Module 6. Monitoring and Evaluation (M&E)

Session 3. Evaluating NTDP Impact
Overview and Objectives

By the end of this session, participants should understand:

1. The rationale for monitoring the impact of NTDPs.
2. The key indicators for measuring NTDs goals, by disease.
3. Tools and methods used to measure these indicators.
4. Options for integrated impact monitoring.
5. How to use impact data to make programmatic decisions including frequency of treatment, stopping MDA, and post-MDA surveillance.
How Do We Know We Have Arrived?
## Disease Specific Goals

<table>
<thead>
<tr>
<th>Disease</th>
<th>Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF</td>
<td>Global Elimination by 2020</td>
</tr>
<tr>
<td>Blinding Trachoma</td>
<td>Global Elimination by 2020</td>
</tr>
<tr>
<td>Oncho</td>
<td>Regional and country elimination where possible, otherwise control</td>
</tr>
<tr>
<td>Schisto</td>
<td>Control to low burden</td>
</tr>
<tr>
<td>STH</td>
<td>Control to low burden</td>
</tr>
</tbody>
</table>

Links to advocacy & communication messages
# Measuring If We Have Met Our Program Goals

<table>
<thead>
<tr>
<th>INPUTS</th>
<th>ACTIVITIES</th>
<th>OUTPUTS</th>
<th>OUTCOMES</th>
<th>IMPACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>What we invest</td>
<td>What we do</td>
<td>The results</td>
<td>Short term</td>
<td>Long term</td>
</tr>
</tbody>
</table>

- Measuring if we have met our program goals
- What we invest
- What we do
- The results
  - Short term
- Long term
INFECTION/DISEASE PREVALENCE IS THE KEY INDICATOR TO MEASURE WHETHER WE HAVE REACHED OUR GOAL
Indicators Exist to Help You Make Key Programmatic Decisions

- Do I need MDA? How often? For how long?
- Can I reduce the frequency of treatment?
- Can I stop MDA now?
- Do I need to continue surveillance activities?
Ending the Programme

Key M&E Indicators
- Infection prevalence
- Disease Prevalence

Surveillance
- Deciding to scale down or stop MDA
- Other non-PC activities

Managing MDAs

Setting Up
For Each Disease We Will Identify ...

1. Specific Indicators and Targets
2. Diagnostic tools
3. Data collection method
4. Timing of surveys
## Complete This Table as You Listen to the Presentation

<table>
<thead>
<tr>
<th>NTD</th>
<th>National Goals</th>
<th>Impact Indicators (prevalence cut off %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF</td>
<td>Elimination by 2020</td>
<td></td>
</tr>
<tr>
<td>Blinding Trachoma</td>
<td>Elimination by 2020</td>
<td></td>
</tr>
<tr>
<td>Oncho</td>
<td>Country/regional elimination / Control</td>
<td></td>
</tr>
<tr>
<td>Schisto</td>
<td>Control to low burden</td>
<td></td>
</tr>
<tr>
<td>STH</td>
<td>Control to low burden</td>
<td></td>
</tr>
</tbody>
</table>
EVALUATING IMPACT

LYMPHATIC FILARIASIS
Lymphatic Filariasis Global Programme Goals

1. Stop the spread
   – Reduce infection prevalence to low levels at which transmission considered unsustainable

2. Reduce suffering and improve quality of life
   – Access to a basic recommended package of care for MMDP

... by 2020.
Indicators and Targets – Stop the Spread

What is the indicator for LF?

- Infection levels of Wuchereria bancrofti, Brugia malayi, or B. timori
- Measured by:
  - Antigen ICT/FTS tests for W bancrofti
  - Antibody tests for Brugia

What are the program targets?

