World Health Organization Global Programme To Eliminate Lymphatic Filariasis

Lymphatic filariasis - managing morbidity and preventing disability:
An aide-mémoire for national programme managers, Second edition

WEB ANNEX A:
Protocol for evaluating minimum package of care of morbidity management and disability prevention for lymphoedema management in designated health facilities

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ISBN 978-92-4-001708-5 (electronic version)

Contents

Glossary of Terms and Abbreviations

Acute attack: acute onset of swelling, warmth, redness, and pain with or without fever, chills, headache, and weakness caused by a bacterial infection; used commonly to refer to adenolymphangitis (ADL).

Adenolymphangitis (ADL): inflammation of the lymphatic vessels and glands often accompanied by pain, fever, and swelling; also termed acute attack.

Designated health facility: in the context of this document and for the purposes of MMDP, refers to facilities selected by the Ministry of Health to provide either lymphoedema or hydrocele MMDP services.

Direct inspection: A mechanism for evaluation of MMDP services that is conducted in person by trained national or sub-national teams. Ten percent of the designated health facilities providing each service are recommended to be inspected to assess quality of services for lymphatic filariasis morbidity management and disability prevention services.

GPELF: Global Programme to Eliminate Lymphatic Filariasis

Hydrocele: collection of excess fluid inside the scrotal sac that causes the scrotum to swell or enlarge.

Implementation unit (IU): administrative unit in a country that is used as the basis for decision making about mass drug administration.

LF: lymphatic filariasis

LF-related disease: in the context of this document, refers to clinical disease including lymphoedema, acute attack, or hydrocele in all areas where LF is or was recently endemic. It does not include chyluria, tropical pulmonary eosinophilia, or other LF-related conditions for which public health approaches to treatment are not currently available.

Lymphoedema: swelling caused by the collection of fluid in tissue; lymphoedema most frequently occurs in the legs, arms, breasts, scrotal skin, vulva and penis.

Lymphoedema management: In the context of MMDP includes the following: hygiene, skin and wound care, elevation, exercises, and wearing suitable shoes.

MMDP: morbidity management and disability prevention

Morbidity: clinical consequences of infections and diseases that adversely affect the health of individuals. Lymphatic filariasis causes chronic morbidity by damaging the lymphatic system in the arms, legs, breasts, genitals (including hydrocele in men), or kidneys.

Service-specific readiness: Capacity of health facilities to provide health services; includes availability of resources in the following domains: trained staff, guidelines, equipment, medicines and commodities, and diagnostics.

SARA: Service Availability and Readiness Assessment; a health facility assessment tool designed to assess and monitor the service availability and readiness of the health sector and to generate evidence to support the planning and managing of a health system.

1. Introduction

Managing morbidity and preventing disability is a key component of the Global Programme to Eliminate Lymphatic Filariasis (GPELF). In areas where lymphatic filariasis (LF) is endemic, the ultimate goal is to provide 100% geographical coverage of the **minimum package of care**[1] in all areas with known patients, which includes:

1. **Treating acute attacks**: treating episodes of adenolymphangitis (ADL) among people with lymphoedema or elephantiasis;
2. **Managing lymphoedema**: preventing debilitating, painful episodes of acute attack and progression of lymphoedema;
3. **Managing hydrocele**: providing access to hydrocele surgery; and
4. **Providing antifilarial medicines** to destroy any remaining worms and microfilariae by MDA or individual treatment for LF infection.

In order to provide 100% geographic coverage, countries should designate and equip **at least one health facility per implementation unit (IU)** to provide MMDP services for LF-related diseases affecting that IU (i.e. lymphoedema or hydrocele). Countries are encouraged to designate more than one health facility per IU where resources allow, particularly in areas with high burden or in areas where access may be limited. In areas endemic for *Wuchereria bancrofti*, at least one surgical facility should serve all IUs that have known hydrocele patients.

To the extent possible, MMDP services should be integrated in the health system so that sustainable quality morbidity management resources are available to all individuals suffering from LF-related conditions. Once MMDP services are established, it is necessary to measure the availability and readiness of designated facilities to provide high quality MMDP care to patients. Readiness to provide quality MMDP care means that designated facilities have the necessary information, skills, infrastructure, and materials to appropriately identify and manage LF-related disease. Ultimately, it is hoped that having these systems in place will facilitate the transference of knowledge and support for persons with lymphoedema to incorporate lymphoedema self-care into their daily life and achieve optimal patient outcomes.

1.1 MMDP indicators included in the LF elimination dossier

According to the GPELF standard operating procedures for validation of elimination[2], countries will need to demonstrate three key MMDP elements within their country's LF elimination dossier:

[1] World Health Organization *Lymphatic filariasis: managing morbidity and preventing disability: an aide-mémoire for national program managers*. Geneva: WHO, 2013. .

[2] WHO Department of Control of Neglected Tropical Diseases. *Validation of Elimination of Lymphatic Filariasis as a Public Health Prpblem* (WHO/HTM/NTD/PCT/2017.1). January 2017.

1. **Patient estimation**: The number of patients with lymphoedema and hydrocele (reported or estimated) by implementation unit (IU) or similar health administrative unit
2. **Availability of the recommended minimum package of care**: In all IUs with known patients (100% geographical coverage), the availability of at least one facility providing the recommended care
3. **Readiness and quality of available services**: In selected designated facilities, documentation of the readiness and quality of available services (preferred assessment of at least 10% of designated facilities).

Previous WHO publications [3] have referred to providing 'access to care' as the goal of the MMDP pillar in elimination. The concept of access to care is multifaceted and is influenced by cultural factors, infrastructure, and the nature of the health system, including the availability of national health insurance schemes. Subsequently, directly ensuring that sustainable access to care is achieved remains outside the control of NTD programmes; therefore, ensuring the readiness and availability of quality services at health facilities are considered achievable standards for providing MMDP services.

1.2 Purpose of protocol

This protocol is intended to serve as a resource for countries that are working towards LF elimination. It details one methodology to collect the data necessary to fulfill the third key element listed above: **readiness and quality of available services**. Quality assessment surveys allow the systematic collection and critical analysis of indicators related to providing quality MMDP services. These indicators provide valuable information to the national programme on the strengths and weaknesses of the MMDP services and identify areas where improvements may be needed to ensure that quality services are available to all patients.

When should a quality assessment be conducted?

Quality assessments can be implemented at any time. To receive acknowledgement of having eliminated LF as a public health problem, a quality assessment should be conducted **at least once** prior to dossier submission, preferably within two years of dossier submission. Programme managers are encouraged to begin the scale-up of MMDP activities as soon as possible within programme implementation. Some national programmes may choose to implement a quality assessment prior to the initiation of MMDP activities, to obtain baseline data and better understand the areas that need strengthening and how to best design MMDP activities. Where resources allow, programmes may also periodically conduct quality assessments to track progress towards providing high quality MMDP care.

Where should quality assessments occur?

The survey should take place in a selection of health facilities throughout areas with known patients. Areas with known patients not only include areas that were classified as endemic during LF mapping exercises, they also include areas that were considered to be non-endemic during mapping (i.e. <1 % antigenemia or microfilaremia), but where there is evidence of one or more individuals with hydrocele

[3] WHO *GPELF Progress Report 2000-2009 and Strategic Plan 2010-2020*, Geneva: WHO, 2010. WHO *Lymphatic filariasis: managing morbidity and preventing disability: an aide-mémoire for national program managers*. Geneva: WHO, 2013.

or lymphoedema. All designated health facilities with known lymphoedema or hydrocele patients are eligible for selection for quality assessments to evaluate MMDP (see **section 2.1**)

How should the direct inspection be implemented?

While programmes are not required to use any specific methodology for assessing quality, this document outlines a survey methodology that countries may use to evaluate the quality of lymphoedema management services and fulfills the third MMDP dossier requirement for lymphoedema.

Alternatively, information can be collected through other health system assessments or methodologies. One such example is the Service Availability and Readiness Assessment (SARA), a WHO tool that has been designed to assess and monitor the service availability and readiness of the health sector and to generate evidence to support the planning and managing of a health system[4]. Currently, it includes information on facilities providing hydrocelectomies, but does not include information about lymphoedema management services. Another tool for assessing quality of hydrocelectomies is the WHO Tool for Situational Analysis to Assess Emergency and Essential Surgical Care.[5]

2. Direct Inspection Protocol methods

The direct inspection protocol (DIP) is designed as a structured assessment to evaluate health facilities on six key themes related to providing quality lymphoedema management services: trained staff, case management and education materials, water infrastructure, medications and commodities, patient tracking system, and staff knowledge (see **Annex 1** for full questionnaire). These quality themes were identified by LF and lymphoedema management experts as critical to providing quality lymphoedema management services[6]. For detailed definitions of each of these indicators and justification for their inclusion in evaluating quality refer to **Annex 2**.

2.1 Site selection and survey design

All designated health facilities with known lymphoedema or hydrocele patients are eligible for selection for quality assessments to evaluate MMDP services, including facilities that are located outside of implementation units where MDA took place. It is recommended to randomly sample a minimum of 10% of the designated health facilities providing MMDP services to provide an accurate and representative assessment of MMDP services. For countries with fewer than 50 total designated facilities a minimum of five designated health facilities should be inspected; if there are fewer than five

[4] Health Statistics and Information Systems, WHO. Service Availability and Readiness Assessment (SARA): an annual monitoring system for service delivery. WHO 2013.
https://www.who.int/healthinfo/systems/sara_introduction/en/

[5] WHO Tool for Situational Analysis to Assess Emergency and Essential Surgical Care.
https://www.who.int/surgery/publications/WHO_EESC_SituationAnalysisTool.pdf

[6] Walsh VL et al. *A Delphi consultation to assess indicators of readiness to provide quality health facility-based lymphoedema management services*. PLoS Neglected Tropical Diseases 12(9): e0006699.

designated facilities, all facilities should be inspected. Particularly in large countries, programme managers may consider stratifying facility section by region or other geographic unit.

A list of all designated health facilities providing lymphoedema management services should be compiled by the survey team. In some situations, LF programmes will directly oversee the scale-up of services in all IUs. In these settings, programme managers can produce a line listing of all facilities designated as providing MMDP services. However, in some settings, MMDP service provision may be provided outside the direct supervision of LF programme managers, including by private health facilities. In such situations, programme managers may use a questionnaire to assess availability of MMDP services by IU to better understand the number of designated health facilities providing MMDP services. This questionnaire could be sent to all IU-level LF focal points to be completed and sent back to the national programme, and/or could be completed while national programme staff are traveling to the IU.

