eIDSR

electronic Integrated Disease Surveillance and Response

A case study in Sierra Leone

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Based in Africa, our mission is to build stronger health systems through the design & implementation of data-driven solutions that respond to local needs and provide underserved communities with tools to lead healthier lives.

https://www.ehealthafrica.org
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Sierra Leone

- Population 7m, 14 districts
- Around 1300 health facilities
- At health facilities
  - ~60% Internet
  - ~95+% Cellular
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**IDSR**
Integrated Disease Surveillance and Response

- A weekly report, counts of 26 diseases, developed by WHO /w MoHS SL
- IDSR pre 2016
  - Facility reports via Call, paper
  - District & National use Excel
- Firstly implemented as an aggregate report in DHIS2. Data entry in webform at district level.
- **Facility reports directly?**

<table>
<thead>
<tr>
<th>N°</th>
<th>Disease/Condition/Events</th>
<th>&lt; 5 Years old</th>
<th>&gt; 5 Years old</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cases</td>
<td>Deaths</td>
<td>Cases</td>
<td>Deaths</td>
</tr>
<tr>
<td>12</td>
<td>Dracunculiasis (Guinea worm)</td>
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<tr>
<td>13</td>
<td>Dysentery (Bloody diarrhoea)</td>
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<tr>
<td>14</td>
<td>Measles</td>
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<tr>
<td>15</td>
<td>Malnutrition severe</td>
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<tr>
<td>16</td>
<td>Malaria</td>
<td>12</td>
<td>0</td>
<td>15</td>
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<tr>
<td></td>
<td>Total Clinical Malaria Cases</td>
<td>12</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Total Malaria Tested</td>
<td>12</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Total Malaria Positive</td>
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<td>0</td>
<td>7</td>
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<tr>
<td>17</td>
<td>Meningococcal Meningitis</td>
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<td>19</td>
<td>Monkeypox</td>
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</tr>
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<td>Neonatal Tetanus</td>
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<td>Plague</td>
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<td>26</td>
<td>Yellow Fever</td>
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</tr>
</tbody>
</table>
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Target Solution

Health Facility
Health workers enter weekly reports

District (DHMT)
Staff view and approve reports

National
National EOC staff analyses and evaluates data
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DHIS2 SMS format: idsr 0401 Zye0=0|ZyC5=0|Zyjp=0|
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SMS Compression Java Library

SMS Gateway

DHIS2 SMS

Compressed SMS

Compressed SMS

DHIS2 SMS

SMS Gateway

Compressed SMS

DHIS2 SMS

Compressed SMS

DHIS2 SMS

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Results

- eIDSR is now rolled out nationally at Facility level (Africa first!)
- A custom solution isn’t sustainable though...
- What about the new DHIS2 Android App?
- We presented at the DHIS2 Annual Conference in 2017
- Now working on SMS in new app