HOA Outbreak Response assessment

Kenya

8th to 12th June 2015
Subject areas of assessment

• Implementation of recommendation from previous assessment
• Quality of outbreak response
• AFP surveillance sensitivity
  – Risk of undetected transmission
  – Ability to detect any new transmission at earliest
• Population Immunity: Quality of SIAs, RI and assessment of need for additional SIAs
• Communication strategy
• Plans to strengthen / maintain population immunity with special focus on known high risk areas and populations
• Outbreak preparedness and response plan
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• Outbreak preparedness and response plan
Status of implementation of previous outbreak response assessment recommendations

• 10 recommendations:
  – 6 Fully implemented
  – 1 partially done:
    • Permanent vaccination points in high risk areas around border
  – 3 Not done:
    • Domestic resources to ensure sufficient funding
    • Active surveillance visits
    • Improving routine immunization in high risk areas
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## Speed and appropriateness of outbreak response activities as per WHA Resolution, 2006 (WHA59.1)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activation of outbreak response within 72 hrs. of notification</td>
<td>Yes</td>
</tr>
<tr>
<td>At least three large scale OPV SIAs</td>
<td>Yes</td>
</tr>
<tr>
<td>SIA coverage at least 95% as evaluated by PCM data</td>
<td>Not met (90 to 95%)</td>
</tr>
<tr>
<td>Initial response SIA conducted within 4 wks. of notification</td>
<td>Yes</td>
</tr>
<tr>
<td>At least 2 SIAs since date of onset of last WPV</td>
<td>Yes</td>
</tr>
<tr>
<td>Rapid analysis of AFP and lab data conducted</td>
<td>Yes</td>
</tr>
<tr>
<td>Response plan prepared within two weeks of outbreak notification</td>
<td>Yes</td>
</tr>
<tr>
<td>Response plan was followed during outbreak response</td>
<td>Yes</td>
</tr>
<tr>
<td>NP AFP rate &gt;2 during the outbreak and for at least one year after</td>
<td>Yes</td>
</tr>
<tr>
<td>% Adequate stool ≥ 80%</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Impact of the response

Epi-curve (2013)

- Wild
- Compatible
- Not Polio
- Not AFP
- Pending

SNID/mop-up with bOPV
NID with tOPV
SNID with bOPV

Week

AFP Cases

0 5 10 15 20 25 30 35

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
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# Key AFP Surveillance Indicators, Kenya 2009-2015*

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Target</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015*</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPAFP rate per 100,000 &lt;15 years</td>
<td>≥ 2.0</td>
<td>2.33</td>
<td>3.29</td>
<td>4.02</td>
<td>3.41</td>
<td>4.07</td>
<td>2.50**</td>
</tr>
<tr>
<td>Stool adequacy (%)</td>
<td>≥ 80</td>
<td>87</td>
<td>85</td>
<td>93</td>
<td>80</td>
<td>88</td>
<td>89</td>
</tr>
<tr>
<td>Timeliness including zero reporting (Weekly) (%)</td>
<td>≥ 80</td>
<td>92</td>
<td>95</td>
<td>91</td>
<td>74</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>Investigated ≤ 2 days of notification (%)</td>
<td>≥ 80</td>
<td>72</td>
<td>88</td>
<td>94</td>
<td>85.2</td>
<td>85.4</td>
<td>82</td>
</tr>
<tr>
<td>Specimen arriving at lab ≤ 3 days since collection (%)</td>
<td>≥ 80</td>
<td>90</td>
<td>85</td>
<td>92</td>
<td>85.3</td>
<td>87.3</td>
<td>84.6</td>
</tr>
<tr>
<td>Specimen arriving in good condition (%)</td>
<td>≥ 90</td>
<td>100</td>
<td>100</td>
<td>99</td>
<td>99.8</td>
<td>99.3</td>
<td>100</td>
</tr>
<tr>
<td>Non-polio enterovirus isolation rate(%)</td>
<td>≥ 10</td>
<td>9.9</td>
<td>8.6</td>
<td>11.8</td>
<td>13.4</td>
<td>9</td>
<td>6.5</td>
</tr>
<tr>
<td>Lab result at programme within 14 days of receipt (%)</td>
<td>≥ 80</td>
<td>93</td>
<td>90</td>
<td>94</td>
<td>74</td>
<td>87.3</td>
<td>81</td>
</tr>
</tbody>
</table>

*As at Week22

** - Pending Lab Results
Key Surveillance Indicators, 2012-2014

NP-Polio AFP Rate

Stool Adequacy

2012

2013

2014
County Level Surveillance Indicators
NPAFP Rate 2014* & 2015*

*As at Week 22

*No cases reported
per 100,000 persons
<15 years of age

![Bar chart showing AFP case detection by month of onset for 2013, 2014, and 2015.](chart.png)
County Level Surveillance Indicators
% Stool adequacy 2014* & 2015*

