“HEALTHY MIGRANTS IN MALARIA-FREE COMMUNITIES - EQUITABLE ACCESS TO PREVENTION, CARE AND TREATMENT IN POST 2015”
MALARIA AND MIGRANTS AND MOBILE POPULATIONS IN SOUTH AFRICA

IOM Informal Dialogue, Geneva
22 May 2015
Lebogang Lebese
Outline of presentation

1. Malaria Profile and Trends in South Africa
2. Regional Malaria initiatives and Profiles
3. Cross Border Malaria Challenges
4. Migrant populations in South Africa implications for malaria transmission
5. Proposed Solutions to Cross Border malaria control
Malaria Trends in South Africa
1. On average 2,087,915 travellers cross the South African border every month, 67% are foreigners.

2. Of those travelling 70% are by road and ~ 27% by air.

3. 12 of 15 SADC member states are endemic for malaria.

4. 93% of SADC residence into and out of South Africa travel by road.

5. From January to December 2011: 6324 malaria Cases were imported into South Africa ~ 64% of the Total Cases for that Year.

6. 85% of the Cases arose from Mozambique.

7. Local Malaria Transmission does occur in South Africa, with 3 provinces: Limpopo; Mpumalanga and KZN being endemic. Secondary transmission is likely in the Vector Receptive areas.

8. Prevention of the reintroduction of Malaria into South Africa is key for malaria elimination in the Country.
<table>
<thead>
<tr>
<th>Country of citizenship</th>
<th>Average % of all travellers</th>
<th>African region of citizenship</th>
<th>Average % of African travellers</th>
<th>Country of citizenship within SADC</th>
<th>Average % of SADC tourists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>58.8%</td>
<td>SADC</td>
<td>96.8%</td>
<td>Zimbabwe</td>
<td>26.4%</td>
</tr>
<tr>
<td>North America</td>
<td>16.2%</td>
<td>West Africa</td>
<td>1.5%</td>
<td>Lesotho</td>
<td>25.3%</td>
</tr>
<tr>
<td>Asia</td>
<td>13.5%</td>
<td>East and Central Africa</td>
<td>1.3%</td>
<td>Mozambique</td>
<td>18.3%</td>
</tr>
<tr>
<td>Australasia</td>
<td>5.8%</td>
<td>North Africa</td>
<td>0.2%</td>
<td>Swaziland</td>
<td>11.4%</td>
</tr>
<tr>
<td>Central and South America</td>
<td>3.9%</td>
<td></td>
<td></td>
<td>Botswana</td>
<td>8.6%</td>
</tr>
<tr>
<td>Middle East</td>
<td>1.7%</td>
<td></td>
<td></td>
<td>Namibia</td>
<td>3.2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Zambia</td>
<td>2.7%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Malawi</td>
<td>2.4%</td>
</tr>
</tbody>
</table>
### Percentage of Refugees and Asylum-Seekers for 2011, UNHCH Planning Figures

