General introduction:

The aim of this district level training course is to provide neglected tropical disease (NTD) programme managers/coordinators at district level with the basic concepts of epidemiology, transmission, and control and elimination strategies for each targeted NTD, as well as morbidity management for lymphatic filariasis (LF) and blinding trachoma. Guidance is given on how to strengthen the management of an integrated NTDP under government ownership from standalone NTD programmes. Best practice to enable scale up to full national coverage is described and discussed. The requirements for medicine applications and supply chain management including adverse experiences and the monitoring and surveillance of all aspects of an integrated NTDP are introduced and described.

Purpose:

To provide an overview of the district level managers NTD training course in which with the basic concepts of epidemiology, transmission, and control and elimination strategies for each targeted disease is presented.

Prerequisite modules:

Trainees should bring along with them the district level report corresponding to the most recent year of reporting that was compiled in their district and submitted to the national level.
**Learning objectives:**

At the end of this session, learners will be able to

1. Define and describe preventive chemotherapy and list targeted diseases that are endemic in their respective districts (Unit 1, 20 minutes)
2. Comprehensively list and describe interventions for control and elimination of targeted diseases (Unit 2, 20 minutes)
3. Present an overview of the functions of a District NTD programme managers, based on the 10 modules of this training course. (Unit 3, 20 minutes)

**Total estimated session time:** 60 minutes

The facilitators notes provide a guide to the PowerPoint presentations and the timing recommended for each section. Interaction between trainer/facilitator is of paramount importance and should be encouraged. Multiple questions should be posed during the presentations and the facilitator should then use the flip chart to record the responses of the participants before moving on to the following slides.

At the end of each session, participants will be asked what they thought were the key messages of the session and their responses will be compared with the prepared list of key messages.

**Preparations by participants:**

The participants should review their district level reports corresponding to the most recent year of reporting that was submitted from their district to the national level.

**Requirements:**

All participants should bring a laptop (notebook), note pad, pen and a calculator for use during the training. Preferably, they should be able to use Excel.
**Pre and Post training test:**

A pre-test will be administered to participants on day 1 of the workshop after registration. A post-test will be distributed at the end of Day 3 for submission to the facilitator at closing of the workshop, along with the final discussions and further arrangements.

After the pre-test, the facilitators should review the answers and discuss the respective topics during the respective sessions which they are dealing.

**Course evaluation:**

A formal, anonymous questionnaire will be provided every morning on which the participants should score the value of each session and the skill of each presenter. The questionnaire should be submitted daily to the course organizer before dispersing.

**Materials needed for Module 1:**

1. Visual teaching aides to facilitate easy learning.
   a. Dose poles for all the targeted diseases: stick and paper dose poles.
   b. Empty bottles of medicines
   c. Other complementary tools for complementary interventions – water and sanitation, vector control (Insecticide treated nets, insecticide spraying kit), poster for surgical/clinical interventions
   d. Samples of medicines of targeted diseases
   e. Images of targeted diseases showing the helminths and clinical morbidity that would be recognizable at community level
   f. Health education posters that have been produced by Ministry of Health or NTD partners at country level
   g. Community level morbidity management kit and posters/pamphlets.
   h. Vector control kits and demonstration packages/posters

2. Data summaries from national report that is directly related to the module
   a. Chart summaries of national annual report from most recent year of reporting
b. Summary of district reports for the most recent year of reporting, showing information by disease or treatment package.

3. Documents to be used in information management at this level; data collection forms, registers,
   a. Copy of district level summary form
   b. Copy of Sub-district level reporting forms (depending on number of intermediate data aggregation levels
   c. Copy of data recording tools used by medicines distributors at community level: registers, tally sheets

UNIT 1 (20 minutes)

Objective
Define and describe preventive chemotherapy and list targeted diseases that are endemic in their respective districts.

Helminthic infections continue to impose a great burden on poor populations in the developing world even though there are robust, low-cost and effective public health interventions are available.

Preventive anthelminthic chemotherapy (PC) aims at using available anthelminthic drugs either alone or in combination as a public health tool for preventing morbidity due to more than one form of helminthiasis at once. The emphasis of preventive chemotherapy is therefore on the best, coordinated use of drugs rather than on specific forms of helminthiasis. The greatest challenge is to expand regular anthelminthic drug coverage as a public health intervention to reach all at risk of morbidity induced by helminth diseases.

Public-health rationale for PC – 20 minutes

Ask:  What is PC?
PC is a public-health intervention that combines the regular mass administration of medicines recommended by WHO to control NTDs and prevent morbidity.
Ask: Which diseases are targeted with preventive chemotherapy
- Lymphatic filariasis (LF)
- Onchocerciasis (ONCHO)
- Soil-transmitted helminthiasis (STH)
- Schistosomiasis (SCH)
- Blinding trachoma (TRA)
- Others: Food-borne trematodes (FBT)

Ask: What are the local names of each of the above diseases?
Participants to answer

Ask: Why is PC important?
PC is important to reduce morbidity from diseases such as STH, SCH, ONCHO, LF and blinding trachoma

Regular treatment using effective medicines given at an early stage reduces the chronic consequences of morbidity

Reducing transmission can lead to elimination of NTDs. Emphasize which NTDs have elimination goals (LF, ONCHO, Trachoma, and SCH in some WHO Regions).