From the list of designated facilities, a random number generator or sampling frame should be used to randomly select at least 10% of the designated health facilities providing lymphoedema services. For example, if 243 health facilities are providing lymphoedema management services nationally, then 24 health facilities should be randomly selected from the list of facilities. Further, national programmes can purposively include health facilities that have large numbers of known patients or known quality issues.

2.2 Survey implementation

The direct inspection protocol should be conducted by trained national or sub-national teams. Prior to the implementation of the survey, the survey team should obtain all necessary permissions from relevant authorities to conduct the health facility assessment.

Upon arriving at the health facility, the survey team should meet with health facility managers to provide an overview of the survey and obtain permission to complete the survey at the selected health facility. In collaboration with the health facility management team, the survey team should identify at least one staff member responsible for providing care for lymphoedema patients. The staff member(s) should accompany the survey team during the direct inspection and should be invited to respond to the staff knowledge questions.

Further, if possible, the inspection team should interview one person with lymphoedema who receives services from the selected health facility. Ideally, this patient would be selected randomly from a list of persons with lymphoedema in the health center catchment area; however, one may be identified based on convenience.

2.3 Questionnaire

At each selected health facility, the quality assessment survey team should complete the standardized questionnaire capturing data on quality of services (**Annex 1**).

The questionnaire comprises five sections:

I. Facility information

II. Facility assessment
III. MMDP challenges and feedback *(optional)*
IV. Patient interview *(optional)*
V. Lymphoedema management demonstration *(optional)*

The first two sections should be completed in their entirety to allow the calculation of quality scores, while Sections III-V are optional. Within the DIP facility assessment, data on 14 core tracer indicators are collected across six quality themes (**Table 1**). Seven of the indicators are related to lymphoedema-specific factors, while the remaining seven indicators measure indicators of general health facility service provision. These measures include indicators assessed through direct observation and interviews with key health facility staff.

Table 1: Direct inspection protocol tracer indicators by quality theme

Quality domains	Tracer indicators	Assessment method
Trained staff	1. At least one facility staff member trained in lymphoedema management in the last two years;	1. Interview
Case management and education materials	2. At least one guideline for lymphoedema management is present at the health facility; 3. At least one information, education, and communication (IEC) awareness material for lymphoedema management is present at the facility;	2. Direct observation 3. Direct observation
Water infrastructure	4. The main water for the facility is an improved source, is located on the premises, and is functional at the time of the visit [2];	4. Direct observation
Medicines and commodities	5. Antiseptics (e.g. potassium permanganate or other anti-bacterial) are present at the facility; 6. Antifungals (e.g. potassium permanganate or Whitfield's ointment) are present at the facility; 7. Oral/injectable antibiotics are present at the facility; 8. Analgesics (e.g. paracetamol) are present at the facility; 9. At least two supplies for lymphoedema and acute attack management are present at the facility;	5. Direct observation 6. Direct observation 7. Direct observation 8. Direct observation 9. Direct observation
Patient tracking system	10. A system for patient tracking with at least one patient recorded in the last 12 months;	10. Direct observation
Staff knowledge	11. Clinic staff member able to correctly identify at least two signs or symptoms of lymphoedema. 12. Clinic staff member able to correctly identify at least two lymphoedema management strategies. 13. Clinic staff member able to correctly identify at least two signs or symptoms of an acute attack. 14. Clinic staff member able to correctly identify at least two strategies to treat a patient with an acute attack.	11. Interview 12. Interview 13. Interview 14. Interview

Countries are encouraged to translate the DIP questions into the local language and adapt the question responses for the local context (e.g. adapt the list of potential IEC materials to those likely available at the health facilities based on programme activities). However, to avoid disrupting the ability to calculate facility and indicator scores, programmes should avoid making structural changes to **Sections I and II**.

To avoid biasing the results, the survey team implementing the questionnaire should not read aloud the list of question options in **Sections IIA-E**, but rather probe for answers by asking "What else?" until no additional options are presented. Further, the team should visually confirm the presence of case management and education materials, water infrastructure, and medications and commodities rather than rely on health staff responses that the materials are available. For the staff knowledge, patient knowledge and MMDP challenges sections, the survey team should only ask 'anything else' and not list possible responses.

Where possible, programmes are encouraged to interview at least one patient per health facility to assess their understanding and application of strategies to prevent lymphoedema and acute attacks (**Section III**). These measures can help assess the effectiveness of the health facility in translating knowledge that supports the uptake of lymphoedema management principals.

To provide actionable information on improving MMDP services, **Section IV** includes semi-structured questions to solicit feedback from lymphoedema management providers related to improving MMDP service quality. Several questions are proposed as part of the DIP questionnaire; however, countries should modify this section to meet their context-specific needs.

Finally, an optional lymphoedema-management hygiene demonstration can be included to allow the survey team to observe how the selected staff member performs lymphoedema-related hygiene and the extent to which he/she adheres to the hygiene best practices (**Section V**).

2.4 Data collection

Depending on local resources and capacity, data from the DIP questionnaire may be collected on paper or using a mobile data collection system. Mobile data collection is recommended, where feasible, to improve data completeness and quality. Following the completion of the survey, data should be collated by the national programme and entered into a spreadsheet or a national NTD database, if applicable.

2.5 Analysis of survey data

It is recommended that scores should be summarized both by facility and by quality indicator to assist programmes in identifying sub-optimally performing facilities, as well as to identify common deficiencies across facilities. **Annex 2** provides a detailed scoring guide for calculating each indicator, including the definition and classification of question responses. The use of statistical software is recommended, where feasible, to aid in the cleaning and analysis of survey data. The DIP scoring

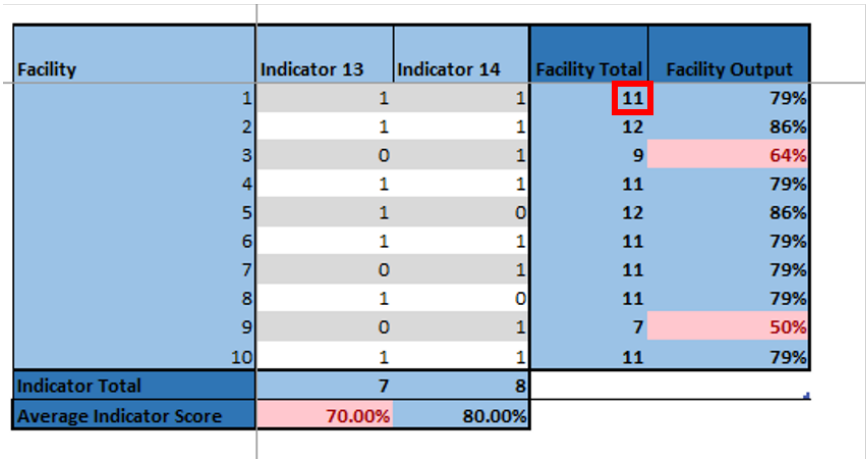
matrix can be used to assist program managers in organizing, calculating, and synthesizing facility and tracer indicator scores (**Annex 3**).

Facility scores

Surveyed facilities should be scored on a 14-point scale ranging from 0 (lowest performing) to 14 (highest performing). If a facility meets all components specified by the indicator, then the facility should be assigned a '1' for that indicator, otherwise the facility should be assigned a '0.' For multi-component indicators, such as water infrastructure, all components must be met for the indicator to be deemed met. The raw score for the facility comprises a count across all indicators (row total).

Each facility should be assigned a percentage score, calculated as follows:

$$\frac{Total\ points\ achieved\ by\ health\ facility}{14}\ x\ 100$$



Facility	Indicator 13	Indicator 14	Facility Total	Facility Output
1	1	1	11	79%
2	1	1	12	86%
3	0	1	9	64%
4	1	1	11	79%
5	1	0	12	86%
6	1	1	11	79%
7	0	1	11	79%
8	1	0	11	79%
9	0	1	7	50%
10	1	1	11	79%
Indicator Total	7	8		
Average Indicator Score	70.00%	80.00%		

Figure 1. Calculation of facility scores (Facility 1) using the DIP scoring matrix.

National indicator scores

National scores should also be generated for all tracer indicators. The raw score for the indicator comprises a count across all facilities (column total). Each indicator should be assigned a percentage score, which depends on the number of facilities surveyed.

The national indicator score is calculated as follows:

$$\frac{Total\ number\ of\ facilities\ achieving\ indicator}{Number\ of\ health\ facilities\ surveyed}\ x\ 100$$

Number of facilities Surveyed	10
Facility score benchmark (%)	75%
Indicator score benchmark (%)	75%

Facility	Indicator 1	Facility Total	Facility Output
1	1	11	79%
2	1	12	86%
3	1	9	64%
4	1	11	79%
5	1	12	86%
6	1	11	79%
7	0	11	79%
8	1	11	79%
9	1	7	50%
10	1	11	79%
Indicator Total	9		
Average Indicator Score	90.00%		

Indicator Score:

$$= \frac{Total\ points}{Number\ of\ health\ facilities\ surveyed}\ x\ 100$$

$$= \frac{9}{10}\ x\ 100$$

$$= 90\%$$

Figure 2. Calculation of indicator scores (Indicator 1) using the DIP scoring matrix.

2.6 Interpretation and use of data

While there is no score that indicates "passing" or "failing", programmes are encouraged to create facility and indicator score benchmarks prior to survey implementation. For example, programmes may aim for 75% of facilities fulfilling each indicator criteria. Following survey completion, the programme should compare the facility and indicator scores with the pre-determined benchmarks. Programmes should critically review which facilities or indicators fell below the benchmark and explore the possible causes of underperformance.

Facilities that fall below the pre-determined benchmark may require site-specific corrective actions. The programme should review the facility's indicators to determine which specific areas require modification to improve service delivery. Using this information, the programme should create a list of needed corrective actions at this site. These actions may include increased supervision by MMDP focal points or peer-to-peer exchanges with higher scoring health facilities.

Sub-optimal indicator scores indicate more systemic issues and may indicate corrective action across all designated health facilities. For programmes using the DIP scoring matrix (**Annex 3**), facility and indicator scores that fall below the stated benchmarks will appear in red (**Figure 3**). A list of strategies to investigate sub-optimal performance by indicator and suggested action items can be found in **Annex 4**. Recognizing that some quality indicators may fall outside the mandate of the national LF programme, sharing the data with other relevant government institutions or partners is key to advocacy efforts for service delivery improvements.