<table>
<thead>
<tr>
<th>Type of population</th>
<th>Origin</th>
<th>Total in South Africa (as of Dec 2011)</th>
<th>Arrived in South Africa in 2011</th>
<th>% of arrivals in 2011 by country of origin</th>
<th>Malaria incidence rate (total 2010 cases per 1,000 population at risk)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Refugees</strong></td>
<td>Somalia</td>
<td>22,700</td>
<td>1,400</td>
<td>6%</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>DRC</td>
<td>12,000</td>
<td>800</td>
<td>3%</td>
<td>113</td>
</tr>
<tr>
<td></td>
<td>Ethiopia</td>
<td>6,500</td>
<td>1,500</td>
<td>6%</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>16,90</td>
<td>1,300</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td><strong>Asylum-seekers</strong></td>
<td>Zimbabwe</td>
<td>266,500</td>
<td>5,000</td>
<td>21%</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>Malawi</td>
<td>40,100</td>
<td>7,000</td>
<td>29%</td>
<td>460</td>
</tr>
<tr>
<td></td>
<td>Ethiopia</td>
<td>27,600</td>
<td>5,000</td>
<td>21%</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>102,500</td>
<td>2,000</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>494,800</td>
<td>24,000</td>
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</table>
### Malaria Cases in South Africa's Endemic Provinces 2000-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Limpopo</th>
<th>Mpumalanga</th>
<th>KwaZulu-Natal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>9487</td>
<td>12390</td>
<td>41786</td>
<td>63663</td>
</tr>
<tr>
<td>2001</td>
<td>7197</td>
<td>9061</td>
<td>9473</td>
<td>25731</td>
</tr>
<tr>
<td>2002</td>
<td>4836</td>
<td>7965</td>
<td>2345</td>
<td>15146</td>
</tr>
<tr>
<td>2003</td>
<td>7010</td>
<td>4335</td>
<td>2042</td>
<td>13387</td>
</tr>
<tr>
<td>2004</td>
<td>4899</td>
<td>4064</td>
<td>4417</td>
<td>13380</td>
</tr>
<tr>
<td>2005</td>
<td>3458</td>
<td>3077</td>
<td>1220</td>
<td>7755</td>
</tr>
<tr>
<td>2006</td>
<td>6369</td>
<td>4558</td>
<td>1236</td>
<td>12163</td>
</tr>
<tr>
<td>2007</td>
<td>2742</td>
<td>2052</td>
<td>557</td>
<td>6629</td>
</tr>
<tr>
<td>2008</td>
<td>4392</td>
<td>1655</td>
<td>582</td>
<td>6297</td>
</tr>
<tr>
<td>2009</td>
<td>3155</td>
<td>1914</td>
<td>428</td>
<td>5497</td>
</tr>
<tr>
<td>2010</td>
<td>4174</td>
<td>2187</td>
<td>380</td>
<td>6741</td>
</tr>
<tr>
<td>2011</td>
<td>3451</td>
<td>3259</td>
<td>598</td>
<td>5258</td>
</tr>
<tr>
<td>2012</td>
<td>2017</td>
<td>2745</td>
<td>486</td>
<td>5248</td>
</tr>
<tr>
<td>2013</td>
<td>2408</td>
<td>3796</td>
<td>575</td>
<td>6779</td>
</tr>
<tr>
<td>2014</td>
<td>5672</td>
<td>5176</td>
<td>687</td>
<td>11282</td>
</tr>
</tbody>
</table>

**Legend:**
- **Limpopo**
- **Mpumalanga**
- **KwaZulu-Natal**
- **Total**
Malaria Deaths in Endemic Provinces 2000-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>LP</th>
<th>MP</th>
<th>KZN</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>68</td>
<td>45</td>
<td>340</td>
<td>453</td>
</tr>
<tr>
<td>2001</td>
<td>61</td>
<td>6</td>
<td>47</td>
<td>114</td>
</tr>
<tr>
<td>2002</td>
<td>44</td>
<td>29</td>
<td>16</td>
<td>89</td>
</tr>
<tr>
<td>2003</td>
<td>106</td>
<td>32</td>
<td>3</td>
<td>141</td>
</tr>
<tr>
<td>2004</td>
<td>50</td>
<td>17</td>
<td>22</td>
<td>89</td>
</tr>
<tr>
<td>2005</td>
<td>31</td>
<td>16</td>
<td>17</td>
<td>64</td>
</tr>
<tr>
<td>2006</td>
<td>57</td>
<td>21</td>
<td>11</td>
<td>89</td>
</tr>
<tr>
<td>2007</td>
<td>29</td>
<td>17</td>
<td>5</td>
<td>51</td>
</tr>
<tr>
<td>2008</td>
<td>31</td>
<td>8</td>
<td>3</td>
<td>42</td>
</tr>
<tr>
<td>2009</td>
<td>34</td>
<td>11</td>
<td>4</td>
<td>49</td>
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<tr>
<td>2010</td>
<td>35</td>
<td>26</td>
<td>5</td>
<td>66</td>
</tr>
<tr>
<td>2011</td>
<td>31</td>
<td>16</td>
<td>6</td>
<td>53</td>
</tr>
<tr>
<td>2012</td>
<td>23</td>
<td>15</td>
<td>4</td>
<td>42</td>
</tr>
<tr>
<td>2013</td>
<td>25</td>
<td>13</td>
<td>4</td>
<td>71</td>
</tr>
<tr>
<td>2014</td>
<td>92</td>
<td>41</td>
<td>8</td>
<td>141</td>
</tr>
</tbody>
</table>
Total Malaria cases in 2014/15 season in South Africa

