

A global forum for nongovernmental organizations working together on NTDs

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Accelerating to 2030: Building Resilient NTD Programmes in a Changing World

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Virtual Event

8th – 10th September 2020

Billy Weeks (2016, Chikwawa, Malawi





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NTD supply chain: A call for integration



















Getting from Port to Patient starting with **PLANNING & FORECASTING**















Getting from Port to Patient through **STOCK & DATA MANAGEMENT**













LMIS Inventory control procedures Warehousing and storage



"Integrated storage system, fragmented supply" — Boakai Boley, National Drugs Service MD, Liberia





Getting from Port to Patient through LAST MILE DISTRIBUTION & REVERSE LOGISTICS











Innovative delivery model







Poor infrastructure

One of the most important components of a robust SCM is having an efficient and effective **Reverse Logistics** system. This ensures a drastic reduction in drug wastage and almost all drugs are accounted for. -- Hadiza Iliasu NTDs Northwest Zonal Officer, Nigeria



Getting from Port to Patient starting with **PLANNING & FORECASTING**















Planning & Guidelines Forecasting & SOPs





Drug Supply Chain Distribution Network Inventory Control Procedures Warehousing & Storage Transport & Distribution **Reverse Logistics Quality Assurance** Reporting









Q&A

The key point for the NTDs SCM is **integration** into the NHMIS, this will go a long way to curb some of the challenges such as accountability of medicines and help to measure performance.

Also, at the lower level, integrating with the logistics management coordination unit (LMCU) will help to coordinate the supply chain activities such as distribution and reverse logistics in the states down to the community level.

- Yvonne Musa Oshuwa

Pharmacist, Head SCM Unit NTDs, Nigeria













Ascend West and Central Africa







NGO NETWORK A global forum for nongovernmental organizations working together on NTDs

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Spatial intelligence; what it is and how it can be applied to solve challenges routinely experienced in NTD surveillance and intervention management.







Challenges

Field teams often operate blindly; without maps or data to plan and deploy operations.

- Where do people live?
- Did interventions reach them?
- Was true coverage achieved?



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heople IV

To better deliver services, we need to understand where



Spatial Intelligence

- Satellite imagery
- Remotely sensed data
- Spatial modelling, incl. artificial intelligence & machine learning
- Digital maps & mobile platforms









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San Francisco

















Impact

- Increased health campaign coverages by 20-30%.
- Reduction in malaria incidence
 by 15% (comparing IRS alone to
 IRS + Reveal).
- Reduced cost per malaria case averted by 63%.



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Using detailed maps, we can identify eligible households and assign teams to priority areas



^{1.} Larsen et al (2020). Leveraging risk maps of malaria vector abundance to guide control efforts reduces malaria incidence in Eastern Province, Zambia. Nature Scientific Reports. 10: https://www.nature.com/articles/s41598-020-66968-w

^{2.} Center for Applied Malaria Research at Tulane University. Retrospective Evaluation of the Effectiveness of Indoor Residual Spray with Pirimiphos-Methyl (Actellic) on Malaria Transmission in Zambia. January 2017.

^{3.} Tropical Health (Josh Yukich). Cost and cost-effectiveness of 3GIRS in sub-Saharan Africa: results of data collection and analysis in the nGenIRS project. January 2019.

Thank you

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Providing analytical tools to understand the impact of MDA delays due to COVID19-related and help plan resumption of NTD programs

MODELLING CONSORTIUM









Key Questions

- How long can NTD interventions be postponed before progress towards the 2030 goals is affected adversely?
- In which settings will delay-related impacts be greatest?
- What, if any, remedial strategies can be implemented once activities resume,
 - -in order to regain ground lost due to COVID19-related programme interruptions

 - -minimize the risks of recrudescence of infection and disease -and even accelerate progress towards the goal







Modelled scenarios



Standard rounds in 2019

- Assumptions made about coverage
- Some of these have not been tested in programmes
- The impact on progress in any given population may be lesser or greater than presented here







Impact on PC Diseases



 Delays to MDA rounds will lead to a greater numbers of infections in the community

– Prevalent infections untreated AND new cases.