<table>
<thead>
<tr>
<th>W. bancrofti</th>
<th>• &lt;2% Antigen (ICT) Anopheles / Culex</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• &lt;1% Antigen (ICT) Aedes</td>
</tr>
<tr>
<td>Brugia spp.</td>
<td>• &lt;2% Antibody (Brugia Rapid)</td>
</tr>
</tbody>
</table>
Indicators and Targets – MMDP

1. Disease burden
   – Number of lymphoedema and hydrocele cases per IU known

2. Availability of MMDP services
   – Availability of at least one health facility per IU known to have cases providing recommended package of care

3. Quality of MMDP services
   – Assessment of 10% of health facilities providing MMDP
### New ICT Version – Filariasis Test Strip (FTS)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>ICT</th>
<th>FTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Shelf life</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Results window</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Sensitivity*</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Specificity*</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Labelling</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Handling</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

US CDC  *Weil et al. AJTMH 89: 11-5 (2013)*

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*Note: ICT refers to the previous version of the test strip, while FTS refers to the new version.*
Survey Methods Depend on Programme Stage

1. **Mapping** surveys in Implementation Units of older children and/or adults before MDA.
2. Measure in sentinel sites and spot-check sites after five years MDA.
3. Transmission assessment survey (TAS) of children aged 6-7, when meet eligibility criteria.
4. TAS is repeated twice during post-MDA surveillance phase.

**Diagram:**
- **Mapping:** Mf or Ag≥1%
- **MDA:** Baseline (optional), Mid-term (optional), Follow-up [TAS Eligibility], TAS1
- **Surveillance:** 2, 3
Sentinel and Spot-check Surveys

• Blood surveys at **sentinel sites** are used to measure infection rates after five rounds MDA (*new guidelines state that sentinel sites at baseline and midterm are optional*).

• Blood surveys at **spot-check sites** are used to confirm that the results of sentinel surveys represent the infection level in the entire IU.
  – At least one spot-check site is selected for each sentinel site.

Blood surveys at **sentinel sites** are used to measure infection rates after five rounds MDA (*new guidelines state that sentinel sites at baseline and midterm are optional*). Blood surveys at **spot-check sites** are used to confirm that the results of sentinel surveys represent the infection level in the entire IU.
  – At least one spot-check site is selected for each sentinel site.
Characteristics of Sentinel and Spot-check Sites

• The population should be at least 500 people (to collect samples from at least 300 people aged > 5 years).
• Should be in an area of high transmission: high disease or parasite prevalence or vector abundance
  – or an area where difficulty in achieving high drug coverage is anticipated.
• No prior MDA for onchocerciasis.
• A stable population.
A TAS is the basis for a decision to move from MDA to post-MDA surveillance.

<table>
<thead>
<tr>
<th>Technical aspect</th>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical area</td>
<td>Evaluation Unit (EU)</td>
</tr>
<tr>
<td>When survey should be</td>
<td>• When all the eligibility criteria are met</td>
</tr>
<tr>
<td>conducted</td>
<td>• At least 6 months after the last round of MDA</td>
</tr>
<tr>
<td>Target population</td>
<td>Children aged 6–7 years</td>
</tr>
<tr>
<td>Diagnostic tests</td>
<td><em>W. bancrofti</em> areas: ICT or FTS</td>
</tr>
<tr>
<td></td>
<td><em>Brugia</em> spp. areas: Brugia Rapid™</td>
</tr>
<tr>
<td>Survey design</td>
<td>Cluster sampling or systematic sampling in schools or the community, or a census</td>
</tr>
</tbody>
</table>
When Do I Do a TAS?

In order for a national programme to start planning a TAS, the following eligibility criteria must be met in each IU:

• **At least five rounds** of MDA were completed.
• **≥ 65% epidemiological coverage** achieved at each round.
• **Sentinel site**: prevalence of Mf < 1% or prevalence of Ag < 2% after last effective round at all sites.
• **Spot-check site**: prevalence of Mf < 1% or prevalence of Ag < 2% after last effective round at all sites.
The form helps in deciding whether the time is appropriate to conduct a TAS.

