enumerator is to establish good rapport with a respondent who does not know you. This first impression is important in ensuring the respondent's cooperation with you throughout the interview. Approach the respondent with a manner that is friendly and cordial as you introduce yourself.

4. **Obtain permission:** Always begin by introducing yourself and asking the respondent if he or she is willing to take part in the interview.

5. **Ensure confidentiality:** All of our surveys are to be conducted and maintained in confidentiality.

    Before beginning an interview, ensure that you are in a good environment and that no one can hear your questions or the answers of your respondent. No one is to take part in the survey except you and your respondent. Occasionally, there may be two respondents. If this is the case, both must agree to participate and offer candid and truthful information. Then you are to carefully explain the study, its purpose, and what we will be asking of the respondent.

6. **Read every script:** This sounds simple, but doing so requires a lot of patience and dedication to collecting high-quality data. Even when the questions become repetitive, even when you think you know the answer, and even when you are almost sure you know the answer, read the question every time. This is your job.

7. **Never change the wording of a question:** Even in cases where the respondent has not understood the question, the wording of the questions and their sequence in the survey must be maintained. When asking a question, speak slowly and clearly so that the respondent whom you are interviewing will have no difficulty in hearing or understanding the question.

At times, you may need to repeat the question in order to be sure the respondent understands it. In those cases, do not paraphrase the question but repeat it exactly as it is written. If the respondent still does not understand the question after you have repeated it, you may have to restate the question. Be very careful when you change the wording to ensure that you do not alter the meaning of the original question.

In some cases, you may have to ask additional questions to obtain a complete answer from a respondent. This is called probing. If you do this, you must ensure that your probes are "neutral" and that they do not suggest an answer to the respondent. Probing requires both tact and skill.

8. **Be neutral:** Most people are inclined to give answers that they think you want to hear. Therefore, you should remain neutral as you ask the questions. Make sure to avoid any expressions that can lead the respondent to think that he/she has given the "right" or "wrong" answer to a question. Similarly, make sure to never appear to approve or disapprove of any of the respondent's responses. Questions are carefully worded to ensure neutrality. It is therefore very important that you read the complete sentences and maintain that neutrality.

    You should also be careful to maintain neutrality in probing. If the respondent gives an ambiguous answer, your probes should be similar to the following neutral probes:

    > "Can you explain a little more?"

    > "I did not quite hear you. Could you please tell me again?"

    > "There is no hurry. Take a moment to think about it."

9. **Do not talk down to a respondent:** If you cannot understand the response provided, or the respondent asks you to repeat the question, or you feel that you need to probe to get a full answer, it is critical to always keep your tone neutral and never use a condescending tone. Be mindful of the way you speak and present yourself as neutral at all times.

10. **Never suggest answers to the respondent:** You should not suggest an answer or attempt to guess an answer from a vague response. We cannot use sentences such as, "I suppose you mean _____?" This is not neutral language; this language is suggestive of an answer that you think makes sense.

11. **Use a conversational tone:** As much as possible, you should use a conversational tone while you are reading the questions. You must read the questions exactly as

stated, but your eye contact and your tone of voice with the respondent are important in establishing a good relationship with the health facility staff. Good eye contact is important because you are learning about the respondent from his/her eyes, face, and body language. At the end of each question, we encourage you to look at the respondent while you are waiting for his or her reply.

12. **Consider responses before entering in the tablet:** At the end of each section, you should scan the responses and think about the "story" of the survey. You need to think about each answer the respondent provides in the context of previous responses and your surroundings. Does the answer make sense in the context of this health facility and in the local environment? Most respondents will give truthful answers. However, you need to be on your guard for the respondent who gives you false information or who feels he/she can shorten the interview by either not telling you the full story or by making up a false story. When probing, you must always be polite but also firm in your desire to get a good and truthful answer.

    When a respondent does not give you truthful answers, you must make it clear in a polite way that you understand that the story you are hearing is not the real story or full story. You may need to point out contradictions that you have identified. If a respondent observes that you accept his/her first untruthful answers, you can expect to get more false answers. As a result, you would record bad data and the survey will fail to be an accurate planning tool.