- & more rounds of treatment to reach 2030 disease targets
- or treatment strategies





• The longer the delay to the scheduled MDA = greater the resurgence in infection

Potential remedial strategies include extra rounds of MDA and different coverage



Delays to the 2030 goals



 Once programmes are able to resume community-based interventions, proposed remedial strategies may help to get progress towards goals based studies.







Imperial

medium

high

 The underlying dynamics of each infection, local transmission parameters, duration of delay, chance and implementation of remedial strategies will influence the ultimate impact.

• High transmission areas face the greatest risk as infection resurgence will be greatest in these populations.

back on track; these will require empirical confirmation in population-



Analytical Tools

NTD Prevalence Simulator

Lymphatic filariasis

Select a country to simulate outcome scenarios

Select a country

Before you start

HOW IT WORKS

The projections on this website provide guidance on the impact of more frequent, longer or higher coverage treatment strategies on achieving elimination as a public health problem. Please note that the model has only been validated against a certain number of settings, details of which can be found in this paper. A full model description can be found in the About section.

MISSION

 \sim

Many urgent policy issues concerning the control and elimination of neglected tropical diseases (NTDs) can be informed by high-quality quantitative modelling. However, a dearth of modelling in this area prevents donors and policymakers from accessing existing expertise. We hope that our NTD Simulator can help close this knowledge gap.

 $\mathbf{\vee}$

Bed Net Coverage (j) 40 0 100	MDA Frequency 🕞
Type of Mosquito () Image: Second state of the second state o	MDA Target Coverage () 65 0 100
Inseticide Coverage (j)	MDA Drug Regimen 🥡 albendazole + ivermectin 🗸
Disruption Are you interested in a specific disruption scenario? You will be able to change this later. 6 MONTHS COVID DISRUPTION 1 YEAR COVID DISRUPTION	18 MONTHS COVID DISRUPTION 2 YEAR COVID DISRUPTION
PREDICTIONS	

Working with ESPEN to provide access to these analyses in a user friendly format - linking to ESPEN data

Cameroon	\checkmark
KOZA	\checkmark
Setup We hold the following information for KOZA.	
PREVALENCE DATA (UNDER SURVEILLANCE)	ESPEN INTERVENTION DATA
'10 '11 '12 '13 '14 '15 '16 '17 '18 '19	08 09 10 11 12 13 14 15 16 17 18 19

 User can adapt analyses to local knowledge (e.g. coverage)

– Duration of disruption

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Analytical Tools











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Background

- conflict and/or humanitarian emergencies.
- The survey was distributed through:
 - NNN list-serv
 - Disease specific platforms
 - International Coalition for Trachoma Control
 - Global Schistosomiasis Alliance
 - Zero Leprosy
 - Global Alliance to Eliminate Lymphatic Filariasis
 - **STH** Coalition
 - **Onchocerciasis** Network
- 28 people completed the survey





 March 2019, communications task team of the Conflict and Humanitarian Emergencies (C&HE) Working Group developed a survey to help the group prioritise what new tools or resources would be most beneficial to support organisations working in or who would consider working in areas affected by



Three Major Needs Identified

- Identifying where NTDs and C&HE overlap
- Advocacy to donors and potential partners
- Information sharing on a range of topics:
 - Coordination
 - Case Studies (what worked and what hasn't)
 - Protocol Development
 - Partnerships
 - Safety





Today I am presenting on behalf of the C&HE Group about the development of a *resource guide* to address the request for more information



NEGLECTED TROPICAL DISEASE NGO NETWORK







This Cross-Cutting Group comprises of NNN members with an interest in learning and advocating on the challenges presented for NTD control and elimination activities presented by conflict and humanitarian emergency situations as a guide to fighting NTDs.

Q Search

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Contact

RESOURCES

Access resources to support all stages of the programme cycle in the NNN Conflict and Humanitarian Emergency Resource Guide.





ToR_NININ_conniciandEmergencies_2019.p



Five Thematic Groupings of Information











1. Getting started

Working in areas affected by conflict and humanitarian emergencies requires tailored and targeted approaches that are often considered to be a major hurdle for NGOs. Settings can vary significantly across refugee camps, internally displaced persons camps, protection of civilian camps, unofficial camps and other post conflict or emergency situations. When getting started, organisations should identify the setting and its physical and health system structures, conduct a situational analysis, contact key stakeholders, and identify what formal agreements are required to work in the targeted setting.