Direct Inspection Protocol Scoring Matrix

Number of facilities Surveyed	10
Facility score benchmark (%)	75%
Indicator score benchmark (%)	75%

Facility	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6	Indicator 7	Indicator 8	Indicator 9	Indicator 10	Indicator 11	Indicator 12	Indicator 13	Indicator 14	Facility Total	Facility Output
1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	11	79%
2	1	1	1	1	1	0	1	1	0	1	1	1	1	1	12	86%
3	1	0	1	1	1	1	0	0	1	0	1	1	0	1	9	64%
4	1	1	0	0	1	1	1	1	1	0	1	1	1	1	11	79%
5	1	1	1	1	0	1	1	1	1	1	1	1	1	0	12	86%
6	1	0	1	1	1	0	1	1	1	0	1	1	1	1	11	79%
7	0	1	1	1	1	1	0	1	1	1	1	1	0	1	11	79%
8	1	1	1	1	1	1	1	0	1	1	1	0	1	0	11	79%
9	1	1	0	0	0	0	1	0	1	1	0	1	0	1	7	50%
10	1	1	1	1	1	0	1	0	1	1	0	1	1	1	11	79%
Indicator Total	9	8	8	8	8	6	8	5	9	6	8	8	7	8		
Average Indicator Score	90.00%	80.00%	80.00%	80.00%	80.00%	60.00%	80.00%	50.00%	90.00%	60.00%	80.00%	80.00%	70.00%	80.00%		

Figure 3. Example of DIP scoring matrix showing sub-optimal facility and indicator scores in red.

Follow up activities to correct problems might include:

- Training or re-training health facility staff on lymphoedema management
- Developing and distributing health education and case management materials
- Advocating for improved water infrastructure in health facilities
- Improving supply chain management for key medications and commodities
- Improving patient tracking and reporting procedures

A report detailing the summary of survey results and an action plan for quality improvements should be developed. Results of the quality assessment and resulting recommendations should be shared with the LF programme, participating health facilities, and other relevant government ministries and organizations in order to implement quality improvement measures. Designated health facilities should be encouraged to create a quality improvement plan that incorporates the needed corrective actions. Corrective actions and suggestions for improvement should be given to facilities even if they fall above the pre-determined benchmarks, to ensure that the collected data is used to improve the quality of patient care. The details of this plan should be included in the LF elimination dossier.

2.7 Ethical considerations

Depending on the setting, this activity may be considered programme evaluation or human subjects research. In settings where this activity constitutes monitoring and evaluation of a public health programme, ethical review may not be needed. National programmes should follow country regulations about ethical review of surveys and informed consent. During health facility interviews, the survey team should ensure confidentiality for health staff participating in the quality assessment and they should be assured that their responses will not adversely impact their employment. All efforts should be made to maintain confidentiality of any patients interviewed or otherwise included in direct inspections of health facilities, in line with country protocols and laws.

Annex 1. Direct inspection protocol - facility questionnaire for the assessment of lymphoedema management services

I. Facility Information

1. Inspector Name: _____

2. Facility ID : _____

2. Facility Name : _____

3. Facility Locality:_____

4. Name of Implementation Unit/District : _____

5. Name of Region:_____

6. Facility Type : _____

O Primary or first referral-level facility/ district hospital / rural hospital
O Health center
O Teaching hospital
O Other: _____

II. Facility Assessment

A. Trained Staff

1. Have any staff who are currently working at this facility **ever** been trained or retrained in lymphoedema management? (If no, skip to question A3).

O Yes O No O Don't Know O Refused

2. How many currently working staff at this facility have **ever** been trained or retrained in lymphoedema management?
|__|__|__| staff

3. Have any staff who are currently working at this facility been trained or retrained in lymphoedema management in the **last 2 years**? (If no, skip to question B1).

   O Yes O No O Don't Know O Refused

4. How many currently working staff at this facility have been trained or retrained in lymphoedema management **in the last 2 years**?

   |__|__|__| staff

5. What are the titles of staff members who have been trained or re-trained in lymphoedema management **in the last 2 years**? (check all that apply)
   - O Physicians
   - O Nurses
   - O Health assistants/officers
   - O Community health workers
   - O Community volunteer
   - O Other (please specify) _____

B. Case Management and Education Materials

1. Are there lymphoedema management guidelines targeted to health workers and written in the local language present at this facility? (If no, skip to question B3).
   O Yes O No O Don't Know O Refused

2. Please show me the guidelines for lymphoedema management present at this facility (*check all that are visualized*)

   - O GPELF guidelines
   - O Regional WHO guidelines
   - O National guidelines
   - O Facility reference material (please specify)_____
   - O Job aid or training material
   - O Lymphoedema management video
   - O Other (NGO, non-profit, etc.) (please specify) _____
   - O No guidelines visualized

3. Please show me the patient education materials written in the local language (or are pictorial) that are available at this health facility (check all that are visualized)
   - O Public Awareness Poster
   - O Flip-chart
   - O Morbidity manual
   - O Patient leaflets

O Patient booklets
O Instruction card
O Other; please specify: _____
O No appropriate IEC/awareness materials visualized

C. Water Infrastructure

1. What is the main water supply for the facility? (Note: If there is more than one source, the one used most frequently should be selected. If patients need to bring water from home because water is not available at the facility, "no water source" should be selected).

O Piped supply inside the building (if yes, skip to C3)
O Piped supply outside the building
O Tube well / Borehole
O Protected dug well
O Unprotected dug well
O Protected spring
O Unprotected spring
O Rain water
O Tanker truck
O Surface water (river/dam/lake/pond)
O Other (specify) _____
O Don't know (Skip to D1)
O No water source (Skip to D1)

2. Where is the main water supply for the facility located? (On premises means within the building or facility grounds. This question refers to the location from where the water is accessed for use in the health facility (e.g. tap, borehole), rather than the source where it originates).

O On premises
O Up to 500 m
O 500 m or further
O Unable to assess location of water supply

3. Is water available from the main water supply at the time of the survey? (Note: To be considered available, water should be available at the facility at the time of the survey or questionnaire. Where possible, the enumerator should confirm that water is available from this source e.g. check that taps or handpumps deliver water).

O Yes
O No
O Unable to assess if water is available

D. Medications and Commodities

1. Please show me the following medications and describe their availability at this facility.

> **Training note:** Inspector must visualize any medications indicated as currently in-stock in order to select this answer.

	Medication	Currently in stock in sufficient quantities*	Currently in stock but NOT in sufficient quantities*	Currently stocked-out	Never available
A	Antiseptic (e.g. potassium permanganate or other anti-bacterial) or topical antibiotics (e.g. povidone-iodine, polysporin, bacitracin)				
B	Antifungal (e.g. potassium permanganate or Whitfield's ointment)				
C	Analgesic or anti-inflammatory (e.g. paracetomol)				
D	Oral antibiotics (e.g. amoxicillin, doxycycline)				
E	Injectable antibiotics (e.g. ampicillin, ceftriaxone)				
F	Diethylcarbamazine citrate (DEC) / ivermectin				
G	Albendazole				
H	Other (Please specify)_____				

**Sufficient quantity is defined as maintaining enough supply of medications to meet current demand at the health facility.*

2. Please show me the following supplies and describe their availability at this facility.

> **Training note:** Inspector must visualize any supplies indicated as currently in-stock in order to select this answer.

	Supply	Currently in stock in sufficient quantities*	Currently in stock but NOT in sufficient quantities*	Currently stocked-out	Never available
A	Bucket or basin				
B	Soap				
C	Towels				
D	Gauze or cotton cloth				
E	Cold compress				
F	Nail clippers				
G	Patient hygiene kits (if appropriate)				
H	Other (Please specify)_____				

**Sufficient quantity is defined as maintaining enough supply of materials to meet current demand at the health facility. These supplies should be for use in patient care and not general use.*

E. Patient Tracking System

1. Does this facility have a system for identifying and quantifying the number of patients with lymphoedema? (If no, skip to F1)

O Yes O No O Don't Know O Refused

2. What system is being used by this facility for identifying and quantifying the number of patients with lymphoedema?

O Patient register
O Paper patient charts
O Health Management Information System (HMIS) / DHIS2
O Other (please specify) _____

3. How many patients receiving any lymphoedema management services have been reported in the last 12 months? |__|__|__|__| O Don't Know

F. Staff knowledge

READ to facility director/point of contact: I would like to ask any member of your facility who has been trained in lymphoedema management a few questions about lymphoedema and acute attacks.

Is there a staff member who is responsible for lymphoedema management that is available? (If no, proceed to Module III)

O Yes
O No

READ to member of facility: I would like to ask you a few questions about lymphoedema management and acute attacks. Your answers will be completely anonymous and will in no way impact your status of employment.

(For inspector to check off): **Has the individual verbally acknowledged that they are willing to participate in the following survey?**

O Yes
O No (If no, proceed to Module III)

1. Please describe for me the signs and symptoms of lymphoedema *(SURVEYOR: DO NOT READ THE ANSWERS, ASK TO BE SPECIFIC, ENCOURAGE "ANYTHING ELSE?" UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY)*:

O Swelling (reversible at night)
O Swelling (irreversible)
O Skin folds (shallow or deep)
O Knobs on the skin
O Mossy lesions (i.e. small elongated or rounded growths)

O Inability to perform daily activities or care for self
O Acute attacks / adenolymphangitis (ADL)
O Wounds or entry lesions
O Other; specify: _____
O Don't know any signs/symptoms of lymphoedema

2. Please describe for me the signs and symptoms of an acute attack (ADL, also known as <local word for ADL>)? *(SURVEYOR: DO NOT READ THE ANSWERS, ASK THEM TO BE SPECIFIC, ENCOURAGE "ANYTHING ELSE?" UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY):*

O Redness of limb
O Warmth of limb
O Increased swelling of limb
O Painful limb
O Fever
O Headache
O Chills
O Nausea/vomiting
O Other; specify: _____
O Don't know any signs and symptoms of an acute attack

3. Please describe for me all of the strategies you would teach a lymphoedema patient for preventing the progression of lymphoedema and preventing acute attacks (ADL, also known as <local word for ADL>) *(SURVEYOR: DO NOT READ THE ANSWERS, ASK THEM TO BE SPECIFIC, ENCOURAGE "ANYTHING ELSE?" UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY)*:

O Hygiene / washing and drying of affected limb
O Wound care / care of entry lesions
O Elevation
O Exercise
O Shoe use
O Prophylactic creams
O Prophylactic systemic antibiotics
O Instruct patients to avoid harmful behaviors (e.g. scarification and fumigation)
O Other; specify: _____
O Don't know any lymphoedema management techniques

4. Please describe for me all of the management strategies you could use to treat a patient who is having an acute attack (ADL, also known as <local word for ADL>) *(SURVEYOR: DO NOT READ THE ANSWERS, ASK THEM TO BE SPECIFIC, ENCOURAGE "ANYTHING ELSE?" UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY):*

O Cool leg in bucket of cool water or using a cold compress
O Analgesic or anti-inflammatory medications
O Topical antibiotics (cream or ointment)
O Oral antibiotics
O Injectable antibiotics
O Rest
O Elevation
O Provide fluids
O Advise patient to avoid exercises for duration of acute attack
O Other; specify: _____
O Don't know any acute attack treatments

III. MMDP Challenges and Feedback

Instructions: This section may be conducted with one individual or a group of individuals of various roles in providing lymphoedema management services (e.g. nurse, doctor, and coordinator).