Ask: What is the difference between clinical and preventive treatment?
Clinical treatment is based on individual diagnosis, whereas PC is based on community diagnosis and delivery of safe and effective medicines to targeted high-risk groups within the community.

PC is thus a shift from a disease-based approach where the target is individuals affected by single diseases to a package-based intervention where the target is a population affected by one or more NTDs that can be tackled with a single package of medicines. PC requires the coordinated delivery of quality-assured medicines alone or in combination at regular intervals to achieve effective coverage defined by each disease.

Emphasize the conceptual similarities between PC and vaccination strategies.
What are the PC medicines?

Present the PC medicines currently recommended for use in community-based interventions by WHO and which diseases they target individually, and in combination.

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Disease targeted(^1)</th>
<th>Medicine package Combination</th>
<th>Tool for measurement dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivermectin (Mectizan): IVM</td>
<td>Lymphatic filariasis (LF)</td>
<td>IVM and ALB tablets</td>
<td>Dose pole</td>
</tr>
<tr>
<td></td>
<td>Onchocerciasis</td>
<td>IVM tablets only</td>
<td>Dose pole</td>
</tr>
<tr>
<td>Diethylcarbamazine (DEC)</td>
<td>Lymphatic Filariasis (No ONCHO)</td>
<td>DEC and ALB tablets</td>
<td>Dose pole</td>
</tr>
<tr>
<td>Albendazole (ALB)</td>
<td>Soil-transmitted helminthiasis (STH)</td>
<td>ALB single dose (1 chewable tablet)</td>
<td>Age group</td>
</tr>
<tr>
<td></td>
<td>Lymphatic Filariasis (LF)</td>
<td>ALB only twice in Loa Loa areas</td>
<td>Age group</td>
</tr>
<tr>
<td>Mebendazole (MDZ)</td>
<td>Soil-transmitted helminthiasis (STH)</td>
<td>MDZ single dose (1 chewable tablet)</td>
<td>Age group</td>
</tr>
<tr>
<td>Praziquantel (PZQ)</td>
<td>Schistosomiasis (SCH)</td>
<td>PZQ tablets</td>
<td>Dose pole</td>
</tr>
<tr>
<td>Zithromax (Azithromycin)-AZT</td>
<td>Blinding trachoma (TRA)</td>
<td>AZT tablets</td>
<td>Dose pole</td>
</tr>
</tbody>
</table>

\(^1\) Note – Some of these medicines may be used to treat other infections. However this is not the focus for this training material.
CASE STUDY – 10 MINUTES
- Take one of the district reports from the most recent year of complete reporting.

Ask:  What are the challenges of PC? Allow participants 5 minutes to list these based on their experience and observations from their respective districts.

Drug delivery
Coverage of as many people in need as possible; experience in the use of these medicines has shown them to have an excellent return in reducing morbidity and transmission.
Anthelminthic treatment should be provided free of charge to those in need
PC explores best practices for delivering drug packages to communities in need through the most cost-effective means (exploits existing delivery platforms and explores innovation)
There is great potential for integration; PC advocates much stronger coordination among disease-specific programmes

Achieving minimum coverage of ≥ 75%

Safety issues (Discussed in Module 5)

Adverse experiences: emphasize that PC medicines have excellent safety records regardless of infection status but that communities must be aware of mild adverse experiences that may accompany treatment

Loa loa: in areas where loiasis is endemic, caution is essential with the use of Ivermectin because there is a risk of encephalopathy in individuals with high levels of Loa microfilaraemia.
## Training plan:

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Time</th>
<th>Content</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Presentation of key concept</td>
<td>15</td>
<td>minutes Lead participants though the Learner’s Guide (include any tips or examples for the presentation)</td>
<td>Learner’s Guide</td>
</tr>
<tr>
<td></td>
<td>slides</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Case study</td>
<td>10</td>
<td>minutes Ask participants to individually read the case study in their Learner’s Guide and ask them Q</td>
<td>Learner’s Guide</td>
</tr>
<tr>
<td>3</td>
<td>Breakout Groups</td>
<td>15</td>
<td>minutes Allocate 2 topics to 2 groups. Tell the group to elect a reporter. Give them 15 minutes to…</td>
<td>Flip chart Markers</td>
</tr>
<tr>
<td>4</td>
<td>Open discussion</td>
<td>10</td>
<td>minutes Have 1 reporter from each group tell their main takeaway. Have 5 minute debrief discussion</td>
<td>Flip chart</td>
</tr>
<tr>
<td>5</td>
<td>Review key messages</td>
<td>5</td>
<td>minutes Ask a few participants to share 1 key message they learned. Summarize any remaining key messages.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total time</td>
<td>60</td>
<td>minutes</td>
<td></td>
</tr>
</tbody>
</table>

## Training procedures

1. A brief presentation of the key concepts

2. A brief **evaluation exercise** to determine that participants have grasped key points. (e.g., a couple of **specific** questions to ask the group)

3. **Review of key messages**

   Preventive anthelminthic chemotherapy:
   - is a public-health intervention
   - combines the regular mass administration of anthelminthic medicines
   - prevents morbidity
   - can control / eliminate NTDs