Identify the setting you are considering working in

Conduct a situational analysis

Engage key stakeholders

- order to implement NTD activities. Organisations should not assume that all settings/camps will be managed the same way.
- populations, especially in camp settings.
- organisations should determine if a coordinated approach would be ideal.
- safely and effectively be conducted. This might include rebel groups, community groups, tribal councils, religious leaders, etc.

Identify formal agreements needed to work in each setting



• In many humanitarian emergencies, settings will be managed by a UN agency. Organisations should identify and contact the managing UN agency (UN cluster lead) in order to identify themselves and learn what permissions must be obtained and what processes must be followed in

• Identify which government ministries are involved in conflict and humanitarian emergency settings as this is likely different from the NTD department working in typical village environments. The government may have specific rules governing the work done with displaced

• In many settings, other programmes will already be operating. Organisations should identify and contact lead NGO organisations to share information, gain insights about working in these settings, ensure programmes do not undermine each other. Based on the information gathered,

• Identify and contact other non-governmental groups that work within these settings. Gaining their permission may be required before work can







Resources for getting started

Resource	Author	Key sec
UNHCR emergency handbook: setting strategy	United Nations High Commissioner for Refugees (2015)	The setti to affec
Information management toolkit	United Nations High Commissioner for Refugees (2015)	The Info coordin provide
Disaster summary sheet armed conflict	acaps (2012)	This disc develop needs d
Malaria control in humanitarian emergencies: an inter-agency field handbook	World Health Organization (2013)	This han handbo manage
UNHCR emergency handbook coordination and partnerships	United Nations High Commissioner for Refugees (2015)	Coordin - militar coordin
Lessons learnt from coordinating emergency health response during humanitarian crises: a case study of implementation of the health cluster in northern Uganda	Journal Article: Olu et al. 2015. Conflict and Health.	This jour crises.
Humanitarian negotiations revealed: the MSF experience	Medecins Sans Frontieres (2012)	This arti
Tuberculosis: care and control in refugee and displaced populations	World Health Organization/United Nations High Commissioner for Refugees (2007)	This man refugee



tions

ing strategy is a component of the UNHCR Emergency Handbook. It includes sections such as accountability ted people, evaluations of emergency operations, and inter-agency refugee response plans.

ormation Management Toolkit provides information and data management advice and tools meant to inform nated humanitarian response during the first two to four months of a refugee emergency. The guidance ad is relevant and useful in a broader range of operational settings.

aster summary sheet (DSS) provides a general profile of the potential impact of an armed conflict on importa oment issues, including health and WASH. The DSS helps understand what the actual impact and priority during an armed crisis may be, based on experience and lessons learnt from previous crises.

ndbook includes best practices for malaria programmes in humanitarian emergencies. Components of the ook include coordination. mechanisms, assessment and operational planning, surveillance, outbreaks, case ement, prevention, community participation, operational research and associated routine monitoring.

nation and partnerships is a component of the UNHCR Emergency Handbook. It includes sections such as civ ry coordination, coordination skills, methods and good practices, international humanitarian and development nation architecture and MoUs and LoUs with UN agencies and NGOs.

rnal article explores issues which are important for strengthening health coordination during humanitarian

cle explores the negotiation process to operate health services during the Sri Lankan civil war.

nual provides guidance to humanitarian agencies on the implementation of effective TB programmes for and displaced populations.

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Next Steps

- Resources will be updated quarterly
- Each section will be expanded upon as we learn new information
- Collect case studies from NGOs implementing NTDs in areas affected by Conflict and Humanitarian Emergency
- We welcome feedback/input from NNN membership on both the website AND on resources that can be included

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• Special thank you to the C&HE Cross Cutting Group for their work on the resource guide and to The Carter Center for their financial support to this web-based platform



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Moving towards integrated NTD approaches: opportunities and challenges

Diepreye Ayabina, Jaspreet Toor, T. Deirdre Hollingsworth NTD Modelling Consortium











Integrated NTD control

- target multiple NTDs at once
- health programs to achieve a common goal
- factors

WHO aims for 90% of endemic countries with NTDs integrated into national health plans by 2030







Programs that combine interventions for various NTDs to

Programs that combine NTD interventions with other public

Programs that collaborate with other sectors to address risk





Opportunities for integration

A common platform requires combining activities for NTDs with similar delivery strategies and interventions.