READ to facility director/point of contact: I would like to speak with several staff members about their experiences providing MMDP (or local word) services.

Is there a staff member who is responsible for lymphoedema management that is available?

O Yes
O No

READ to member of facility: I would like to ask you a few questions about your experience providing MMDP (or local word) services at this facility. Your answers to the following questions will remain anonymous and will in no way affect your employment at this facility.

(For inspector to check off): **This individual has verbally acknowledged that they are willing to participate in the following survey.**

O Yes
O No

1. Does your facility face any challenges in providing high quality lymphoedema care to patients with lymphoedema at this facility?

O Yes
O No (If no, skip to question 3)
O Don't Know
O Refused

2. What are the challenges you face in providing high quality lymphoedema care to patients with lymphoedema at this facility? *(DO NOT READ THE ANSWERS, ASK THEM TO BE SPECIFIC, ENCOURAGE "ANYTHING ELSE?"UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY)*

O Was not aware I needed to provide this service
O Lack of medication/supplies
O Lack of training
O Lack of human resources
O Poor supervision or support
O Poor motivation of providers
O Too many patients
O Patients don't present to facility
O Never encountered a person with lymphoedema
O Other; specify: _____
O Don't know

3. How can the services for lymphoedema patients be improved at this facility *(check all mentioned)*?

O Improve supervisory support and communication
O Increase human resources
O Increase staff motivation
O Improve training for personnel
O Increase in number of personnel trained
O Provide more supplies for patients; specify: _____
O Provide more medications for patients; specify: _____
O Implement outreach program
O Decrease cost of treatment
O Increase awareness of program
O Engage community
O Other; specify: _____
O Don't know

4.Is there anything else you would like to add about your experiences with lymphoedema management services?

_____
_____

IV. Patient Interview (Optional)

READ to facility director/point of contact: I would like to ask at least one—more than one is permissible—lymphoedema patient at this facility some questions about lymphoedema and acute attacks. The patient should be randomly selected from the patient register. The interview should take less than five minutes.

Is there a lymphoedema patient that is available?

O Yes
O No (If no, end)

READ: I would like to ask you some questions about how your [local word for lymphoedema] is cared for at this facility. Your answers to the following questions will remain anonymous and will in no way affect the services you receive at this facility.

1. *(For inspector to check off):* **Has the individual verbally acknowledged that they are willing to participate in the following survey?**

O Yes
O No

2. **Sex:** O Male O Female

3. **Age:** _____Years

4. Please describe for me all of the strategies you know for preventing acute attacks (local word for acute attacks) and preventing [local word for lymphoedema] from getting worse. *(SURVEYOR: DO NOT READ THE ANSWERS, ASK THEM TO BE SPECIFIC, ENCOURAGE "ANYTHING ELSE?" UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY):*

O Hygiene / Washing and drying of affected limb
O Wound care/ care of entry lesions
O Elevation
O Exercises
O Shoe use
O Prophylactic creams
O Prophylactic systemic antibiotics
O Traditional remedies; specify: _____
O Other; specify: _____
O Don't know any lymphoedema prevention techniques

5. Please describe for me all of the strategies you know for treating an acute attack *(SURVEYOR: DO NOT READ THE ANSWERS, ASK THEM TO BE SPECIFIC, ENCOURAGE "ANYTHING ELSE?" UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY)*:

O Cool leg in bucket of cool water or using a cold compress
O Visit the health facility
O Rest
O Elevation
O Avoid exercises for duration of acute attack
O Drink fluids

O Apply antibiotics to skin
O Take antibiotics by mouth
O Take injectable antibiotics
O Traditional remedies; specify: _____
O Visiting a traditional healer
O Other; specify: _____
O Don't know any acute attack treatments

6. Do you wash your affected leg(s) in a specific manner with soap and water either independently or with the assistance of someone? (If no, skip to 8)

O Yes O No O Don't Know O Refused

7. How often in the last 30 days did you wash your affected leg(s) in a specific manner with soap and water?

O More than once per day
O Once daily
O More than once per week
O Once per week
O Once per month
O More than once per month
O Never

8. Have you ever had pain, warmth, swelling and redness on either of your legs? (If no, skip to 10)

O Yes O No O Don't Know O Refused

9. How many times did you have pain, warmth, swelling or redness of your leg in the past 30 days?

O None
O 1 time
O 2 times
O 3 times
O 4 times
O More than 4
O Refused
O Don't know

10. Which of the following best describes your feelings about your lymphoedema in the past 30 days?

O Excellent
O Very good
O Good
O Fair
O Poor

11. Overall are you pleased with [local word for lymphoedema] services provided at this health facility?

O Very satisfied
O Satisfied
O Neutral
O Dissatisfied
O Very dissatisfied

12. How can services be improved at this facility to improve your satisfaction *(SURVEYOR: DO NOT READ THE ANSWERS, ASK THEM TO BE SPECIFIC, ENCOURAGE "ANYTHING ELSE?" UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY)*:

O Increase human resources
O Improved training for personnel
O More supplies for patients; specify: _____
O Implement outreach program
O Decrease cost of treatment
O Increase awareness of program
O Patient support groups
O Engage community
O Other; specify: _____
O Don't know

V. Lymphoedema Management Demonstration (Optional)

Instructions: This section may be conducted with one individual or a group of individuals of various roles in providing lymphoedema management services (e.g. nurse, doctor, and coordinator).

READ to facility director/point of contact: I would like to ask one staff to demonstrate how they would teach morbidity management to a new patient.

1. Is there a staff member who is willing to demonstrate morbidity management who is available?

O Yes
O No (if no, end)

READ to member of facility: I would like to ask you to demonstrate how you would teach a new lymphoedema patient to care for his/her lymphoedema. Please go through this as if this is the first interaction with a patient and highlight all messages you would provide to the patient. The results of your demonstration will remain anonymous and will in no way affect your employment at this facility.

Please demonstrate for me all of the strategies you know for ongoing lymphoedema management *(SURVEYOR - DO NOT DESCRIBE FOR THE STAFF MEMBER HOW TO CONDUCT MORBIDITY MANAGEMENT. CHECK ALL ASPECTS THAT THE STAFF MEMBER TOUCHES UPON AND THE DEGREE TO WHICH THEY ARE PERFORMED)*:

Strategy	Done thoroughly	Done, but incompletely	Not performed	Not Applicable
Checked or instructed patient to look for entry lesions (e.g. between toes and in folds)				
Washed or instructed patient to wash the affected leg				
Washed the leg with soap				
Dried the leg				
Instructed on proper use of antibiotic ointment/potassium permanganate				
Instructed the patient on strategies for management of an acute attack				
Instructed the patient on how frequently to perform hygiene				
Washed the unaffected leg				
Demonstrated exercises				
Demonstrated elevation techniques				
Counseled on shoe use				
Other: _____(please specify)				

Annex 2: Direct inspection protocol – scoring guide for assessing quality of lymphoedema management services at health facilities

Indicator 1: Trained Staff

The purpose of this indicator is to determine if staff who are currently working at this health facility have been trained or re-trained in aspects of lymphoedema management in the past two years. Those staff who have been trained in lymphoedema management should be trained in the WHO minimum package of care. Staff training within the last two years is required since there is oftentimes staff turnover and to ensure that staff have the latest information on best practices for lymphoedema management.

Scoring:

- Question A.3 = Yes AND Question A.4 ≥ 1

Indicator:

- At least one facility staff member who is currently working at the facility has been trained or retrained in lymphoedema management in the last two years (A.3 & A.4)

Numerator:

Number of facilities that have staff trained in the last two years (A.3) and report at least one staff member that is currently working at the facility who has been trained or re-trained (A.4).

Denominator:

Number of health facilities surveyed.

QA3. Have any staff who are currently working at this facility been trained or re-trained in lymphoedema management in the last two years?	
Yes	>> QA4
No	>> QB1
Don't Know	>> QB1
Refused	>> QB1

QA4. How many currently working staff at this facility have been trained or retrained in lymphoedema management in the last two years?	
No. of staff trained	>> QA5

QA5. What are the titles of staff members who have been trained or re-trained in lymphoedema management **in the last 2 years**? (check all that apply)	
Physicians	>> QB1
Nurses	>> QB1
Health assistants/officers	>> QB1
Community health worker	>> QB1
Community volunteer	>> QB1
Other (please specify) _____	>> QB1

Indicator 2: Lymphoedema Management Guidelines

The purpose of this indicator is to determine if health staff have adequate case management resources to provide the minimum package of care for lymphoedema. These documents could serve as a reference for how to care for how to identify persons with lymphoedema and acute attacks and the strategies on how to provide quality care for those persons. These documents should be created in line with WHO preferred practices for lymphoedema management and should be oriented towards health staff rather than towards patients. The materials should be presented either as largely pictorial or written in a language that is widely understood by the health staff working at the health facility.

Scoring:

- Question B.1 = 'Yes' and Question B.2 does not equal "no guidelines visualized"

Indicator:

- At least one guideline for lymphoedema management is present at the facility (B.1 & B.2)

Numerator:

Number of facilities that have a guideline (B.1) and the guideline is not checked as 'No guidelines visualized' (B.2).

Denominator:

Number of health facilities surveyed.

