

Achieving NTD Program Goals in Urban Settings

Session Date: Saturday, November 4

Session Time: 9:00am – 12:00pm

Session Location: Harborview II

Session Description: An analysis of district level information from fifteen countries supported by USAID's ENVISION project, from 2012 to 2016, shows that the percent of mass drug administration (MDA) achieving sufficient coverage has increased. This achievement is reflected in data that shows an increase in districts achieving sufficient coverage for LF and Trachoma, from 75% in 2012 to 92% in 2016. Remaining low coverage challenges are increasingly observed in the "hard to reach" populations: urban dwellers, nomadic/ migrant populations, those living where there is insecurity, out of school children, and those living in places with especially weak infrastructure and education levels. The goal of this session is to review the challenges of conducting NTD programs in urban areas, identify gaps that require further operations research, and present innovative ideas that could be tested in other urban settings.

Session Chairs: Margaret Baker, RTI
Joseph Shott, USAID

Session Rapporteur: Chelsea Toledo

KEY DISCUSSION POINTS

This session explored challenges, successes, and opportunities in urban mass drug administration (MDA). Presentations and discussions were based on a coverage framework for successful NTD programs – from timely drug orders and manufacture; to an effective drug supply chain; to available, motivated, trained, and supervised community drug distributors (CDDs); to populations aware of MDA, which is distributed at an appropriate place and time; to the willingness of the population to take the drugs (compliance).

Presentations focused on introducing challenges and opportunities for NTD programs in urban contexts (Alayne Adams); describing the approach to urban MDA in Port-au-Prince, Haiti (Abdel Direney on behalf of Jean Lemoine) and in Bamako, Mali (Benoit Dembele on behalf of Massitan Dembele); exploring an algorithm used to determine whether MDA was needed in Porto Novo and Cotonou, Benin (Rousseau Djouaka); and providing a literature review on challenges and solutions for MDA in urban settings (Tara Brant). The speakers then fielded the following questions as a panel.

- What about vector control?

In Port-au-Prince, there is no vector control program, but sometimes there is vector control activity based on the type of diseases. For example, there is some fumigation after outbreaks of chikungunya and Zika, but this is a one-time intervention. In Bamako, there is no vector control program for NTDs, but there is one for malaria. Studies in The Gambia and Zambia show quite clearly the effect of bed

nets. Vector control eliminated lymphatic filariasis (LF) in areas of Benin. In Accra (Ghana), vector control had an impact on LF.

- What about economic disparities within urban settings?

This is where micro-planning comes in. Implementers need to understand, at the lowest level possible, who is being targeted, who is respected as a leader in those communities, how are community drug distributors selected, and what are the key messages that this group needs to hear.

Micro-mapping proved useful in Accra (Ghana). By the time the program wanted to start MDA, they realized they couldn't treat everywhere. They went into the areas where cases of LF were being reported and instead of treating the whole district, they treated sub-districts and sub-metros. One issue was determining whom to treat, as there are dynamic populations and indigenous people born in Accra, as well as affluent people living between slums who were not infected with LF. Coverage among the poor was very poor, yet they were able to decrease transmission.

- What constitutes population denominators?

Denominators are an issue in Port-au-Prince (Haiti), where people have questioned the results of MDA, as it took place after an earthquake and when people were moving into the city. Furthermore, no census had taken place. However, results using the Supervisor's Coverage Tool triangulated with the low administrative coverage reported. Furthermore, when CDDs were asked to describe the urban area they were responsible for, it was much less than the central government believed they were responsible for. In Bamako, people live in peri-urban areas and come to work and school in the city. Others from rural areas migrate to the urban centers just for the dry season. This impacts the numerator, while the denominator used by the NTD program is based on official Ministry of Health data of number of residents.

- How can researchers determine the best distribution points of MDA in urban areas? What are the potential risks and benefits of involving small pharmacies? What about schools as distribution points for urban MDA?

Some drug sellers are trained, but some are not. In Bangladesh, these small pharmacies are numerous, they are approximate to where the at-risk groups are, and they are the first place many go for acute illnesses. There is potential to leverage these sites as points for MDA, but such an effort would have to be piloted with training attached to assess its feasibility. Schools can work as delivery points, where school attendance rates of at-risk children is high. However, children in schools would need to be reached before the 5th grade, as that is the age when many urban children drop out to begin work.