- Planning and programme managements
- Preventive chemotherapy: creation of PCT packages by combining MDA for more than one NTD.
- Health care worker training











Challenges

- condensed
- and activities.
- together.
- endemic areas.







Resentment among managers and staff that might emerge as programs are combined and roles and responsibilities are

Program staff will need to receive training on new diseases

• Challenge of using a single criteria (i.e. the patient's height) for determining the correct dosage of all drugs distributed

Drug co-administration challenges, for example, ivermectin for onchocerciasis cannot be administered in Loa Loa





Conclusion

- 2030 targets may not be cost–effective or sustainable
- countries with support donors and partners.
- Maintaining the balance between disease specific and integrated approaches







• A siloed focus on each disease independently to achieve the

Integration of NTD control programmes should be led by





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• BMGF

NTD modelling consortium













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IDM: Buruli ulcer, Chagas disease, human African trypanosomiasis leishmaniasis and yaws

- -burden is poorly understood;
- lack of appropriate control tools;
- relatively lower investment in research and development;
- systems and limited access to diagnosis and treatment.





MSF: The challenges of managing Innovative and Intensified Disease Management (IDM) NTD's in the field

- difficult and costly to manage - diagnosis, treatment and follow up;

-people affected often live in remote rural areas with poor health

 In Africa, MSF provides care for visceral leishmaniasis in projects in Sudan, South Sudan and Ethiopia, and for HAT in DRC and CAR.

Both are fatal, parasitic diseases affecting the poorest of the poor





MSF and visceral leishmaniasis (VL) in Africa (1988 - 2019)





	Country	Period	VL cases treated
ysa Bura SOM	Sudan	1988 — 1989 1996 — 2005 2010 — 2019	36,763
Buuhoo	South Sudan	1989 – 2019	66,398
orī Dehar Ē N	Ethiopia	1997 – 2019	17,626
	Uganda	2000 – 2006	2,437
Jobarde ¹²	Somalia	2001 – 2009	3,791
iwaC _é	Kenya	2007 - 2012	3,083
Moga Marka we	Total	1988 - 2019	130,098





MSF HAT interventions and mobile team approach

- Between 1986 and 2018 MSF screened almost 3,5 million people and treated over 50,000 cases of HAT in 7 countries
- Between 2015 and 2019, mobile teams visited hundreds of villages in DRC and screened 99,626 people. 235 cases were identified and treated. The teams were also active in South Sudan and CAR.
- Cases remained consistently low after 2016, which led to the decision to disband the mobile team in 2019.









HAT and VL: diagnosis and treatment in field conditions





















African VL:

- rK39 antigen-based rapid test for clinically suspect patients: suitable for field conditions, highly specific but sensitivity 80 - 90%
- Rapid test negative and suspect: laboratory (serological Direct Agglutination Test (DAT) and parasitological confirmation in tissue aspirates via microscopy)
- Relapsed and non-responding patients: **laboratory** (parasitological confirmation in tissue aspirates via microscopy)

HAT:

- Newly developed rapid tests for clinically suspect patients suitable for screening only, quality control and supply issues
- Confirmation of disease: laboratory (parasitological confirmation in tissue aspirates and/or CSF via microscopy, or/and collect blood on filter paper to be sent to Belgium (trypanolysis test))





HAT and VL: highly complex diagnostic algorithms; imperfect tools





African VL: complex hospital-based treatment

• First line: SSG + paromomycin injections: 17 days, 2 dd

- Effective but painful and significant toxicity
- High cost of long hospitalisation
- Second line: long-course AmBisome for vulnerable groups not tolerating SSG





















HAT: significant advances in treatment through DNDi From nifurtimox-effornithine combination therapy 7 days of IV infusion, twice daily and 10 days of oral treatment

- Complex logistics
- Hospital-based
- Only for non-neurological stage



• To oral fexinidazole 10 days of oral treatment, one dose daily ….. To acoziborole, <u>a single dose oral treatment</u> (in development)









WHO's 2030 NTD roadmaps goals

HAT: Interruption of transmission (elimination) in 15 countries (62%)

VL: Elimination as a public health problem (defined as <1% case fatality rate due to primary visceral leishmaniasis) in 64 countries (85%)

- The most remote and neglected populations may remain neglected
- but not a measure of the true VL mortality in communities.