Definitions:

- **GPELF Guidelines** refers to written materials prepared by WHO headquarters such as Lymphatic Filariasis: managing morbidity and preventing disability: an aide-memoire for national program managers

- **Regional WHO Guidelines** refers to written materials on preventing disability and managing morbidity for lymphatic filariasis prepared by a WHO regional office such as Morbidity management and disability prevention in lymphatic filariasis, WHO Regional Office for South-East Asia (2013).
- **National guidelines** refers to written materials on preventing disability and managing morbidity for lymphatic filariasis prepared by the national program or other entities.
- **Facility reference materials** refers to written materials on preventing disability and managing morbidity for lymphatic filariasis prepared by the facility, these could include morbidity management standard operating procedures.
- **Job aid or training materials** refers to written materials that were received by health staff during training activities. This could include the WHO Learner's Guide: Training Module on community home-based prevention of disability due to lymphatic filariasis.
- **Lymphoedema management video** refers to a visual presentation of lymphoedema management which is meant to serve as a training video. Examples include: Helen Keller International's Lymphatic Filariasis Lymphedema Management Videos.
- **Other (NGO, non-profit, etc.)** refers to other appropriate materials that could be created by non-governmental or other organizations. One example is the *Dreyer et. al* book.
- **No guidelines visualized** refers to a facility where no guidelines are seen by the surveyor or where guidelines that were produced are not appropriate for lymphoedema management.

QB.1 Are there lymphoedema management guidelines targeted to health workers and written in the local language present at this facility?	
Yes	>> QB.2
No	>> QB.3
Don't Know	>> QB.3
Refused	>> QB.3

QB.2 Please show me the guidelines for lymphoedema management present at this facility (check all that are visualized)	
GPELF Guidelines	>> QB.3
Regional WHO guidelines	>> QB.3
National guidelines	>> QB.3
Facility reference material (please specify)_____	>> QB.3
Job aid or training materials	>> QB.3
Lymphoedema management video	>> QB.3
Other (NGO, non-profit, etc.) (please specify)_____	>> QB.3
No guidelines visualized	>> QB.3

Indicator 3: Lymphoedema Information, Education, and Communication (IEC) Materials

The purpose of this indicator is to determine if staff have adequate information, education, and communication (IEC) materials as a means of promoting desired, positive behaviors among patients with lymphoedema, their families, and the community at large.

These materials should cover the core principals of daily lymphoedema management (hygiene, skin care, elevation, exercise, and adaptive shoe use). These materials should be adapted to the local setting, be written in the language understood, or be presented in pictorial nature where possible. Where possible, these materials should be developed with appropriate local health education bodies and should be pre-tested prior to implementation at health facilities.

Scoring:

- Question B.3 does not equal "no appropriate IEC/awareness materials visualized"

Indicator:

- At least one information, education, communication (IEC) material is present at the facility (B.3)

Numerator:

Number of facilities that have at least one guideline information, education, communication (IEC) material that could be visualized available at the facility (B.3).

Denominator:

Number of health facilities surveyed.

Definitions:

- **Public awareness poster** refers to a large sheet of paper with words and pictures or symbols that conveys a message about lymphoedema or lymphoedema management. For example, the WHO community home-based prevention of disability due to lymphatic filariasis poster.
- **Flip-chart** is made-up of a number of posters that are meant to be shown one after the other. In this way, several steps or aspects of the central topic can be presented. For example, the WHO community home-based prevention of disability due to lymphatic filariasis flip chart.
- **Morbidity manual** refers to a multi-paged guide with detailed instructions in text and pictures on clinical and programmatic aspects of lymphoedema management.
- **Patient leaflets** refers to a folded sheet of printed material that is designed to communicate simple messages about lymphoedema management using short sentences, simple drawings, or photographs.

- **Patient booklets** refers to a small booklet that is given to patients where they can refer to key morbidity management messages and can track their progress with lymphoedema management over time.
- **Instruction card** refers to a small card that is given to patients where they can refer to key morbidity management messages.
- **No appropriate IEC/awareness materials visualized** refers to no IEC materials are visualized by the surveyor or where IEC materials that were produced are not appropriate for lymphoedema management.

QB.3 Please show me the lymphoedema patient education (IEC) materials written in the local language (or are pictorial) that are available at this health facility (check all that are visualized).	
Public awareness poster	>> QC.1
Flip-chart	>> QC.1
Morbidity manual	>> QC.1
Patient leaflets	>> QC.1
Patient booklets	>> QC.1
Instruction card	>> QC.1
Other (please specify)_____	>> QC.1
No IEC/awareness materials visualized	>> QC.1

Indicator 4: Reliable Water Infrastructure

The purpose of this question is to determine if the main source of water for outpatient facilities at health centers meets the requirements for the "basic" service level for water in health care facilities, as defined by the WHO/UNICEF Joint Monitoring Programme (JMP). The water indicator is sourced from the *Core questions and indicators for monitoring WASH in health care facilities in the Sustainable Development Goals*. Effective functioning of a health care facility relies on a safe, sufficient and reliable supply of water on premises.

Water sources meeting the "basic" service level are types of water sources or technologies that, by nature of their design and construction, have the potential to deliver safe water. The location of the water source and the availability of water at the time of the interview serve as indicators of quantity of water and reliability of the source respectively. In addition to ensuring proper hand hygiene and facility cleaning, water is critical for helping health care workers teach persons with lymphedema how to adequately wash and dry their affected limb(s).

The health facility's water supply meets a "basic" service level for water supply in a health care facility if the main water source is from an **improved** source, is located **on premises**, from which water is **available**.

Question C1 aims to determine the type of the facility's main source of water for general purposes, including drinking, washing, hygiene, environmental cleaning and laundry. It does not cover water for medical purposes, such as dialysis. Where water is available from multiple sources, the main source should be recorded. The recommended categories are based on the JMP definitions of "improved" and "unimproved" water sources.

Question C2 asks about the location of the water supply, in recognition of the fact that health care facilities need large volumes of water (for example 100 L of water per delivery and 40-60 L per inpatient per day) and therefore should have a water supply located on premises to be able to meet the demands of the facility. For lymphoedema management, enough water should be available to ensure that patients can wash and rinse the lymphoedematous areas. The question refers to the water supply, i.e. the location from which water is accessed, rather than the original source of the supply.

Question C3 asks about the availability of water on the day of the survey or questionnaire, rather than asking respondents to generalize about availability of water over time, to limit response bias.

For more information on this indicator or information on WASH in Health Care Facilities, refer to the WHO/UNICEF document: Core questions and indicators for monitoring WASH in health care facilities in the Sustainable Development Goals.

Scoring:

- Question C.1 = 'piped supply inside the building' OR 'piped supply outside the building OR 'tube well/ Borehole' OR 'protected dug well' OR 'protected spring' OR 'rainwater collection' OR 'tanker truck'; AND
- Question C.2 = 'on premises'; AND
- Question C.3 = 'yes, water from this source is available'

Indicator:

- The proportion of health care facilities with "basic" water service, as defined as facilities where the main source of water is from an **improved** source (C.1) located **on premises** (C.2) from which water is **available** (C.3)

Numerator:

Number of facilities that have an improved water source (C.1) that is located on the health facility premises (C.2), from which water is available at the time of the visit (C.3).

Denominator:

Number of health facilities surveyed.

Definitions:

The recommended categories are based on JMP definitions of "improved" and "unimproved" water sources.

"Improved" sources of water

- **Piped supply inside the building,** also called a facility connection, is defined as a water service pipe connected with in-house plumbing to one or more taps (e.g. in the consultation room or bathroom)
- **Piped supply outside the building**, also called a yard connection, is defined as a piped water connection to a tap placed in the yard or plot outside the facility.
- **Tubewell or borehole** is a deep hole that has been driven, bored or drilled, with the purpose of reaching groundwater supplies. Boreholes/tubewells are constructed with casing, or pipes, which prevent the small diameter hole from caving in and protest the water source from infiltration by run-off water. Water is delivered from a tubewell or borehole through a pump, which may be powered by human, animal, wind, electric, diesel or solar means. Boreholes/tubewells are usually protected by a platform around the well, which leads spilled water away from eh borehole and prevents infiltration of run-off water at the well head.
- **Protected dug well** is a dug well that is protected from runoff water by a well lining or casing that is raised above ground level and a platform that diverts spilled water away from the well. A protected dug well is also covered, so that bird droppings and animals cannot fall into the well.
- **Protected spring.** The spring is typically protected from runoff, bird droppings and animals by a "spring box," which is constructed of brick, masonry, or concrete and is built around the spring so that water flows directly out of the box into a pipe or cistern, without being exposed to outside pollution.
- **Rainwater** refers to rain that is collected or harvested from surfaces (by roof or ground catchment and stored in a container, tank or cistern until used).
- **Tanker-truck.** The water is trucked into a community and sold from the water truck.
    - The WHO and UNICEF Joint Monitoring Program (JMP) previously treated tanker truck water as unimproved due to lack of data on accessibility, availability and quality. As of 2017, the JMP treats them as improved and classify them as 'limited', 'basic' or 'safely managed'.[7]

"Unimproved" sources of water

- **Unprotected dug well.** This is a dug well for which one of the following conditions is true: 1) the well is not protected from runoff water; or 2) the well is not protected from bird droppings and animals. If at least one of these conditions is true, the well is unprotected.
- **Unprotected spring.** This is a spring that is subject to runoff, bird droppings, or the entry of animals. Unprotect springs typically do not have a "spring box."

[7] Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines. Geneva: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), 2017.

- **Surface water.** Is water located above ground and includes rivers, dams, lakes, ponds, streams, canals, and irrigation channels.
- **No water source**

QC.1 What is the main source of water for the facility? (Note: If there is more than one source, the one used most frequently should be selected. If patients need to bring water from home because water is not available at the facility, "no water source" should be selected).	
Piped supply inside the building	>> QC.3
Piped supply outside the building	>> QC.2
Tube well/Borehole	>> QC.2
Protected dug well	>> QC.2
Unprotected dug well	>> QC.2
Protected spring	>> QC.2
Unprotected spring	>> QC.2
Rainwater collection	>> QC.2
Tanker truck	>> QC.2
Surface water (river/dam/lake/pond)	>> QC.2
Other (specify) _____	>> QC.2
Don't know	>> QD.1
No water source	>> QD.1

QC.2 Where is the main water supply for the facility located? (Note: On premises means within the building or facility grounds. This question refers to the location from where the water is accessed for use in the health facility (e.g. tap, borehole), rather than the source where it originates)	
On premises	>> QC.3
Up to 500 meters	>> QC.3
500 meters or further	>> QC.3
Unable to assess location of water supply	>> QC.3
QC.3 Is water available from the main water supply at the time of the survey? (Note: To be considered available, water should be available at the facility at the time of the survey or questionnaire. Where possible, the enumerator should confirm that water is available from this source e.g. check that taps or handpumps deliver water).	
Yes, water from this source is available	>> QD.1

No, water from this source is not available	>> QD.1
Unable to assess if water is available	>> QD.1

Indicator 5: Antiseptics or Topical Antibiotics

The purpose of this question is to determine if antiseptics or topical antibiotics are available at the health facility in sufficient quantities. Antiseptics and topical antibiotics are essential materials used for the management of lymphoedema and prevention of acute attacks, which is a key strategy for minimizing disability and preventing the progression of lymphoedema. Antiseptics are defined as any medicine that stops or delays bacteria from growing. Antiseptics may be available in several forms including liquids, creams, or ointments. Topical antibiotics are also medicines that stop or delay bacteria from growing, and that have been manufactured into a cream or an ointment and can be applied directly to the skin.