The form should be reviewed by the RPRG before the survey is planned.
COUNTRIES MAY APPLY FOR VALIDATION OF ELIMINATION STATUS IF ALL IU IN THE COUNTRY HAVE PASSED THREE TAS

STEP 1: SUBMIT DOSSIER
STEP 2: RPRG REVIEW
Dossier Format

1. Narrative
   - Word document
   - Overall description of the programme
   - A few key summary data tables

2. Data Annex
   - Excel file with 6 summary data tables harmonized with current JAP and TAS Eligibility and Reporting forms
   - Line listing of IU data by topic
   - Aligned with integrated NTD database
# Dossier Structure

<table>
<thead>
<tr>
<th>Section</th>
<th>Narrative</th>
<th>Data Annex</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General description</td>
<td>Sheet 1. Population</td>
</tr>
<tr>
<td>2</td>
<td>History of LF</td>
<td>Sheet 2. Mapping</td>
</tr>
<tr>
<td>3</td>
<td>Interventions for interruption of transmission</td>
<td>Sheet 3.1. MDA&lt;br&gt;Sheet 3.2. Other interventions</td>
</tr>
<tr>
<td>4</td>
<td>Epidemiological monitoring and evaluation of interventions</td>
<td>Sheet 4.1. M&amp;E&lt;br&gt;Sheet 4.2. TAS</td>
</tr>
<tr>
<td>5</td>
<td>Surveillance</td>
<td>Sheet 5.1. TAS surveillance&lt;br&gt;Sheet 5.2. Other surveillance</td>
</tr>
<tr>
<td>6</td>
<td>Morbidity management and disability prevention (MMDP)</td>
<td>Sheet 6. Morbidity</td>
</tr>
<tr>
<td>7</td>
<td>Special issues</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Resources and Partners</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Biography</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Abbreviations</td>
<td></td>
</tr>
</tbody>
</table>
Summary of Reporting from a National Programme to the GPELF

**Begin planning TAS**

- Communicate plan to WHO/RPRG through TAS eligibility and planning form

**TAS**

- RPRG endorses plan
- Submit report to WHO/RPRG through WHO ERF
- RPRG endorses results

**Post-MDA surveillance**

- Submit dossier to WHO/RPRG
- RPRG endorses dossier and recommends it to STAG-NTD
- STAG-NTD endorses the claim

**Validation**

_*(Proposed framework)*_
Recap Programmatic Decision Points for LF

What measures do you use to be able to decide ...

• Do I need MDA?
  – Yes if, mapping adults older children in IUs results in antigen >=1%

1. Can I stop MDA in this IU now?
  – Yes if, IU had at least 65% epi coverage in at least 5 rounds of MDA; if sentinel and spot check antigen results are <2%; if the RPRG endorse TAS; and if IU is part of EU that passes TAS (targets depend on parasite and vector species)

2. Do I need to continue surveillance activities?
  – I can stop all activities if IU passes TAS three times and STAG-NTDs endorse validation claims.
EVALUATING IMPACT

TRACHOMA
Goal, Indicators, and Targets

1. Goal:
   – Elimination of trachoma as a public health problem due to blindness from trachoma by 2020.

2. Indicators:
   – Of transmission: TF in children 1-9 years
   – Of morbidity: TT in total population

3. Targets:
   – <5% TF in children aged 1-9 years
   – TT less than 1 per 1,000 in the total population
Trachoma Impact Surveys

- Children aged 1-9 years examined for trachomatous inflammation follicular (TF).
- Grading is subjective, therefore persons performing the clinical examination must be trained and their grading standardized.
- Conduct at the DISTRICT level.
When Are Impact Surveys Conducted?

- Timing of impact assessment depends on the baseline TF prevalence. Conduct survey after a minimum of
  - 7 years if TF $\geq$ 50%
  - 5 years if TF 30-49.9%
  - 3 years if TF 10-29.9%
- If TF 5-9.9% conduct after minimum of 1 year if targeted MDA was administered, or after 3 years if no MDA was conducted.
- AND, if at least 80% epidemiological coverage reached.
Diagram on Decision Making for the Antibiotic Treatment of Trachoma