<table>
<thead>
<tr>
<th>Month</th>
<th>Cases</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul-14</td>
<td>374</td>
<td>4</td>
</tr>
<tr>
<td>Aug-14</td>
<td>332</td>
<td>2</td>
</tr>
<tr>
<td>Sep-14</td>
<td>833</td>
<td>16</td>
</tr>
<tr>
<td>Oct-14</td>
<td>1386</td>
<td>20</td>
</tr>
<tr>
<td>Nov-14</td>
<td>592</td>
<td>12</td>
</tr>
<tr>
<td>Dec-14</td>
<td>504</td>
<td>6</td>
</tr>
<tr>
<td>Jan-15</td>
<td>2438</td>
<td>21</td>
</tr>
<tr>
<td>Feb-15</td>
<td>2675</td>
<td>39</td>
</tr>
<tr>
<td>Mar-15</td>
<td>2163</td>
<td>38</td>
</tr>
<tr>
<td>Apr-15</td>
<td>884</td>
<td>4</td>
</tr>
</tbody>
</table>
Challenges

• Malaria Cases in South Africa increasing due to several factors:
  – Increased movement of persons with parasites from neighbouring endemic countries.
  – LSDI non function since 2012- lack of financial resources- Global Funding ended
  – Above average rainfall for the past 2 years
  – Financing for malaria decreasing
  – Human Resource capacity decreasing
Priorities

• Sustain gains on LSDI, through resource mobilisation;

• Strengthen collaboration through regional initiatives such as the E8.

• Improve surveillance of malaria in South Africa and the region, so that foci of transmission are identified and removed.
Cross Border Project- LSDI (Lubombo Spatial Development)
Broad objective of the LSDI

- The Lubombo Spatial Development Initiative (LSDI) was aimed at accelerating development, particularly with regard to tourism within an area of approximately 100,000 square kilometres.

- The region was largely undeveloped, this being exacerbated by the fact that it falls within a malaria area.

- A regional approach was required in order to reduce the negative impacts of the disease on the communities, business and tourism development opportunities.
LSDI Malaria Objectives

1. To reduce malaria incidence in the border areas of South Africa and Swaziland from 250 per 1000 to less than 20 per 1000. Done

2. To reduce malaria infections from 625 per 1000 to less than 200 per 1000 within three year after the start of IRS in Maputo Province Done, Zone 1

3. To provide updated tourist information booklets containing definitive malaria risk maps and prophylaxis guideline Done

4. To develop a regional malaria control programme Done

5. To develop a regional GIS based malaria information system Done

6. To implement effective treatment and definitive diagnosis SA and Zone 1 Done
Malaria Reductions in Mozambique

Malaria Prevalence in Mozambique (2-<15 years)

Prevalence %

Zone 1
MOZAL
Zone 2
Zone 3
Boane

Malaria Prevalence in Mozambique (2-<15 years)

Prevalence %

1999 2000 2001 2002 2003 2004 2005
Since the reintroduction of DDT for vector control in 2000, the start of vector control in southern Mozambique and the introduction of ACT as first line treatment there has been a >90% reduction in malaria incidence in comparison to the 1999/2000 malaria season. 

a significant reduction in notified cases since the start of vector control in adjacent areas in Mozambique and the introduction of ACT.
Malaria Reductions in Mozambique

Malaria Prevalence in children (2 to <15 years) in Maputo Province, Mozambique (1999-2008)
Changes in Percentage Prevalence of *Plasmodium falciparum* Infection in Children Aged 2 to < 15

Maputo and Gaza Provinces, Mozambique — Lubombo Spatial Development Initiative (LSDI)

**Baseline Years**
- 1999 - Zones 1, 2A
- 2000 - Zone 1A
- 2002 - Zone 2
- 2003 - Zone 3
- 2006 - Zones 4, 5, 6
- 2008 - Zone 7

**Percentage Prevalence by Malaria Control Zone**
- < 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 60
- 61 - 70
- 71 - 80
- 81 - 90
- >= 91

**Map**
- Province
- Zambian
- Mozambique
- South Africa
- Indian Ocean

**Legend**
- Baseline
- 2009

**Date**
- 06 October 2010

**Data source**
- Estatistica Geographica, Gaza Province Malaria Control Programme, Maputo Province Malaria Control Programme

**Map produced by the**
- Health GIS Centre
- Malaria Research Programme
- Medical Research Council
- South Africa

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- www.mrc.ac.za
Elimination 8
“Eliminating malaria needs change in mindset, change in game plan and renewed energy.