"Sufficient quantities" is equivalent to being able to meet the usual demand for medications as well as a small buffer. For example, if 10 people are known to need antiseptics for any treatment in a week, the health facility should have enough antiseptics available to treat approximately 12 people per week.

Scoring:

- Question D.1a = 'Currently in stock in sufficient quantities'

Indicator:

- At least one antiseptic or topical antibiotic is currently in stock in sufficient quantities at the health facility (D.1a)

Numerator:

Number of facilities that are able to show the availability of antiseptics or topical antibiotics and report that the antiseptic or topical antibiotic is currently in stock in sufficient quantities (D.1a).

Denominator:

Number of health facilities surveyed.

QD1a. Please show me the following medications and describe their availability at this facility: **Antiseptic (e.g. potassium permanganate, or other anti-bacterial) or topical antibiotic (e.g. povidone-iodine, polysporin, bacitracin)**	
Currently in stock in sufficient quantities	>> QD1b
Currently in stock but not in sufficient quantities	>> QD1b

Current stocked out	>> QD1b
Never available	>> QD1b

Indicator 6: Antifungals

The purpose of this question is to determine if antifungals are available at the health facility in sufficient quantities. Antifungal cream refers to a cream that kills fungi or stops them from growing; used to treat entry lesions between the toes.

Antifungals are one of the key materials used for the management of lymphoedema and prevention of acute attacks. In particular, antifungals are important to treat interdigital and inter-fold lesions that may lead to entry lesions. By treating fungal infection with antifungals, it may be possible to reduce or prevent acute attacks that lead to lymphoedema progression. For patients with advanced-stage lymphoedema (elephantiasis), antifungal creams can help prevent fungal infections in deep folds and in the interdigital spaces.

"Sufficient quantities" is equivalent to being able to meet the usual demand for medications as well as a small buffer. For example, if 10 people are known to need antifungals for any treatment in a week, the health facility should have enough antifungals available to treat approximately 12 people per week.

Scoring:

- Question D.1b = 'Currently in stock in sufficient quantities'

Indicator:

- At least one antifungal is currently in stock in sufficient quantities at the health facility (D.1b)

Numerator:

Number of facilities that are able to show the availability of antifungals and report that the antifungal is currently in stock in sufficient quantities (D.1b).

Denominator:

Number of health facilities surveyed.

Training note: Inspector must visualize any medications indicated as currently in stock in sufficient quantities in order to select this answer.

QD1b. Please show me the following medications and describe their availability at this facility: **Antifungal (e.g. potassium permanganate, or Whitfields ointment)**	
Currently in stock in sufficient quantities	>> QD1c

Currently in stock but not in sufficient quantities	>> QD1c
Current stocked out	>> QD1c
Never available	>> QD1c

Indicator 7: Analgesics or anti-inflammatories

The purpose of this question is to determine if analgesics or anti-inflammatories are available at the health facility in sufficient quantities. Analgesics refers to medicines used to relieve pain. Analgesics are one of the key medications used for the management of acute attacks. Analgesics provide symptom relief for patients suffering from acute attack.

"Sufficient quantities" is equivalent to being able to meet the usual demand for medications as well as a small buffer. For example, if 10 people are known to need analgesics for any treatment in a week, the health facility should have enough analgesics available to treat approximately 12 people per week.

Scoring:

- Question D.1c= 'Currently in stock in sufficient quantities' selected

Indicator:

- At least one analgesic or anti-inflammatory medication is currently in stock in sufficient quantities at the health facility (D.1c)

Numerator:

Number of facilities that are able to show the availability of analgesic/anti-inflammatory medication and report that the analgesic is currently in stock in sufficient quantities (D.1c).

Denominator:

Number of health facilities surveyed.

Training note: Inspector must visualize any medications indicated as currently in stock in sufficient quantities in order to select this answer.

QD1c. Please show me the following medications and describe their availability at this facility: **Analgesic or anti-inflammatory (e.g. paracetamol)**	
Currently in stock in sufficient quantities	>> QD1d
Currently in stock but not in sufficient quantities	>> QD1d
Current stocked out	>> QD1d
Never available	>> QD1d

Indicator 8: Oral/Injectable Antibiotics

The purpose of this question is to determine if antibiotics are available at the health facility either in oral or injectable forms in sufficient quantities. Antibiotics refer to medicine used to kill bacteria or stop their growth.

Antibiotics are one of the key managementstrategies to treat acute attacks. The antibiotics that are appropriate for use in this context should be based on the local antibiogram, but generally the antibiotics should provide good coverage for skin bacteria such as *Streptococcus spp.* and *Staphylococcus Spp.*

"Sufficient quantities" is equivalent to being able to meet the usual demand for medications as well as a small buffer. For example, if 10 people are known to need antibiotics for any treatment in a week, the health facility should have enough antibiotics available to treat approximately 12 people per week.

Scoring:

- Question D.1d= 'Currently in stock in sufficient quantities' or Question D.1e= 'Currently in stock in sufficient quantities' selected

Indicator:

- At least one oral or injectable antibiotic is currently in stock in sufficient quantities at the health facility (D.1d & D.1e)

Numerator:

Number of facilities that are able to show the availability of oral or injectable antibiotic medication and report that the antibiotic is currently in stock (D.1d & D.1e).

Denominator:

Number of health facilities surveyed.

Training note: Inspector must visualize any medications indicated as currently in stock in sufficient quantities in order to select this answer.

QD1d. Please show me the following medications and describe their availability at this facility: **Oral antibiotics (e.g. amoxicilin, doxycycline)**	
Currently in stock in sufficient quantities	>> QD1e
Currently in stock but not in sufficient quantities	>> QD1e
Current stocked out	>> QD1e
Never available	>> QD1e

QD1e. Please show me the following medications and describe their availability at this facility: **Injectable antibiotics (e.g. ampicillin, ceftriaxone)**	
Currently in stock in sufficient quantities	>> QD1f
Currently in stock but not in sufficient quantities	>> QD1f
Current stocked out	>> QD1f
Never available	>> QD1f

Special Note:

The availability of diethylcarbamazine citrate (DEC)/ivermectin (QD1f) and albendazole (QD1g) are included within the DIP questionnaire, however, they are not included as indicators within the scoring framework. These indicators are included in the questionnaire since some countries may elect to house anti-filarial medications at health facility to treat residual cases of LF after the cessation of mass drug administration. If the country wishes to analyze these data, they are scored in the same manner as indicators 5 – 8.

QD1f. Please show me the following medications and describe their availability at this facility: **Diethylcarbamazine citrate (DEC) or Ivermectin**	
Currently in stock in sufficient quantities	>> QD1g
Currently in stock but not in sufficient quantities	>> QD1g
Current stocked out	>> QD1g
Never available	>> QD1g

QD1g. Please show me the following medications and describe their availability at this facility: **Albendazole**	
Currently in stock in sufficient quantities	>> QD1h
Currently in stock but not in sufficient quantities	>> QD1h
Current stocked out	>> QD1h
Never available	>> QD1h

QD1h. Please show me the following medications and describe their availability at this facility: **Other (please specify) _____**	
Currently in stock in sufficient quantities	>> QD2a
Currently in stock but not in sufficient quantities	>> QD2a
Current stocked out	>> QD2a
Never available	>> QD2a

Indicator 9: Lymphoedema and Acute Attack Management Supplies

The purpose of this question is to determine if adequate supplies are available at the health facility to teach lymphoedema management or to address an acute attack. These supplies should be available for limb hygiene purposes at the health facility. Hygiene supplies (e.g. bucket/basin) should not simultaneously be used for other purposes, such as waste disposal. This includes adequate supplies for patients to be given to initiate performing lymphoedema management at home, e.g. a patient hygiene kit.

"Sufficient quantities" is equivalent to being able to meet the usual demand for supplies as well as a small buffer. For example, if 1 person is known to need a patient hygiene kit in a month, the health facility should have enough kits available to treat approximately 2 people per month.

Scoring:

- Two of the following are selected as "Currently in stock in sufficient quantities": D2a, D2b, D2c, D2d, D2e, D2f, or D2g.

Indicator:

- At least two supplies for lymphoedema or acute attack management are currently in stock in sufficient quantities at the health facility (D.2)

Numerator:

Number of facilities that are able to show the availability of at least two supplies and report that the supplies are currently in stock in sufficient quantities (D.2).

Denominator:

Number of health facilities surveyed.

Training note: Inspector must visualize any supplies indicated as currently in stock in sufficient quantities in order to select this answer.

Definitions:

- **Bucket or basin.** This refers to a bucket or basin that can be used by patients for limb hygiene purposes. This should not be a bucket that is used for disposal of medical waste or other purposes.
- **Soap.** Only soap that is available for use by patients for limb hygiene should be considered.

- **Towels.** Only towels that is available for use by patients for limb hygiene should be considered.
- **Gauze or cotton cloth.** This refers to small pieces of gauze or cloth that can be used to wash or dry between patient's toes or within folds as part of limb hygiene.
- **Cold compress.** This refers to cold compress that can be applied to a patient's skin during an acute attack. Either commercial or improvised (e.g. wetted towel) cold compresses can be considered.
- **Nail clippers.** This refers to clippers that can be used to trim patient toenails.

Patient hygiene kit. This refers to a set of supplies that are given to lymphoedema patients to take home with them to help reinforce the good hygiene practices necessary to prevent progression of lymphoedema. They often include a soap, towel(s), anti-biotic and/or anti-fungal creams, etc..