**RESULTS**

- **Baseline TF$_{1.9}$ ≥ 50%**
  - A, F, E Implementation ≥ 7 rounds of MDA*

- **Baseline TF$_{1.9}$ 30-49.9%**
  - A, F, E Implementation ≥ 5 rounds of MDA

- **Baseline TF$_{1.9}$ 10-29.9%**
  - A, F, E Implementation ≥ 3 rounds of MDA

- **Baseline TF$_{1.9}$ 5-9.9%**
  - Targeted** A as appropriate to program needs (1 round);
    Conduct F, E

- **Baseline TF$_{1.9}$ < 5%**
  - No A needed; Conduct F, E

**ACTION**

- **TF$_{1.9}$ ≥ 30%**
  - A, F, E Implementation ≥ 5 rounds of MDA

- **TF$_{1.9}$ 10-29.9%**
  - A, F, E Implementation ≥ 3 rounds of MDA

- **TF$_{1.9}$ 5-9.9%**
  - A, F, E Implementation ≥ 1 round of MDA

- **TF$_{1.9}$ < 5%**
  - Stop MDA
  - Continue F, E

**District-level IA**

- **+6 months since last MDA**
  - TF$_{1.9}$ ≥ 5%
  - District-Level Surveillance Survey
  - TF$_{1.9}$ < 5%

**Version 9 – April 2015**

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**PROGRAMME MANAGERS’ TRAINING COURSE FOR NTDS TARGETED FOR CONTROL OR ELIMINATION BY PREVENTIVE CHEMOTHERAPY INTERVENTIONS**

**Module 6. Monitoring and Evaluation (M&E)**

**Session 3. Evaluating NTDP Impact**

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**Note:**

*Program evidence has shown that areas with baseline TF$_{1.9}$ ≥ 50% often require at least 7 rounds of MDA.

**The need for “targeted” antibiotic treatment is determined by the Ministry of Health based on its judgment and contextual knowledge. Zithromax® may be requested from the Trachoma Expert Committee.

*Program evidence has shown that areas with baseline TF$_{1.9}$ ≥ 50% often require at least 7 rounds of MDA.

**The need for “targeted” antibiotic treatment is determined by the Ministry of Health based on its judgment and contextual knowledge. Zithromax® may be requested from the Trachoma Expert Committee.

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**Version 9 – April 2015**
Recap Programmatic Decision Points for Trachoma

1. Do I need MDA?
   - Yes, if TF in children ages 1-9 years >=10% (and in some cases when 5-9.9%). The number of years required will depend on TF prevalence. F and E components also important

2. Do I need to manage trichiasis?
   - Yes, if TT in adults is >=0.1%

3. Can I stop MDA now?
   - Yes, if district level TF in children 1-9 years is <5%
   - If >5%, follow algorithm for additional number years of MDAs

4. Do I need to continue surveillance activities?
   - Yes, if stopped MDA, conduct surveillance survey 24 months after impact assessment
EVALUATING IMPACT

ONCHOCERCIASIS
Goal: Moving From Control to Elimination

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Community-directed treatment with ivermectin</td>
<td>None</td>
</tr>
<tr>
<td>Transmission</td>
<td>Transmission declining towards negligible levels</td>
<td>Irreversibly approaching zero due to insufficient or absent adult worms</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Monitoring &amp; evaluation of progress</td>
<td>Active surveillance to proof elimination</td>
</tr>
</tbody>
</table>

- **START**
- **MID-TERM**
- **Control**
- **ADVANCED STAGES – Elimination**

Fertile adult worm population reduced to such low levels that it is irreversibly moving to its demise.

Confirmed elimination of transmission.
WHO GUIDELINES FOR STOPPING MDA AND VERIFYING ELIMINATION WERE RELEASED JANUARY 2016

http://www.who.int/onchocerciasis/resources/9789241510011/en/
**Diagnostics: Traditional Methods**

**Nodule palpation**
- Insensitive and not very specific
- Target: nodular prevalence <20%

**Skin snips**
- Problems with acceptance
- **Control target:** Mf<5% in all villages
- **Elimination target:** Mf<5% in all villages and Mf<1% in 90% of villages

... but these older diagnostic methods are being phased out (2010 APOC guidelines)
Diagnostics: Newer Methods