There is no time better than now to rid Africa of malaria...”
Overview of Malaria Elimination - E8 Countries

API rates (incidence/1,000 at-risk population)

- No cases
- 1 or less
- >1-5
- >5-25
- >25-50
- >50-100
- >100-200
- >200-600

API: Annual Parasite Incidence, used to measure the number of cases recorded in a given year relative to population
Note: Includes all cases, both confirmed and clinically diagnosed, both imported and local
Source: WHO World Malaria Report 2010; South African Department of Health; Swaziland Ministry of Health, Statistics South Africa

Second line: Angola; Mozambique; Zambia and Zimbabwe
Front Line: Botswana; Namibia; South Africa and Swaziland

Front Line: Botswana; Namibia; South Africa and Swaziland
Elimination 4 Countries
Botswana; Namibia; South Africa and Swaziland

API rates (incidence/1,000 at-risk population)
- No cases
- 1 or less
- >1-5
- >5-25
- >25-50
- >50-100

Note: Includes all cases, both confirmed and clinically diagnosed, both imported and local
Source: Ministry of Health Namibia; South African Department of Health; Swaziland Ministry of Health; Statistics South Africa
Regional mandates for elimination
Committing South Africa and its neighbours to elimination

African Union 2007 Launch of Africa Malaria Elimination

“The approach in these countries should be the implementation of anti-malaria programmes deliberately aimed at elimination.”

Windhoek Elimination 8 Declaration by the SADC Health Ministers

“We, the SADC Ministers of Health of the E8 countries, affirm that the following are our major priorities to achieve malaria elimination:

1. Strengthening of existing cross-border collaboration
2. Building of health system capacity to effectively implement, sustain, monitor, and evaluate malaria elimination programmes”
Access

- The National Malaria Elimination Strategy (Developed in 2011) is targeting malaria elimination by 2018, has included activities for reaching migrants and vulnerable populations.

- All persons entering South Africa can access the public health services, where malaria testing and treatment is offered.

Challenges

- Language is often a problem among Migrants
- Migrants present late to health facilities
- Lack of trust towards health care providers
- Health Care facilities not necessary close to the point of entry into South Africa
• IV Artesunate registration is an issue - no company wants to register.
• Cross Border movement of persons with malaria - Mozambique
• No company wants to register Primaquine
• Too many regional players in Southern Africa
• HR Capacity
• Funding
Proposed Solutions

• Need for Government to better coordinate and direct interventions by Partners
• Scaling up IEC to ensure regional languages are included to accommodating all migrants
• Working closely with organisations such as E8 WHO, IOM, SADC and SARN
• Strengthening cross border collaboration with neighbouring countries and ensuring, Surveillance, IEC and Case Management is a strong component
There is significant heterogeneity in transmission within the E8 sub-region; importation of infections across borders is a significant threat to elimination.
The countries of the E8 – the four front line countries, and their northern neighbours, the second line countries – are highly interconnected through:

(i) Population movement
(ii) Related malaria ecology

As a result, there is a need for a coordinated approach to achieving elimination in southern Africa.
Southern Africa is adopting a spatially progressive model of elimination, moving the boundary of malaria transmission from south to north.

…setting the stage for the disease to pushed up the continent

With the help of cross-border initiatives, malaria will be rolled back from the southernmost countries.
What is needed to achieve elimination in this region, and how does E8 fill those gaps?

1. Policy prioritization
2. Reduce importation
3. Regional transmission picture
4. Entomological expertise
5. Quality assured diagnosis
6. Community engagement

1. Engagement with Ministers of Health and Finance, and Heads of State
2. Early diagnosis and treatment among MMPs
3. Regional surveillance system and database
4. Regional expert entomologist
5. Regional laboratory
6. Use of community health workers
Success Factors and Challenges

**Success Factors:**
- Political commitment at the highest levels, including Heads of State
- The right balance between integration and parallel systems
- Maintenance of accountability
- Alignment with rich partner landscape, to ensure we are pulling in one direction – investments into elimination by other partners

**Challenges:**
- Political commitment has not translated to domestic resource allocation
- Need for a compelling investment case into regional activities, especially for domestic policymakers
- Meticulous operational precision requires very strong health systems, especially for surveillance and community health service provision
- Insecticide resistance
Thank you for your Attention

Merci boucoup