QD2a. Please show me the following supplies and describe their availability at this facility: Bucket or basin	
Currently in stock in sufficient quantities	>> QD2b
Currently in stock but not in sufficient quantities	>> QD2b
Current stocked out	>> QD2b
Never available	>> QD2b

QD2b. Please show me the following supplies and describe their availability at this facility: Soap	
Currently in stock in sufficient quantities	>> QD2c
Currently in stock but not in sufficient quantities	>> QD2c
Current stocked out	>> QD2c
Never available	>> QD2c

QD2c. Please show me the following supplies and describe their availability at this facility: Towels	
Currently in stock in sufficient quantities	>> QD2d
Currently in stock but not in sufficient quantities	>> QD2d
Current stocked out	>> QD2d
Never available	>> QD2d

QD2d. Please show me the following supplies and describe their availability at this facility: Gauze or cotton cloth	
Currently in stock in sufficient quantities	>> QD2e
Currently in stock but not in sufficient quantities	>> QD2e

Current stocked out	>> QD2e
Never available	>> QD2e

QD2e. Please show me the following supplies and describe their availability at this facility: **Cold compress**	
Currently in stock in sufficient quantities	>> QD2f
Currently in stock but not in sufficient quantities	>> QD2f
Current stocked out	>> QD2f
Never available	>> QD2f

QD2f. Please show me the following supplies and describe their availability at this facility: **Nail clippers**	
Currently in stock in sufficient quantities	>> QD2g
Currently in stock but not in sufficient quantities	>> QD2g
Current stocked out	>> QD2g
Never available	>> QD2g

QD2g. Please show me the following supplies and describe their availability at this facility: **Patient hygiene kits**	
Currently in stock in sufficient quantities	>> QD2h
Currently in stock but not in sufficient quantities	>> QD2h
Current stocked out	>> QD2h
Never available	>> QD2h

QD2h. Please show me the following supplies and describe their availability at this facility: **Other (please specify)**	
Currently in stock in sufficient quantities	>> QE1
Currently in stock but not in sufficient quantities	>> QE1
Current stocked out	>> QE1
Never available	>> QE1

Indicator 10: Patient tracking system

The purpose of this question is to determine if persons with lymphoedema are being captured and tracked as part of the morbidity management program. Having appropriate systems to identify and track persons with lymphoedema is key for ensuring that patients are adhering to local follow-up

routines. Further, the availability of facility-level patient data is key for reporting on lymphoedema service delivery and tracking facility needs such as supplies and materials.

Scoring:

- Question E.1 = Yes and E.3 ≥ 1

Indicator:

- The facility as a patient track system (E.1) and at least one patient has been recorded in the patient tracking system in the last year (E.3)

Numerator:

Number of facilities that have a patient track system in place (E.1) and are able to show that at least one patient is listed in the tracking system in the last year (E.3).

Denominator:

Number of health facilities surveyed.

Definitions:

- **Patient register** refers to book or similar log that tracks all incoming patients visits.
- **Paper patient charts** refers to a system where each patient has his/her own record of health facility encounters and it is possible to review the patient's health status, diagnosis, and treatment over time.
- **Health Management Information System (HMIS)** refers to a system that integrates data collection, processing, reporting, and use of the information necessary for improving health service effectiveness and efficiency through better management at all levels of health services. This includes the DHIS2 (District Health Information Software) system.

QE1. Does this facility have a system for identifying and quantifying the number of patients with lymphoedema?	
Yes	>> QE2
No	>> QF1
Don't know	>> QF1
Refused	>> QF1

QE2. What system is being used for identifying and quantifying the number of patients with lymphoedema?	
Patient register	>> QE3

Paper patient charts	>> QE3
Health Management Information System/DHIS2	>> QE3
Other: (please specify)_____	>> QE3

QE3. How many patients receiving any lymphoedema management services have been reported in the last 12 months?	
Number of patients	>> QF1
Don't know	>> QF1

Indicator 11: Staff knowledge of signs/symptoms of lymphoedema

The purpose of this question is to determine if staff working at the health clinic are able to recall key signs and symptoms necessary for correctly identifying persons with lymphoedema. Prior to providing quality lymphoedema management services, health facility staff must be able to diagnose an individual with lymphoedema and exclude other diagnoses.

Scoring:

- Identifies at least two listed signs/ symptoms AND Question F.1 Does NOT respond 'Don't know any signs/symptoms of lymphoedema or inappropriate 'Other'

Indicator:

- Clinic staff member able to correctly identify at least two signs or symptoms of lymphoedema (F.1)

Numerator:

Number of facilities where a staff member was able to correctly identify at least two signs or symptoms of lymphoedema (F.1).

Denominator:

Number of health facilities surveyed.

Definitions:

- **Swelling (reversible at night)** refers to swelling that increases during the day and goes away overnight when the patient lies flat in bed, not because of any specific treatment. Reversible swelling is the characteristic feature of stage 1 lymphoedema.

- **Swelling (irreversible)** refers to swelling of the affected limb that does not go away overnight. This is the characteristic feature of stage 2 lymphoedema.
- **Skin folds (shallow or deep)** refers to the presence of shallow or deep folds in the skin. Shallow folds are defined as the presence of one or more shallow skin fold, including very thin lines and creases which are not seen on normal legs. Shallow folds are defined as those which the base of the fold can be seen when the patient moves the leg or foot so that the fold "opens up." Shallow folds are the characteristic feature of stage 3 lymphoedema. Deep skin folds are defined as the presence of one or more deep skin folds, defined as folds where the base cannot be seen when the patient moves the leg or foot; rather the base of the fold can be seen only when the edges are actively separated by hand. Deep folds are the characteristic feature of stage 5 lymphoedema.
- **Knobs on the skin** refers to bumps, lumps or protrusions of the skin, including protruding scars known as keloids. Varicose buttons should also be considered as knobs. Knobs are the characteristic feature of stage 4 lymphoedema.
- **Mossy lesions** refers to small elongated or rounded growth that are clustered together, giving rise to the appearance of "mossy" skin. Mossy lesions contain fluid and are transparent or translucent (light can shine through them). Mossy lesions commonly occur near the toes, on the side of the foot, and near the heel. This is also known as stage 6 lymphoedema.
- **Inability to perform daily activities or care for self** refers to patients who are unable to adequately or independently perform routine daily activities such as walking, bathing or cooking. These individuals tend to have high volume legs and frequently deep folds. This is also known as stage 7 lymphoedema.
- **Acute attacks or adenolymphangitis (ADL)** refers to acute onset of fever with localized pain and warmth, with or without swelling or redness, in a limb or genital area.
- **Wounds or entry lesions** refers to any break in the skin that allows bacteria to enter the body; can occur between the toes or in deep folds, through wounds on the skin surface, such as cuts, scrapes or scratches; visible in almost all patients with ADL or acute attacks.

Training note: Do not read the answers, ask them to be specific, encourage "Anything else?" until nothing further is mentioned and check all that apply.

QF1. Please describe for me the signs and symptoms of lymphoedema	
Swelling (reversible at night)	>> QF2
Swelling (irreversible)	>> QF2
Skin folds (shallow or deep)	>> QF2
Knobs on the skin	>> QF2
Mossy lesions (i.e. small elongated or rounded growths)	>> QF2
Inability to perform daily activities or care for self	>> QF2
Acute attacks or adenolymphangitis	>> QF2
Wounds or entry lesions	>> QF2
Other; specify:_____	>> QF2

Don't know any signs/symptoms of lymphoedema	>> QF2

Indicator 12: Staff knowledge of signs/symptoms of acute attacks

The purpose of this question is to determine if staff working at the health clinic are able to recall key signs and symptoms of an individual experiencing an acute attack or ADL episode. Acute attacks are associated with poor quality of life in persons with lymphoedema and are linked with the progress of lymphoedema to more severe stages. Rapid identification and treatment of acute attacks is a key role of health facility staff supporting persons with lymphoedema.

Scoring:

- Identifies at least two listed signs/ symptoms AND Question F.2: Does NOT respond 'Don't know any signs/symptoms of an acute attack or inappropriate 'Other'

Indicator:

- Clinic staff member able to correctly identify at least two signs or symptoms of acute attacks (F.2)

Numerator:

Number of facilities where able to correctly identify at least two signs or symptoms of acute attacks (F.2).

Denominator:

Number of health facilities surveyed.

Definitions:

- **Redness of limb** also known medically as rubor or erythema.
- **Warmth of limb** also known medically as calor.
- **Increased swelling of limb** also known medically as edema.
- **Painful limb** also known medically as dolor.
- **Fever** also known medically as pyrexia.
- **Headache** also known medically as cephalgia.
- **Chills** also known medically as rigor.
- **Nausea/vomiting** also known medically as emesis.
- **Don't know any signs/symptoms of acute attack**

Training note: Do not read the answers, ask them to be specific, encourage "Anything else?" until nothing further is mentioned and check all that apply.

QF2. Please describe for me the signs and symptoms of an acute attack (ADL, also known as <local word for ADL>	
Redness of limb	>> QF3
Warmth of limb	>> QF3
Painful limb	>> QF3
Fever	>> QF3
Headache	>> QF3
Chills	>> QF3
Nausea/vomiting	>> QF3
Other; specify:_____	>> QF3
Don't know any signs/symptoms of acute attack	>> QF3

Indicator 13: Lymphoedema management strategies

The purpose of this question is to determine if staff working at the health clinic are able to recall key management strategies for persons diagnosed with lymphoedema. Health facility staff should be able to identify strategies that will be effective at preventing acute attacks and the progression of lymphoedema to a more severe stage, in line with WHO's recommended lymphoedema management strategies: hygiene, skin and wound care, exercises, elevation, and comfortable shoe use. Some providers may be aware of advanced lymphoedema management strategies such as compressive bandages and garments, decongestive therapy, and lymphatic massage. These strategies should be acceptable for the purpose of this question.

In some settings, harmful traditional practices, such as scarification and fumigation, are common. It is important that health facility staff are able to identify evidence-based strategies and do not promote harmful traditional practices.

Scoring:

- Identifies at least two management strategies AND Question F.3 DOES NOT respond 'Don't know any lymphoedema management techniques' or inappropriate 'Other' management option)

Indicator:

- Clinic staff member able to correctly identify at least two lymphoedema management strategies (F.3)

Numerator:

Number of facilities where able to correctly identify at least two lymphoedema management strategies (F.3).

Denominator:

Number of health facilities surveyed.

Definitions:

- **Hygiene / Washing and drying of affected limb** refers to conditions or practices conducive to maintaining health and preventing disability. In the context of managing morbidity from lymphatic filariasis, hygiene involves systematically washing the affected limb with soap and water until the rinse water is clean and then carefully drying the limb. Best practices include washing the non-affected limb as well.
- **Wound care** refers to medicated creams or antibiotics (e.g. antiseptics, antifungal and antibiotic creams) are used to treat small wounds or abrasions. For patients with elephantiasis, antifungal creams can help prevent fungal infections in folds and interdigital spaces.
- **Elevation** refers to the process of raising the affected limb should at night and when possible during the day.
- **Exercises** refers to low-intensity movement of the joints that promote the flow of lymph
- **Shoe use** refers to comfortable shoes should be worn to protect the skin.
- **Prophylactic creams** refers to a topical anti-bacterial or anti-fungal cream that is used to prevent bacterial infections.
- **Prophylactic systemic antibiotics** refers to an antibiotic used to prevent bacterial infections.
- **Instruct patients to avoid harmful behaviors** refers to counseling patients to avoid harmful behaviors such as scarification, fumigation, or other harmful behaviors.
- **Other**, may include other supplemental strategies such as compressive bandaging, lymphatic massage, and decongestive therapy.
- **Don't know any lymphoedema management techniques.**

Training note: Do not read the answers, ask them to be specific, encourage "Anything else?" until nothing further is mentioned and check all that apply.

