FOR A WORLD FREE OF PARASITIC WORM INFECTIONS
Monitoring and Evaluation for schistosomiasis control programmes in Africa

Neerav Dhanani
Senior MER Advisor: Biostatistics

Natural History Museum, 26 September 2019
What does SCI do?

- Support treatment delivery
- Monitoring and evaluation
- Research
Purpose of Monitoring and Evaluation (M&E)

To guide government programmes in optimum SCH and STH control

- To provide a **continual cycle of feedback** for MoH to enable programme adaption
- Support **WHO recommendations** for M&E of SCH and STH
- **Developed and revised** over 13 years of supporting programme implementation
- **Demonstrate impact** for country use, donor reporting and community engagement
- Build the **capacity and skills** of in-country experts and technicians
- Foster south to south **technical exchange** and capacity building
- To determine if we are **reaching global goals** for SCH and STH control/elimination
These guides give us WHO’s three components of M&E:
- Process indicators
- Performance indicators
- Impact indicators

Published in 2011 by WHO
Defines key indicators and targets

https://www.who.int/intestinal_worms/resources/9789241548267/en/
WHO Components of M&E

## Control of Morbidity

<table>
<thead>
<tr>
<th>Elimination as a public health problem</th>
<th>Elimination of transmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% geographical and 75% national coverage with Preventive Chemotherapy (PC)</td>
<td>Adjusted PC and complementary interventions recommended</td>
</tr>
<tr>
<td>Prevalence of heavy intensity infection &lt;5%</td>
<td>Prevalence of heavy intensity infection &lt;1%</td>
</tr>
<tr>
<td>Up to 5-10 years from joining the group</td>
<td>Up to 3-6 years from joining the group</td>
</tr>
</tbody>
</table>

### WHO Strategy for Elimination of SCH

1. Step - Mapping
2. Step - Strategy
3. Step - Logistics
4. Step - Training
5. Step - Social mobilisation
6. Step - Treatment
7. Step - Reporting

National programme for SCH with preventive chemotherapy (PC)
M&E Framework for SCH Programs

- Mapping
- Process
- Performance
- Impact
- VfM
- + interventions
M&E Framework for SCH Programs

- Mapping
- + Interventions
- VfM
- Process
- Performance
- Impact
Prior to treatment, SCI works with in-country programme partners (primarily the Ministries of Health) to **assess the level of infection**

SCI supports the development of **risk maps**, detailing predicted levels of infection across mapping units

These maps show **which areas require treatment and how often to distribute treatment**
Mapping

Diagnostic tools

- Kato Katz
- Urine filtration
  - Tweezers
  - Filter paper
  - Filter holder (3 parts)
  - Syringe
- Urine dipstick
- Circulating Cathodic Antigen
Mapping

Where is infection?

Liberia

Treatment strategy based on WHO guidelines
M&E Framework for SCH Programs
Process

Are **routinely reported** treatment data reliable and accurate?

School/community Registers → Summary Forms → District Report → National Report → WHO

- Fragile paper forms
- In-correct data in Summary Forms
- In-complete District Report
- Over or under reported numbers
- Inaccurate and untimely reporting to WHO

World Health Organization
Process: Data Quality Assessment (DQA)

Ethiopia & Madagascar
Confirmed validity of routinely reported data

Cote d’Ivoire: Strengthened supervision
Malawi: Improved registration forms + reporting system

Many errors in recounting school and community registers
Insufficient tools at aggregation levels for cascaded recording
Performance: Coverage evaluation survey

Is **survey** treatment coverage >75% in school-age children?

Random selection of 30 clusters per IU (PPES)

Random selection ~15 households per cluster

All eligible household members interviewed

https://www.ntdsupport.org/resources/coverage-survey-builder-coverage-evaluations
Performance: Coverage evaluation survey

Is survey treatment coverage >75% in school-age children?

