A novel entomological capacity building program in the SADC elimination eight countries: meeting programmatic needs and early lessons from a review of the program

RBM Vector Control Working Group
15th Annual Meeting, February 3 – 5th 2020

Chadwick H. Sikaala
Presentation outline

- Background and Approach
  - In-residence weeks
  - Overview of research projects
  - Summary of Evaluation of the fellowship
  - Key lessons learnt
Background

- Eight countries with common borders collaborate in their efforts to eliminate malaria

- Strengthening Entomological Capacity of the NMCPs

- Bridging the divide between entomological operational research and programmatic decision making to achieve optimal implementation of vector control.
Approach

- Relevance and availability for the selected period
- Endorsement by the NMCPs
- Selected institutions
- Addressing NMCPs needs/Mentorship
  - Results dissemination (Regional & International Conferences)
- Relevancy, effectiveness, efficiency, impact and sustainability.
## General Overview: Learning Framework Timelines

<table>
<thead>
<tr>
<th>Call for Applications &amp; Selection</th>
<th>Residential Weeks</th>
<th>Capstone/Research projects</th>
<th>Evaluation of Fellowship &amp; Project results dissemination</th>
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</thead>
<tbody>
<tr>
<td><strong>2018</strong> Call for Applications and selection</td>
<td><strong>2019</strong> Call for Applications and selection</td>
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<td>Wits University/NICD</td>
<td>Ifakara Health Institute</td>
<td>Liverpool School of Tropical Medicine</td>
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<td>Concept notes drafting &amp; Mentors engaged</td>
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<td><strong>2019</strong> Evaluation commenced</td>
<td>Evaluation commenced</td>
<td>Presentation of top projects at scientific conferences</td>
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<td></td>
<td><strong>2019</strong> Project report submission deadline</td>
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<td>Concept developed of E8 professional network for entomology</td>
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Entomological Surveillance Fellowship: Residential Weeks

**Week One: Wits University**
- Basic Insectary Management skills, including mosquito rearing
- Morphological identification of vectors
- WHO susceptibility testing and interpretation of the results

**Week Two: Ifakara Health Institute**
- Prioritizing entomological surveillance indicators
- Principles of malaria vector surveillance & applications
- Innovative tools, analysis and interpretation of georeferenced data
- Monitoring coverage and performance of VC interventions

**Week Three: Liverpool School of Tropical Medicine**
- Tailored insecticide resistance course (incl. IVM)
- Applying vector control field data to influence policy – decision making
- Geographical Information for Vector Surveillance (GIVeS) training
- Networking opportunities at LSTM Vector Biology Seminar and with PIIVeC Fellows
Research projects field work

Efficacy of clay pots and plastic buckets for sampling mosquitos in Moambo District, Mozambique. *Dulcisaria Marrenjo*

Insecticide susceptibility of malaria vectors in Cuvelai Municipality, Angola. *André José Domingos*

Evaluation of IRS in Zambezi Region, Namibia. *Michael Lifasi*

Feasibility of decentralized entomological surveillance system in Okavango, Botswana. *Mooketsi Segaetsho*
Overview of Research Projects

- Projects mainly entailed vector Profiling, Evaluation of IRS, IR monitoring and community-based entomological surveillance platforms
- Data collected across the 8 countries
- 6 months of project completion

Projects highlight:
- Importance of sustaining entomological surveillance for policy decision-making
- Operational Research Strengthening at national and regional levels
- Innovative alternatives strategies to centralized surveillance systems

Map of morphologically identified vectors across the common borders
Regional Meetings and Conferences

- Annual E8 VC TWG meeting
- SAMRC
- PAMCA
- ASTMH

“I am especially grateful to my mentor and the E8 because I can now stand up on my own and do entomological surveillance work as a VC technician.”

- Silindile Shabangu, South Africa

Poster presentation by Zulisile Zulu from Eswatini during the 5th Annual South Africa Medical Research Council (SAMRC) South Africa.
Evaluation results suggested that:
- The program was relevant to the E8 region
- The program was effective enough to meet its objective.
- Each capstone project costed $6,500. This was perceived to be an efficient way of resource utilization.
- NMCPs were satisfied, the program will add value - impact - to the implementation of interventions.
- Sustainability of the program was likely to succeed with stronger partnerships engagement.

<table>
<thead>
<tr>
<th>Evaluation criteria</th>
<th>Description</th>
<th>Score</th>
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<tbody>
<tr>
<td>Relevance</td>
<td>Highly satisfactory</td>
<td>100%</td>
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<tr>
<td>Effectiveness</td>
<td>Satisfactory to highly Satisfactory</td>
<td>75%</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Satisfactory to highly Satisfactory</td>
<td>75%</td>
</tr>
<tr>
<td>Impact</td>
<td>Satisfactory</td>
<td>50%</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Likely to highly likely</td>
<td>75%</td>
</tr>
<tr>
<td>Overall</td>
<td>Satisfactory to highly satisfactory</td>
<td>75%</td>
</tr>
</tbody>
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- Glossary of Evaluation and Results Based Management (RBM) Terms, OECD (2000).
Key Lessons learnt

• The NMCPs perceptions of the role of entomological surveillance for malaria elimination was elevated: beneficial and impactful

• Support Career progression

• Data collection, handling and analyzing improvement

• Mentorship and networking are long-term outcomes of the program

• Time limitation - suggested a stepped learning beyond in-residence training for expanded learning outcomes

• High value achieved with limited resources

Key Recommendation: Future design to incorporate review results
Thank you!