- O-150 (Pool screen) testing in blackflies
  - Target for elimination: <0.05% infective (L3) flies, n=10,000
- Ov-16 serology (ELISA) in children
  - Target for elimination: <0.1% OV16+ in children <10 years old in a sample of approx. 2,000
Onchocerciasis Program Goals

Control:
• Reduce nodular prevalence <20%
• <5% mf prevalence in all surveyed villages
• Reduce to 0 the # of cases of blindness due to oncho

Elimination:
• Mf prevalence <1% in 90% of all villages in the transmission zones and <5% in all villages
• ↓infection (L3) <0.05%/6,000 flies
• <0.1% OV16+ in children <10 years old
When Do I Measure Impact of MDA on Onchocerciasis?

After at least 12 years of MDA with IVM

- Complete geographic coverage
- National coverage at least 80%
Recap Programmatic Decision Points for Onchocerciasis

What measures do you use to be able to decide ...

1. Do I need MDA?
   – Dependent on whether goal is elimination/control

2. Can I stop MDA now?
   – Yes, if blackflies (L3) infection <0.05% and if OV16+ is <0.1% in children <10 years old

3. Do I need to continue surveillance activities?
   – Yes
EVALUATING IMPACT

SOIL TRANSMITTED HELMINTHIASIS (STH) AND SCHISTOSOMIASIS
STH and SCH Program Goals

Elimination requires improvement in environmental conditions and change in risk behaviours. The purpose of PCT for STH and SCH is to:

1. Reduce prevalence, and keep it low
2. Reduce heavy infection in children
3. Reduce morbidity in children
STH and Schistosomiasis Impact Measures

What is the indicator?

- **STH:** prevalence and intensity (eggs/gramme) of eggs in stools, by species
- **Schistosomiasis:** prevalence eggs in stool/urine/haematuria, by species

What are the program targets?

- Reduce infection prevalence in children <1%
- Reduce children with heavy infections to <5%, in 2-3 years (with good coverage)
- Reduce children with heavy infection to <1%, in 5 years
Infection prevalence and intensity in SAC:
- Kato Katz
- urine filtration
- Haematuria

Morbidity
- Ultrasounds and nutritional indicators
- Not recommended to include in control programmes, but may be undertaken by universities with separate research funding.

Note:
1. Hookworm eggs disappear if slides are not read promptly
2. Timing of impact assessment should be as close to next MDA as possible
Survey Methods – STH and Schistosomiasis

Sentinel sites

• 50 children in third-year class, per school/sentinel site.
• Number sentinel sites proportional to number SAC living in each ecological zone – one site for every 200,000-300,000 children recommended.
Example – Burkina Faso

Ecological zones – Burkina Faso can be divided into three main ecological zones:
- Sahelian in the north (approximate target population 300,000);
- Sahelo-Sudanese in the centre (approximate target population 2.6 million);
- Sudanese in the South East (approximate target population 700,000).

Selection and location of sentinel sites
Based on the distribution of the resident population in the different ecological zones:
- 6 schools were selected as sentinels in the Sahelian area;
- 8 schools were selected in the Sahelo-Sudanese area;
- 3 schools were selected in the Sudanese area.

The location of the sentinel schools is shown in the figure below.

Toure et al., 2008
Note: Parasitological surveys should be conducted at 2-3 year intervals, and before a MDA round.

Prior to surveys
Situation analysis – Historical data

1\textsuperscript{st} survey
Baseline: validates data

2\textsuperscript{nd} survey
Mid-term assessment

3\textsuperscript{rd} survey
Evaluate possibility of changing frequency of MDA
STH Assessment

Module 6. Monitoring and Evaluation (M&E)
Session 3. Evaluating NTDP Impact
Schistosomiasis Decision Points

Module 6. Monitoring and Evaluation (M&E)
Session 3. Evaluating NTDP Impact
Recap Programmatic Decision Points for STH and Schistosomiasis

What measures do you use to be able to decide …

1. Do I need to treat the population?
   - Yes if prevalence (based on SAC parasitological surveys)
     • for SCH is >1%, frequency dependent on prevalence
     • For STH >20%, frequency dependent on prevalence