- Malawi 2012: 87%
- Malawi 2014: 77%
- Uganda 2014: 85%
- Zanzibar 2015: 81%
- Mozambique 2015: 88%

<40% of non-attending SAC ingesting praziquantel

<50% non-attending SAC not hearing about treatment
M&E Framework for SCH Programs

+ Interventions

Mapping

Process

VfM

Performance

Impact

SCI Foundation
Impact: cross-sectional sentinel surveys in SAC

Has control of morbidity been achieved?

- Indicators are assessed routinely in the same randomly selected sentinel schools
- Cross-sectional assessment of school-aged children for these indicators:
  - prevalence of infection
  - intensity of infection
  - prevalence of heavy intensity of infection
  - macro and micro haematuria
Impact

Diagnostic tools

Kato Katz

Urine filtration
- Tweezers
- Filter paper
- Filter holder (3 parts)
- Syringe

Urine dipstick

Circulating Cathodic Antigen

IMPROVING HEALTH
UNLOCKING POTENTIAL

SCI Foundation
Parasitological (impact) surveys

Prevalence of infection

Fig 1. Overall prevalence of *S. mansoni* and *S. haematobium*, multi-country*
Each coloured line represents a country

Fig 2. *S. haematobium* prevalence, Malawi
Each coloured line represents a sentinel school
Black line indicates mean prevalence

*Deol *et. al.*, Achieving global 2020 and 2025 goals for schistosomiasis: rapidly reaching the thresholds for control and elimination as a public health problem. *Under review*
Impact: cross-sectional sentinel surveys in SAC

Has control of morbidity been achieved?

Malawi

Reduced prevalence of heavy and light intensity successfully in SAC

Heterogeneity in school level prevalence of heavy intensity
M&E Framework for SCH Programs

- Mapping
- Process
- Performance
- Interventions
- VfM
- Impact
Cost: cost per treatment in FY15/16*

Only countries delivering > 100,000 treatments between April 2015 and March 2016 shown. Cost based on monies transferred to country during the same time period.
Cost: Tools

Are we achieving a ‘best buy’ = low/high cost AND good quality?

Cashbook: Completed in-country and audited by Finance

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Activity Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications</td>
<td>Country Management</td>
</tr>
<tr>
<td>Fuel</td>
<td>Mapping</td>
</tr>
<tr>
<td>Bank fees</td>
<td>Monitoring &amp; Evaluation</td>
</tr>
<tr>
<td>Per diem - driver</td>
<td>Drug Distribution Training</td>
</tr>
<tr>
<td>Per diem - teacher</td>
<td>Drug Distribution</td>
</tr>
<tr>
<td>Per diem - officer</td>
<td>Drug Distribution Supervision</td>
</tr>
<tr>
<td>Per diem - top up to salary</td>
<td>Drug Distribution Registration</td>
</tr>
<tr>
<td>Salaries - officer</td>
<td>Drug Logistics</td>
</tr>
<tr>
<td>Salaries - technician</td>
<td>Strategic Planning</td>
</tr>
<tr>
<td>Salaries - driver</td>
<td>Social Mobilization</td>
</tr>
<tr>
<td>Stationary</td>
<td>Advocacy</td>
</tr>
<tr>
<td>Training Materials</td>
<td>Global management</td>
</tr>
<tr>
<td>ICT</td>
<td></td>
</tr>
<tr>
<td>Laboratory Supplies</td>
<td></td>
</tr>
<tr>
<td>Drug Distribution Materials</td>
<td></td>
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<tr>
<td>IEC Materials</td>
<td></td>
</tr>
<tr>
<td>Publicity</td>
<td></td>
</tr>
<tr>
<td>Accommodation and meals</td>
<td></td>
</tr>
<tr>
<td>Travel</td>
<td></td>
</tr>
<tr>
<td>Drug transportation</td>
<td></td>
</tr>
<tr>
<td>Customs clearing and handling</td>
<td></td>
</tr>
<tr>
<td>Vehicle hire</td>
<td></td>
</tr>
<tr>
<td>Vehicle insurances and taxes</td>
<td></td>
</tr>
<tr>
<td>Vehicle maintenance and repairs</td>
<td></td>
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</tbody>
</table>
Value for Money
Are we achieving a ‘best buy’ = low cost AND good quality?