QF3. Please describe for me all of the strategies you would teach a patient for preventing the progression of lymphoedema and preventing acute attacks.	
Hygiene / washing and drying of affected limb	>> QF4
Wound care	>> QF4
Elevation	>> QF4
Exercise	>> QF4
Shoe use	>> QF4
Prophylactic creams	>> QF4
Prophylactic systemic antibiotics	>> QF4
Instruct patient to avoid harmful behaviors (e.g. scarification and fumigation)	>> QF4
Other; specify:_____	>> QF4
Don't know any lymphoedema management techniques	>> QF4

Indicator 14: Staff knowledge of acute attack management

The purpose of this question is to determine if staff working at the health clinic are able to recall key management strategies for an individual experiencing an acute attack or ADL episode. Acute attacks are associated with poor quality of life in persons with lymphoedema and are linked with the progress of lymphoedema to more severe stages.

Rapid and appropriate treatment of acute attacks is a key role of health facility staff supporting persons with lymphoedema. The mainstay of acute attack management is the administration of antibiotics that provide good coverage for skin bacteria such as *Streptococcus spp*. and *Staphylococcus spp.* The appropriate antibiotic should be selected in consultation with information from the local antibiogram.

In addition to providing antibiotics, as appropriate, the clinician should provide symptomatic management (e.g. analgesics, anti-inflammatory medication, and/or anti-pyretics) to manage any symptoms present. Further, the provider should counsel the person on other supportive measures for a person with an acute attack, including rest, hydration, elevation, and cooling of the affected leg.

Scoring:

- Identifies at least two management strategies AND Question F.4 DOES NOT respond 'Don't know any acute attack treatments' or inappropriate 'Other' treatment option

Indicator:

- Clinic staff member able to correctly identify at least two strategies to treat a patient with an acute attack (F.4)

Numerator:

Number of facilities where able to correctly identify at least two strategies to treat a patient with an acute attack (F.4).

Denominator:

Number of health facilities surveyed.

Definitions:

- **Cool leg in bucket of water or using a cold compress** refers to a pain-relieving technique used during an acute attack to relieve the pain associated with the cellulitis episode.
- **Analgesic or anti-inflammatory medications** refers to the administration of medication such as paracetamol to relieve pain or inflammation.
- **Topical antibiotics** refers to antibiotic creams or ointments that can be applied directly to the skin to treat entry lesions or wounds.
- **Oral antibiotics** refers to antibiotic pills or solutions that are ingested by mouth.

- **Injectable antibiotics** refers to antibiotic solutions that are administered through intravenous infusion.
- **Rest** refers to the cessation or minimization of physical activity.
- **Elevation** refers to resting the affected limb above the level of the heart (when patient is lying down) or on an object (when patient is seated).
- **Provide fluids** refers to increasing the oral intake of fluids.
- **Advise patient to avoid exercises during duration of acute** attack refers to telling the patient to avoid exercise or strenuous movement of the affected limb during an acute attack.

- **Don't know any acute attack treatments**

Training note: Do not read the answers, ask them to be specific, encourage "Anything else?" until nothing further is mentioned and check all that apply.

QF4. Please describe for me all of the management strategies you could use to treat a patient who is having an acute attack (ADL, also known as <local word for ADL>	
Cool leg in bucket of water or using a cold compress	>> end or Section III
Analgesic or anti-inflammatory medications	>> end or Section III
Topical antibiotics (cream or ointment)	>> end or Section III
Oral antibiotics	>> end or Section III
Injectable antibiotics	>> end or Section III
Rest	>> end or Section III
Elevation	>> end or Section III
Provide fluids	>> end or Section III
Advise patient to avoid exercises during duration of acute	>> end or Section III
Other; specify:_____	>> end or Section III
Don't know any acute attack treatments	>> end or Section III

Annex 3: Direct inspection protocol - scoring matrix (separate excel file)

Direct Inspection Protocol Scoring Matrix

Number of facilities Surveyed	
Enter facility score benchmark (%)	
Enter indicator score benchmark (%)	

Facility	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6	Indicator 7	Indicator 8	Indicator 9	Indicator 10	Indicator 11	Indicator 12	Indicator 13	Indicator 14	Facility Total	Facility Output
1															0	0%
2															0	0%
3															0	0%
4															0	0%
5															0	0%
6															0	0%
7															0	0%
8															0	0%
9															0	0%
10															0	0%
Indicator Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Average Indicator Score	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		

Indicator List	
Indicator 1	**At least one** facility staff member has been trained in lymphedema management in the last 2 years. (Question A.3 = Yes and Question A.4 >=1) (**Trained Staff**)
Indicator 2	**At least one** guideline for lymphedema management is present at the facility. (Question B.1 = 'Yes' and Question B.2= Not "no guidelines visualised") (**Case Management Education Materials**)
Indicator 3	At least one IEC/awareness material for lymphedema management is present at the facility. (Question B.3 does not equal "no IEC/awareness material visualised") (**Case Management Education Materials**)
Indicator 4	The facility has the main source of water from an **improved source (Question C.1 = 'piped into facility', 'piped onto facility ground', 'public tab/stand pipe', 'tubewell/borehole', 'protected dug well', 'protected spring', 'rainwater collection' or 'tanker truck') located on premises** (Question C.2 = 'on premises') that is **functional** at the time of the visit (Question C.3 = 'Yes, water from this source is available') (**Infrastructure**)
Indicator 5	Antiseptics (i.e. potassium permanganate or other anti-bacterial) or topical antibiotics (e.g. polysporin, bacitracin) are available at the facility. (Question D.1= 'antiseptics' selected) (**Medications and Commodities**)
Indicator 6	Antifungals (i.e. potassium permanganate or Whitfield's ointment) are available at the facility. (Question D.1 = 'Anti fungal' selected) (**Medications and Commodities**)
Indicator 7	Analgesics or anti-inflammatories (e.g. Paracetamol) are available at the facility. (Question D. 1 = 'Analgesic or anti-inflammatory' selected) (**Medications and Commodities**)
Indicator 8	Oral/Injectable antibiotics are available at the facility. (Question D.1 = 'oral antibiotics' and/or 'injectable antibiotics' selected) (**Medications and Commodities**)
Indicator 9	At least two supplies for lymphedema and acute attack management is available at the facility. (Question D. 2= not 'No supplies available") (**Medications and Commodities**)
Indicator 10	At least one patient has been recorded in the reporting system in the last 12 months (Question E. 3 >=1) (**Patient Tracking System**)
Indicator 11	Clinic staff member able to correctly identify **at least two signs or symptoms of lymphedema**: (Question F.1 DOES NOT respond 'Don't know any signs /symptoms of lymphedema' or inappropriate 'Other') (Staff Knowledge)
Indicator 12	Clinic staff member able to correctly identify **at least two signs or symptoms of an acute attack**: (Question F.2 DOES NOT respond 'Don't know any signs/symptoms of an acute attack' or inappropriate 'Other') (Staff Knowledge)
Indicator 13	Clinic staff member able to correctly identify **at least two lymphedema management strategies**: (Question F. 3 DOES NOT respond 'Don't know any lymphedema management techniques' or inappropriate 'Other' management option) (Staff Knowledge)
Indicator 14	Clinic staff member able to correctly identify **at least two strategies to treat a patient with an acute attack**: (Question F.4 DOES NOT respond 'Don't know any acute attack treatments' or inappropriate 'Other' treatment option) (Staff Knowledge)

Annex 4: Direct inspection protocol - suggested action items by indicator based on survey results

Trained Staff (Indicator 1)

- Use quantitative and qualitative methods to help identify the specific challenges with training (e.g. staff turnover, failed cascade training)
- Organize additional training sessions, especially if no training has been given in last 2 years
- Consider expanding number of individuals trained per facility and review procedures for staff turnover
- Incorporate LF MMDP training into medical and nursing curriculum
- Refer to the WHO MMDP toolkit for tools to assist with staff training

Case Management and Education Materials (Indicator 2-3)

- Work with local health education partners and local artists to adapt existing materials or create new materials
- Secure funding for duplication of case management and education materials
- Ensure materials are available in sufficient quantities at facilities providing MMDP services
- Refer to the WHO MMDP toolkit for examples of case management and education materials

Water Infrastructure (Indicator 4)

- Identify specific issues related to water access (e.g. type of infrastructure, service interruptions, distance of infrastructure from facility). Consider using the Water and Sanitation for Health Facility Improvement Tool (WASH FIT) to identify areas for quality improvement in facilities.
- Disseminate results of survey to relevant organizations (e.g. Ministry of Water Resources, Ministry of Health)
- Advocate for improved health care facility infrastructure, including provision of water infrastructure
- Influence and/or develop partnerships with existing WASH initiatives (e.g. water safety plans, protocol for water and health, etc.)
- Encourage WASH and NTD joint strategic planning
- Refer to Water, sanitation, and hygiene in health care facilities: Status in low- and middle-income countries and way forward for more information on WASH in health care facilities for more information on WASH in health care facilities
- Refer to Water sanitation and hygiene for accelerating and sustaining progress on neglected tropical diseases: A global strategy 2015-2020 for more information on mobilizing WASH and NTD actors to work together towards roadmap targets

Medications and Commodities (Indicators 5-9)

- Improve policies and procedures for supply chain management and address identified gaps

- Identify supplies outside of normal services that require additional investment
- Secure a regular shipment of supplies
- Identify and access fund sources needed to maintain access to needed supplies
- Liaise with institutions responsible for supply management at health care facilities

Patient Tracking System (Indicator 10)

- Develop a system for tracking patients, either in paper or electronic format, as appropriate for the setting
- Encourage staff to use current tracking system for lymphoedema patients

Staff Knowledge (Indicators 11-14)

- Determine if additional training is required (see Trained Staff).
- Review training materials to evaluate appropriateness and comprehension of materials (e.g. consider language, etc.)
- Evaluate the success of previous training sessions and diffusion of key messages
- Work to incorporate LF MMDP training into standard medical and nursing curriculum

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