2. When can I change frequency of treatment?
   - After 5-6 years of treatment, depending on prevalence (see algorithm)
   - If treatment coverage has been at least 75% of SAC
Assessing the Epidemiology of STH During A TAS
Rationale for Assessing STH During TAS

- MDA for LF (DEC/IVM + albendazole) has impact on other NTDs, including STH.
- If TAS results in stopping MDA for LF, what is the implication for STH control?
- Integrating STH evaluation with TAS provides a timely opportunity to determine continued MDA needs for STH control; determines a new baseline for monitoring the impact of school-based MDA on STH infection.
Survey Design and Target Population

• The survey design and location (i.e. EU) is the same as that for TAS; the sampling strategy most often used is school-based cluster sampling.
• TAS should be planned before finalizing details for the STH component.
• Target population:
  – 8-10 year olds for school-based surveys
  – 6-7 year olds (same as TAS) for community-based surveys
## TAS-STH Coordinated Survey Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>TAS</th>
<th>STH survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aim</strong></td>
<td>Stop MDA, interrupt transmission</td>
<td>Determine frequency of MDA required for control</td>
</tr>
<tr>
<td><strong>Geographical area</strong></td>
<td>Evaluation unit</td>
<td>Same as TAS</td>
</tr>
<tr>
<td><strong>Timing</strong></td>
<td>After five or more rounds of effective MDA repeated twice at 2–3-year intervals after MDA is stopped</td>
<td>Same as TAS</td>
</tr>
<tr>
<td><strong>Primary sampling unit</strong></td>
<td>Schools if primary enrolment is ≥ 75%</td>
<td>Same as TAS</td>
</tr>
<tr>
<td></td>
<td>Enumeration areas if primary enrolment is &lt; 75%</td>
<td></td>
</tr>
<tr>
<td><strong>Target population</strong></td>
<td>6–7-year-olds for both school-based and household surveys</td>
<td>8–10-year-olds for school-based surveys</td>
</tr>
<tr>
<td></td>
<td>Same as TAS for household surveys</td>
<td></td>
</tr>
<tr>
<td><strong>Survey design</strong></td>
<td>Cluster or systematic survey or census</td>
<td>Same as TAS</td>
</tr>
<tr>
<td><strong>Target sample size</strong></td>
<td>Cluster, 759–1692; systematic, 284–846</td>
<td>Cluster, 308; systematic, 154</td>
</tr>
<tr>
<td><strong>Child selection</strong></td>
<td>Fixed sampling interval from TAS lists in survey sample builder</td>
<td>Fixed sampling interval from STH lists in survey sample builder</td>
</tr>
<tr>
<td><strong>Diagnostic specimen</strong></td>
<td>Blood</td>
<td>Stool</td>
</tr>
<tr>
<td><strong>Diagnostic tool</strong></td>
<td>ICT or FTS</td>
<td>Kato-Katz or Mini-FLOTAC</td>
</tr>
</tbody>
</table>
Critical Cut-offs

- 5 categories of STH prevalence
- Determine frequency of treatment required

<table>
<thead>
<tr>
<th>Sampling design</th>
<th>Critical cut-off for classifying STH prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAS</td>
<td>STH survey</td>
</tr>
<tr>
<td>Census, N &lt; 300</td>
<td>Census</td>
</tr>
<tr>
<td>Census, N ≥ 300</td>
<td>Census</td>
</tr>
<tr>
<td>Systematic</td>
<td>Systematic sampling</td>
</tr>
<tr>
<td>Cluster sampling</td>
<td>Cluster sampling</td>
</tr>
</tbody>
</table>
## NTD Specific Goals and Impact Indicators