13. **Handle hesitant and distracted respondents tactfully:** Sometimes respondents simply say, "I don't know"; give irrelevant answers; act very bored or detached; or contradict something they have already said. In

these cases, you must try to interest them again in the conversation. You can achieve that by spending a little time talking about unrelated topics such as the weather, the community, etc. Feel free to give the respondents energizers as well. This does not mean that you should have them play a game, but it does mean that it is okay if they stand up or walk around for a bit.

Do not stop the respondent even if his/her answers are irrelevant or elaborate. Listen to what they have to say and then try to steer them gently back to the original question. If the respondent is reluctant or unwilling to answer a question, explain once again that the same question is being asked to many health facilities and that the answers will be confidential. No one outside of the survey team will ever know the respondent's name. If the respondent is still reluctant, simply enter –888 in the "other" option. This means "declined to answer." Then continue with the next question and ask if they are willing to continue with the survey. If they respond that no, they wish to quit the survey, you must discuss with your team leader.

14. **Do not hurry the interview:** Ask the questions slowly to ensure the respondent understands what is being asked and pause to give the respondent time to think. If the respondent feels hurried, they may respond with "I don't know" or give an inaccurate answer. If you feel the respondent is answering without thinking just to speed up the interview, say to the respondent, "There is no hurry. Your opinion is very important, so consider your answers carefully."

15. **Do not use your phone unless it is an emergency:** Never answer your phone in the middle of a survey. It is inappropriate to answer your phone for anything other than a professional or family emergency.

8. A typical day at the field

Step 1: Arrival at the meeting point

Report to the meeting point at 7:00 a.m. for every day of surveying. If you are travelling to health facilities that are very far, you will be asked to meet at 6:00 or 6:45 a.m. instead.

Some of the health facilities we will be working in are remote and far from any trading center. There might not be any opportunity for you to purchase food while we are working at health facilities. It is your responsibility to pack something to eat and drink while you are working.
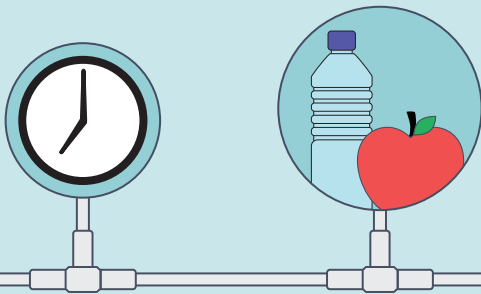
Step 2: Departure

Before leaving for the field, you must ensure that you have your correct tablet or data collection instrument and that it is fully charged. You must also have all other materials, such as worksheets, showcards, permission letters, a notebook, and pen.

The teams will move to and from the field in shared vehicles. We will make every effort to coordinate the efficient movement of vehicles to keep travel time to a minimum.
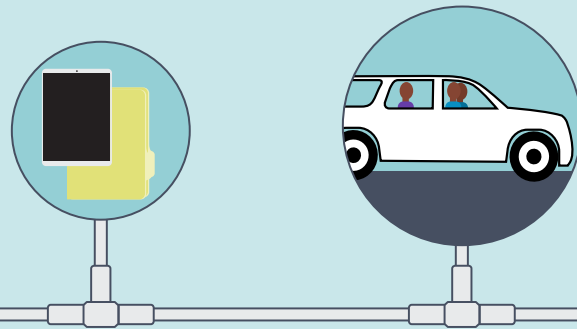
Step 3: Arrival at the health facility

Upon arriving at the health facility, you will first introduce yourself to the administration. If a team leader is with your team, then they will assist in the introductions.

Be sure to take the time for introductions. Doctors, nurses, and the health facility administration are incredible resources. Keep in mind, though, that health workers have other responsibilities. They are not at a health facility to simply to help us with our work. For this reason, you should be appreciative and thankful for any time and effort they offer.