Value for Money: Cote d’Ivoire
FY7: July 2016 – March 2017

Summary

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain</td>
<td>All (Pf, UPME, Unrestricted)</td>
</tr>
<tr>
<td>Local currency</td>
<td>West African CFA (CFA)</td>
</tr>
<tr>
<td>Conversion rate</td>
<td>664.17</td>
</tr>
<tr>
<td>Financial year</td>
<td>FY7: Q2-4 of FY7 (July 2016 – March 2017)</td>
</tr>
<tr>
<td>Treatments delivered</td>
<td>October 2016</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Treatments</strong></td>
</tr>
<tr>
<td>Targeted population</td>
</tr>
<tr>
<td>Treatments delivered</td>
</tr>
<tr>
<td>Treatment coverage</td>
</tr>
<tr>
<td><strong>Reported expenditure + purchases</strong></td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Cost per treatment</td>
</tr>
</tbody>
</table>

Cost per treatment by district

Spending by inputs and activities
Knowledge Management

Translating evidence into practice
Knowledge Management

Translating evidence into practice
Knowledge Management
Translating evidence into practice

Rapport de recommandations suite à l’enquête de couverture à Madagascar 2016

1. Recommandations programmatiques
Ce rapport porte sur une enquête de couverture menée dans cinq districts de Madagascar en 2016, suite à la première campagne de chimiothérapie préventive de masse contre la schistosomiasis (SCH) et des helminthes transmis par le sol (HTS). Comme convenu avec le programme national, les mesures programmatiques sont les suivantes :

Tableau 1 : Observations et mesures correctives pour maintenir et étendre la couverture à Madagascar.

<table>
<thead>
<tr>
<th>Observations</th>
<th>À Rechercher</th>
<th>Mesures correctives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Le taux de couverture rapporté dans deux districts était nettement inférieur à celui validé par l’enquête</td>
<td>Les chiffres concernant la population totale et la population éligible (c.-à-d. le dénominateur) sont incorrects ou obsolètes</td>
<td>Mettre à jour et corriger les données concernant la population si des données plus récentes existent</td>
</tr>
<tr>
<td>Tous les rapports des sous-districts n’ont pas été renvoyés à temps pour être inclus dans le rapport final</td>
<td>Renforcer le processus d’enregistrement et les exemples pratiques d’enregistrement du nombre de personnes traitées pendant la formation. Insister sur l’importance du renvoi des rapports au niveau central dans les délais</td>
<td></td>
</tr>
<tr>
<td>Les registres de traitement sont incomplets et/où les données ajoutées sont erronées</td>
<td>Envisager de mener une évaluation de la qualité des données pour diagnostiquer les problèmes du système de rapportage</td>
<td></td>
</tr>
<tr>
<td>Le taux de couverture rapporté et validé par l’enquête était élevé dans trois districts</td>
<td>Un bon système de rapportage est mis en place.</td>
<td>Maintenir la dynamique du programme pour l’année à venir afin de conserver les niveaux de couverture.</td>
</tr>
</tbody>
</table>
M&E Framework for SCH Programs

+ interventions

Mapping

Process

Performance

VfM

Impact
“Complimentary Interventions”

- Behaviour Change
- Communications
- What WASH?
- Snail Control
M&E Framework for SCH Programs

- Mapping
- Process
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- Impact
- VfM
- + interventions
Summary points

• Monitoring and evaluation is critical to ensure programmes are reaching their goals and to adapt and improve i.e. knowledge management

• Adequate tools are available for measuring process, performance and impact measurements

• We need to strengthen our understanding of why uptake of treatment varies
  o Further identification of supply and demand-side barriers
Summary points

• For moving from control phases to interruption of transmission we need to build operational research on to existing M&E to:
  o Determine what the most effective and cost-effective ‘complementary interventions’ are
  o Identify the optimum combinations of PC and other interventions to break transmission
  o Understand factors for focal heterogeneity and how to address areas of persistent moderate and high infection of SCH
Acknowledgements

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- All our partners in sub-Saharan Africa
- Our funding and research partners
- The SCI Team!
Acknowledgements
Thank you for listening!