<table>
<thead>
<tr>
<th>NTD</th>
<th>NATIONAL GOALS</th>
<th>INDICATORS (with targets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF</td>
<td>Elimination by 2020</td>
<td>Antigenemia &lt;1% (Aedes) or &lt;2% (Culex/Anopheles) in children 6-7 years old in all EUs</td>
</tr>
<tr>
<td>Blinding Trachoma</td>
<td>Elimination by 2020</td>
<td>TF &lt;5% in children 1-9 years at the district level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TT &lt;0.1% in the total population</td>
</tr>
<tr>
<td>Oncho</td>
<td>Control, and where possible elimination</td>
<td>Control: &lt;5% mf prevalence in all surveyed villages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduce to 0 the # of cases of blindness due to oncho</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduce nodular prevalence &lt;20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elimination: mf prevalence &lt;1% in 90% of all villages in the transmission zones and &lt;5% in all villages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>↓ infection (L3) &lt;0.5%/1,000 flies</td>
</tr>
<tr>
<td>Schisto</td>
<td>Control to low burden</td>
<td>&lt;10%, measured by stool/urine examination for eggs,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduce to 0 the number of cases with gross morbidity</td>
</tr>
<tr>
<td>STH</td>
<td>Control to low burden</td>
<td>&lt;20%, measured by examination of stool for eggs,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Light intensity infections only</td>
</tr>
</tbody>
</table>
WHO Epidemiological Data Reporting Form
An Integrated Form to Report Impact Results

• Epidemiological Data Reporting Form (EPIRF) should indicate:
  – new mapping data completed recently
  – M&E data (e.g. SS/SC survey results)
  – TAS results
  • >>> used to revise the estimates of population requiring PC
  – morbidity-related data

**PC Epidemiological Data Reporting Form**

This purpose of this template PC Epidemiological Data Reporting Form (PC EPIRF) – available as an Excel file – is to provide national health authorities and data managers with a standardized tool to address these reporting challenges, facilitate integration and thereby better contribute to ongoing national programme management. This template aims to standardize national reporting of epidemiological data on diseases targeted for preventive chemotherapy, improve reliability and coordination of preventive chemotherapy data across the World Health Organization regions.

The template is designed to be used by national authorities to ensure that data is collected and reported in a standardized manner, thereby improving the comparability and quality of data across different regions.

**Structure of the application (worksheets):**
- WHO Epidemiological Data Reporting Form
  - Non-endemic
  - Epidemiological Data Reporting Form (EPIRF)
  - should indicate:
    - new mapping data completed recently
    - M&E data (e.g. SS/SC survey results)
    - TAS results
    - >>> used to revise the estimates of population requiring PC
    - morbidity-related data

**Instruction for data entry**
- White - cell is not protected. Please enter the value of the requested indicator.
- Orange - cell is not protected and includes a drop-down menu. Please select the value from the drop-down list.
- Yellow - cell is protected and includes formula. Please change the value only if your data are different from those that are calculated automatically.
- Green - cell is not protected and includes formula. Please change the value only if your data are different from those that are calculated automatically.
- Blue - cell is protected and includes formula. No data entry required.

**Country data**
- Is country endemic for lymphatic filariasis (LF)?
- Is country endemic for onchocerciasis (ONCHO)?
- Is country endemic for soil-transmitted helminthiases (STH)?
- Is country endemic for schistosomiasis (SCH)?
- Name of evaluation unit
  - (for TAS only)
- Name of implementation unit
- Name of survey site
- Type of survey
  - Assessment surveys (mapping, sentinel sites, spot-check sites, and TAS)
- Date of survey
  - (month)
- Latitude (decimal)
- Longitude (decimal)
- Date of the first round of MDA (year)
- Number of MDA rounds completed
- Number of people examined
- Number of people positive
- % positive
- Diagnostic test
- Age range
- Survey site
- Survey type
- Number of people examined
- Number of people positive
- % positive
- Number of invalid tests
- Critical cut-off
- Decision
- Lymphoedema
- Hydrocoele

**Module 6. Monitoring and Evaluation (M&E)**
Session 3. Evaluating NTDP Impact
What do you think are the key messages from this session?
Key Messages

- Impact assessments help determine whether NTDPs are achieving goals.
- Survey methods include: Sentinel and spot-check sites and population surveys.
- Different tools and sample sizes are needed at the different stages for the different NTDs.
- Good tools, methods, and data facilitate good decision-making.