- How much have social scientists been involved in asking communities what they would recommend for improving coverage (ex. "old lady Facebook" vs. other social networking tools)?

The best approach will differ from place to place. Facebook is a hugely important mode of communication in Southeast Asia. The mobile phone is ubiquitous (even the poorest people have them), so messaging via the smartphone could be effective. The only way to learn is by asking the questions.

KNOWLEDGE GAPS & RECOMMENDED NEXT STEPS

During the session, participants generated a list of operational research questions related to NTDs in urban settings, and follow-up input was provided by e-mail. This document is a record of what participants proposed.

1. To improve decision making on **when to start MDA** in urban settings, and who to target:
 - a. What are the best approaches to NTD prevalence mapping in urban settings?
 - b. Can subpopulations or geographic units at risk for NTDs be identified and differentiated from other groups that are not at risk? If yes, how? How stable are these groups in time and space?
 - c. How should the influence of other disease control efforts that can impact disease prevalence be included in the decision to start MDA (e.g., insecticide-treated nets and indoor residual spraying for LF), especially when mapping data is old?
 - d. What is the role of xenomonitoring in deciding to start MDA?
 - e. What is the comparative cost of having a more robust mapping strategy in urban setting compared to x number of rounds of MDA?
 - f. What is the transmission potential of schistosomiasis in urban and peri-urban areas?

Additional comments relevant to these questions:

- For mapping - it is very difficult to identify subpopulations given the great diversity of urban populations. Indeed, the urban environment is experiencing rampant migration and diversity in the geographical origin of migrants. The population can come from endemic areas as from non-endemic areas.
- In considering xenomonitoring for LF, there is concern about the cost of searching for L3s and the stability of mosquito populations, vector efficiency, dominant species, etc., as well as the limited amount of expertise in this field.
- For LF, MDA may not be necessary in urban areas of West Africa.
- The transmission potential of schistosomiasis is more likely in peri-urban settings, because of the lack of availability of modern water management structures and water supply. Peri-urban areas will also be unlikely to have the usual school based structures in place given the nature of the peri-urban settlements being recently established.

2. What are cost-effective methods to ensure **MDA coverage targets** are met?
 - a. Determine what approaches/platforms lead to achievement of coverage targets in different urban settings (e.g., fixed post, door to door, markets, malls, schools, private pharmacies, other private health care settings, entrances to large high rises, workplaces, prisons, etc.) and their relative cost.
 - b. Develop a rapid assessment tool to identify best (effective, cost effective, feasible, replicable, etc.) service delivery package (planning, drug supply, motivation of health workers, training, supervision, monitoring, social mobilization, etc.) tailored to specific context.
 - Develop a rapid-assessment tool to identify behavioral drivers of MDA participation and propose social mobilization messages and strategies to improve MDA participation.
 - Generate and document examples of social mobilization strategies that effectively treat micro-populations present in urban areas (educated vs.

illiterate; rich vs. poor; etc.) and methods and best practice for communication of health messages via radio, billboards, TV slots etc.

- c. What are good 'go to' protocols and tools for microplanning MDAs in urban settings?
 - d. Develop methodologies for including community recommendations and different types of leadership systems in the design of MDA strategy.
3. What are strategies to **monitor and evaluate MDA coverage** to ensure that program goals are likely to be met?
- a. What are alternative methods to estimate denominators for urban MDA interventions in order to more accurately measure MDA coverage and account for populations that fluctuate according to the time of the day. In the morning the population moves into the city center and away in the evening.
 - b. Develop monitoring strategies that help rapidly identify and remediate sub-optimal coverage of MDA delivery in urban settings in advance of full TAS
 - c. Is there potential for using remote sensing to estimate population densities?
 - d. Can we estimate denominators from cell phone use patterns in different areas which might give a measure?
 - e. How to sub-divide MDA units in areas for impact measures?
4. For all of the above – explore how we can learn and adapt from **other public health programs** e.g immunization (including polio), malaria, vitamin A, etc.