Critical for success is early detection and treatment at community level in all endemic areas, including remote and isolated area's.



• Case fatality rate is an indicator of quality care and early diagnosis and treatment,







Conclusion

• HAT is now a low prevalence disease occurring in often extremely remote area's (< 1000 cases in 2019)

- MSF has shown that active case finding is no longer cost-effective
- Integrated diagnosis and treatment with simplified diagnostic and treatment tools at community level may soon be possible
- African VL is still endemic in many areas, with regular epidemics occurring
 - MSF has shown that active case finding is not cost-effective, except in certain outbreak scenario's
 - Better tools for decentralizing diagnosis and treatment are needed
 - Access to treatment is poor, with many cases remaining unnoticed
 - True mortality remains unknown

We need to maintain the 'momentum' between partners during and after the COVID crisis, to avoid a re-emergence of VL & HAT (access, supply, MD training, com'ty-awareness) and an inability to detect it (epi, surveillance)







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Understanding, applying and evaluating One Health to achieve the goals of WHO's NTD Roadmap for 2030

- One Health collaborative, multisectoral, and transdisciplinary approach – working at local, regional, national and global levels – to achieve optimal health and well-being outcomes recognizing the interconnections between people, animal, plants and their shared environment.
- One Health is still sparsely implemented in the field and has a special and high needs in development and humanitarian contexts in the Global South.





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Understanding, applying and evaluating One Health to achieve the goals of WHO's NTD Roadmap for 2030

- Around 50% of NTDs have animals as vector or / and an animal reservoir
- Lack of coordination between veterinary public health and public health sector, this is addressed in the WHO's NTD Roadmap for 2030
- We as NNN have to acknowledge, recognize and promote the interconnections between diseases and people, animals, plants, water and their shared environment.









Understanding, applying and evaluating One Health to achieve the goals of WHO's NTD Roadmap for 2030

- How can the One Health approach significantly increase the impact in the fight against NTD?
- Where are the chances?
- I would like to make two recommendations:

Health strategy for NTDs and included in local strategies and plans. • Create national operational plans to deliver interventions for NTDs with animal-environment interface, with clear attribution of roles and resp a coordinated plan outlining stakeholder accountability for humans-, an ecosystem-related actions.	Developing a One Health strategy for NTDs	 Develop a One Health strategy for NTDs, including case definition, comm strategies and mechanisms for collaboration among ministries of agricultu- wildlife, environment, food safety, health and others. Integrate NTD into existing One Health platforms and ensure that they a and included in local strategies and plans. Create national operational plans to deliver interventions for NTDs with animal-environment interface, with clear attribution of roles and respon- a coordinated plan outlining stakeholder accountability for humans-, anim ecosystem-related actions.
---	---	---

Programme planning	Share data on occurrence of NTDs in various human and anin guide activities, e.g. surveillance in animals as a proxy for hum Develop plans for coordinated disease control, e.g. simultan humans and animals in a geographical area.
	numans anu ammais in a geographical area.



on targets, re, livestock,

e considered

a humansibilities, e.g. al-, food- and

mai hosts among sectors to nans. eous interventions for both



Fig. 19. One Health: activities and mechanisms for coordination





Opportunities for increasing impact

- Donors as key stakeholders in order to fund and realize One Health in consortia projects, increase the impact by "pooling" and sharing" the different disciplines
- Convincing political actors and donors to following the One Health Approach by fighting communicable diseases, in particular zoonoses. Such as ministries, UN or European bodies, ...







How NNN can support

- One Health offers opportunities to address the complex challenges found at the interfaces between humans, animals and the environment – especially among livestock-dependent communities – and therefore the NNN has to bundle more resources to assure One Health implementation.
- Developing a Global One Health Strategy for fighting NTDs
- Develop plans for coordinated Disease Control







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Sightsavers









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