For the most part, the field manager will be responsible for managing relations with the health facility's administration. If you encounter any problems in accomplishing your activities, you are to contact the field manager.
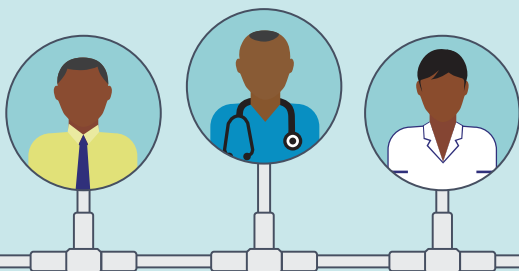
Step 4: Completing the health facility survey

The survey is designed to guide you through the facility ward by ward. During the introduction, you should make a plan with the administration for the most efficient way to go through the health facility. It may be appropriate to ask the administrator whom you are speaking to the first set of questions, or it may make sense to ask if another, less senior person is available to answer your questions. It is important to identify appropriate respondents who can quickly and accurately answer your questions on each ward.

Work as a team to move quickly through the health facility, identify new respondents, and observe medical equipment. While one team member is recording information on the tablet, the other should be facilitating the next step in the survey, such as gathering information from the equipment on the ward.
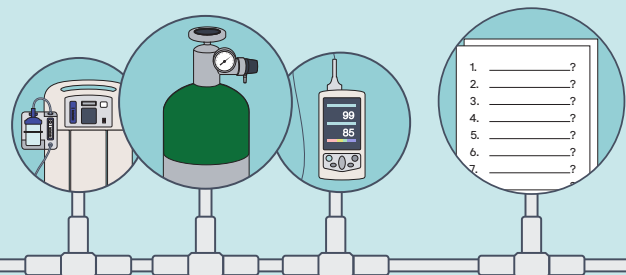
9. Conducting the survey

Survey length

Each survey will vary considerably in length. A small health center may take 1 to 2 hours to complete. A large hospital may take more than a full day. Some respondents will take their time to answer and will have many responses, whereas others will be more direct and brief. Please do not rush the survey.

Skip patterns

As with any survey, this one has numerous skip patterns that must be followed very carefully. While we review the survey, pay very close attention to the skip patterns associated with each question to ensure that you always ask the right question. Skips on tablets are executed automatically. This is not an excuse to not learn the skip patterns. The better you understand the flow of the survey, the more likely you are to catch any potential issues with the tablet's program or the answers you input.

Ward identification

Accurately determining the number of wards in the health facility is one of the most essential parts of the survey. You will repeat a large part of the survey for each ward. If you miss a ward or double-count a segment of a ward, it will result in inaccurate counting of beds and equipment. Such a mistake will result in an inaccurate quantification of oxygen equipment, which will drastically limit the utility of the survey.

Bed classifications

Properly classifying beds as outpatient, inpatient, or critical care is one of the most important parts of the survey. Pay very close attention to the definitions listed on the survey questions. During the training, ask any questions you have about various bed types. It is essential that each team classifies the same types of beds in the same way as they move through different facilities. The definitions used in the survey are shown in Table 1. If the definitions in Table 1 are inappropriate for your context, adjust as needed in the survey instrument.

Table 1. Bed classifications and definitions for the survey.

Bed type	Survey definition
Inpatient	NOT including critical care. This includes recovery beds in surgical ward.
Critical care	Inpatient critical care beds, high-dependency unit (HDU) beds, operating tables in surgical ward.
Outpatient	Beds typically occupied by patients receiving outpatient services. Includes receiving beds in surgical wards.

Training resources

Baseline assessment survey

The Excel-based survey is composed of four main sections: administrative and facility-level questions; ward-level questions; oxygen supply questions; and maintenance and contract questions. During the training, the technical director will walk through each survey question while enumerators follow along on tablets or data collection instruments. The survey template is available at www.path.org/resources/baseline-assessment-manual/. You can also request it via oxygen@path.org.

Baseline assessment training PowerPoint

The PowerPoint presentation includes helpful training guidance to assist enumerators in using SurveyCTO when conducting a health facility baseline assessment. It includes detail on each question used in the survey, as well as skip patterns to follow. The presentation is available at www.path.org/resources/baseline-assessment-manual/. You can also request it via oxygen@path.org.