Cross border surveillance in southern Angola

An analysis of the activities implemented and results achieved after three years (2017-2020)

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Background – Southern Angola epidemiological profile

- Angola as a second line country in SADC efforts for malaria elimination but contributing for hindering progress in neighbouring countries (Namibia in particular)
- The entire Angolan population is at risk for malaria but there is a significant heterogeneity in transmission;
- Some Southern districts with very low transmission but some registering high prevalences
Malaria elimination in Namibia is highly dependent on control efforts done in bordering districts of Angola.

Malaria risk is higher in districts bordering Angolan districts with higher prevalence.

The four northeastern regions bordering Angola reported >90% of Namibia’s imported cases from 2017-2019, which generate new chains of local transmission.

**Background – Southern Angola epidemiological profile**

- Malaria elimination in Namibia is highly dependent on control efforts done in bordering districts of Angola.
- Malaria risk is higher in districts bordering Angolan districts with higher prevalence.
- The four northeastern regions bordering Angola reported >90% of Namibia's imported cases from 2017-2019, which generate new chains of local transmission.

**PROPORTION OF IMPORTED CASES REPORTED IN HEALTH FACILITIES IN NAMIBIA AND TARGETED AREAS FOR IRS^2 (JANUARY – MAY 2017)**

**E8 Targeting sources of Infection Project** – Coordinated multi pronged approach to reduce malaria sources of infection in Angola.

- **Image Courtesy:** Namibia NVDCP/CHAI’
- **Source:** Eliminatin 8 strategy: Acceleration Plan 2018-2020
## Interventions Implemented (2017-2020)

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<th>2017</th>
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- ADECOS program has been implemented by World Vision Angola for 16 months
- Selected and trained 210 ADECOS: initial training provided; follow up supportive supervisions and supply chain was guaranteed
- Total of 37,458 malaria cases diagnosed by these ADECOS
- 188,706 tests conducted.
- ADECOS became a major source of health care seeking by populations (CISA, 2018; MENTOR, 2020)
- Program was discontinued in 2019
Cross-border malaria testing posts (2017-2019)

- Implemented by a Consortium led by ADPP
- Eight fixed malaria testing posts established in border areas of Cuando Cubango and Cunene in Angola
- Mobile posts and surveillance teams used to reach remote villages and populations
- Test Positivity rate sharply decreased across all posts

Source: TKMI project database

Image credits: ADPP Angola
Insecticide-treated nets distribution

- Mass distribution conducted in 2018
- 529 444 LLIN distributed in Cunene in October/November 2017
  - 97% calculated coverage
- 286 543 LLIN distributed in Cuando Cubango in August-October 2018
  - 98% calculated coverage

- 63% of households in Cunene had at least one LLIN one year after the distribution (CISA, 2018)
  - 71% replied children slept under LLIN previous night
  - 29% of adults slept under LLIN previous night → not enough LLIN

- Prior to distribution, only 9.2% of household possessed a LLIN in Cuando Cubango (CISA, 2018)
  - 12% replied children slept under LLIN previous night
Indoor residual spraying

Cunene and Cuando Cubango Province

APRIL 2018 - FEBRUARY 2019

- 90% Total coverage
- 18,898 Structures sprayed
- 111,464 People protected

- 24% Under 5
- 3% Pregnant women

Cuando Cubango Province

JANUARY 2020 - MARCH 2020

- 98% Total coverage
- 13,048 Structures sprayed
- 57,157 People protected

- 24% Under 5
- 5% Pregnant women

OVERALL From 2018 to 2020

- 168,621 People protected
- 31,946 Structures sprayed

- 93% Total Coverage

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### Entomologic surveillance

- **8 sites sampled along the border:**
  - 4 for entomological profiling
  - 4 for resistance monitoring

- **Major species collected:**
  - 65.4% (n=187) *An. gambiae* s.l.
  - 30.4% (n=87) *An. coustani*
  - 4.2% (n=12) *An. funestus* s.l.,

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#### IR Test Results in Cuando Cubango

<table>
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<tr>
<th>Insecticide</th>
<th>SET A Mortality 24H</th>
<th>SET B Mortality 24H</th>
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<tr>
<td>Primphos-methyl</td>
<td>93%</td>
<td>100%</td>
</tr>
<tr>
<td>Deltamethrin 0.05%</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td>Malathion 0.5%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Bendiocarb 0.1%</td>
<td>89%</td>
<td>100%</td>
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![Entomological surveillance site locations, Southern Angola, 2018 (The blue sites represent sites targeted for entomological profiling (biting behaviour, resting behaviour) and the green for resistance monitoring)](image-url)
Prevalence study

• Feb to jun 2018 led by CISA

• Cross sectional study in 16 municipalities of Cunene, Namibe and Cuando Cubango provinces: prevalence (RDT and PCR) and KAP survey questions included

Source: CISA (2018) Malaria Prevalence Survey in southern Angola
Surveillance Assessment

From September to November 2018 led by E8 with CHAI support

In 13 municipalities of Cuando Cubango, Cunene and Namibe;

- The main challenges identified for data collection is register stockouts (60-70%), followed by high workload (50-60%);
- 13% of DHMTs and 86% of HFs report not using data to inform decisions
- Meetings to review data are inconsistent or often cancelled (40%);
- Data from the passive surveillance system was found not to be readily accessible by the provincial managers and NMCP;
- 30-35% of HF reports had errors in calculations
- Districts received monthly reports from HFs only 60-65% of the time
- The reporting forms are not always available at health facilities;
- Data quality audits are not carried out systematically and feedback from the highest levels to the lowest to address data gaps was found not to be effective;

Data collection
- Register stockouts (60-70%)
- High workload (50-60%)
- 30-35% of HF reports had errors in calculations

Data reporting
- Reporting form stock outs
- Districts received monthly reports from HFs only 60-65% of the time

Data use
- Meetings to review data are inconsistent or often cancelled (40%)
- 13% of DHMTs and 86% of HF reports not using data to inform decisions
- DQA not carried out systematically and little feedback received at lower levels
Surveillance project

- Focused in the border districts of Cuando Cubango
- Jan 2020 – Sept 2021
- Ensure all malaria related data is reported on time and with quality
- Ensure data is used for decision making
- Baseline assessment
  - Monthly follow up at district and HF level
  - Monthly DQA
  - Monthly epidemiological analysis
  - Quarterly data discussions and operational planning
- Monitor DQ indicators on a routine basis
Results in 4 districts of Cuando Cubango

Malaria cases reported in Calai, Cuangar, Dirico and Rivungo (2017-2019)
Results in 4 districts of Cuando Cubango

Malaria cases reported at RMS in Calai, Cuangar, Dirico and Rivungo (2017-2020)

Malaria cases reported at RMS

Reports coverage
Results in 4 districts of Cuando Cubango and its neighbouring districts in Namibia...

- Namibia’s 1st Global Fund grant
- ACTs become first-line treatment
- LLIN coverage expanded

RDT's introduced

Trans-Kunene Malaria initiative begins

Case classification starts

Cases by Classification Type by Year
Key Conclusions and takeaway messages

• Cross border surveillance and collaboration is essential in contexts of very low/very high incidence neighbouring countries
• Angola proved to be engaged in contributing for Regional malaria elimination efforts
• Coordinated approached with partners support led to high quality intervention implementation
• Results seem to show a decrease in number of cases (even when quality of data and coverage of reporting increased
• Need to keep these efforts and implementation (and scale up) to not loose gains and to support neighbouring countries efforts

- Detailed Operational Plan for 3 years elaborated