*As at Week 22

* 2015*

* 2014*

Legend:
- Green: > 80%
- Yellow: 60 – 80%
- Red: <60 %
- White: No cases Reported
Environmental surveillance

<table>
<thead>
<tr>
<th>Date of sample collection</th>
<th>Epidemiological week</th>
<th>12-Oct-13</th>
<th>28-Nov-13</th>
<th>10-Dec-13</th>
<th>17-Dec-13</th>
<th>16-Jan-14</th>
<th>07-Feb-14</th>
<th>06-Mar-14</th>
<th>01-Apr-14</th>
<th>18-Apr-14</th>
<th>03-May-14</th>
<th>22-May-14</th>
<th>06-Jun-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of sample collection</td>
<td>Epidemiological week</td>
<td>2022</td>
<td>2022</td>
<td>2022</td>
<td>2022</td>
<td>2022</td>
<td>2022</td>
<td>2022</td>
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<td>2022</td>
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</tr>
<tr>
<td>Date of sample collection</td>
<td>Epidemiological week</td>
<td>2023</td>
<td>2023</td>
<td>2023</td>
<td>2023</td>
<td>2023</td>
<td>2023</td>
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<td>2023</td>
<td>2023</td>
<td>2023</td>
</tr>
<tr>
<td>Date of sample collection</td>
<td>Epidemiological week</td>
<td>2024</td>
<td>2024</td>
<td>2024</td>
<td>2024</td>
<td>2024</td>
<td>2024</td>
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<td>2024</td>
<td>2024</td>
<td>2024</td>
</tr>
<tr>
<td>Date of sample collection</td>
<td>Epidemiological week</td>
<td>2025</td>
<td>2025</td>
<td>2025</td>
<td>2025</td>
<td>2025</td>
<td>2025</td>
<td>2025</td>
<td>2025</td>
<td>2025</td>
<td>2025</td>
<td>2025</td>
<td>2025</td>
</tr>
<tr>
<td>Date of sample collection</td>
<td>Epidemiological week</td>
<td>2026</td>
<td>2026</td>
<td>2026</td>
<td>2026</td>
<td>2026</td>
<td>2026</td>
<td>2026</td>
<td>2026</td>
<td>2026</td>
<td>2026</td>
<td>2026</td>
<td>2026</td>
</tr>
</tbody>
</table>

- Kamukunji site 1: S, NE, S, NP, S, NP, S, NP, S, NP, S, NP, S, NP, NP, NEV
- Kamukunji Site 2: S, NP, S, NP, S, NP, S, NP, S, NP, S, NP, S, NP, NP
- Kibera: S, NP, S, NP, S, NP, S, NP, S, NP, S, NP, S, NP, NP
- Madaraka bridge: S, NP, S, NP, S, NP, S, NP, S, NP, S, NP, S, NP, NP
- Mathare: S, NP, S, NP, S, NP, S, NP, S, NP, S, NP, S, NP, NP
- Kisumu Site 1: S, NP, S, NP, S, NEV, S, S, NP, NP, NP, NP
- Mombasa Site 1: S, S, NP, S, NP, NP, S, NP, NP, NP

- Negative for WPV; grew either an Sabin, Non-poliomyelitis enterovirus or a non-enterovirus
- Concentrates awaiting shipment to CDC
- Samples undergoing processing
- Frozen samples awaiting processing
**AFP surveillance sensitivity**

- **Surveillance sensitivity:**
  - Increased following outbreak.
  - However, significant drop in AFP detection in 2015.

- **Reporting network:**
  - Includes govt. as well as private health facilities
  - The reporting network list needs to be updated
  - Prioritization exists-Needs to be more uniform

- **Active surveillance visits:**
  - Suboptimal frequency and quality
  - Key issues: Resources and capacity
  - No system of tracking Active surveillance visits
**AFP surveillance sensitivity**

- Low NPEV isolation rate from 2\textsuperscript{nd} half of 2014 onwards.
- Contact sampling:
  - for inadequate cases
  - Irregular (~25%)
- Good mechanism of tracking weekly ‘zero’ reports with regular feedback to counties.
- CBS being piloted in 3 counties.
- Improved lab performance

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015**</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-day Timeliness of reporting isolation result (80%)</td>
<td>95.3%</td>
<td>67.3%*</td>
<td>95.9%</td>
<td>86.2%</td>
</tr>
<tr>
<td>Timeliness of ITD results within 7 days is at least 90%</td>
<td>90.3%</td>
<td>91%</td>
<td>93.1%</td>
<td>95.8%</td>
</tr>
</tbody>
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### Population immunity

**OPV status of NP AFP, 6-59 Months, 2013-2015**

<table>
<thead>
<tr>
<th>Year</th>
<th>High Risk</th>
<th>Rest of Kenya</th>
<th>Kenya</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-S1</td>
<td>12</td>
<td>94</td>
<td>106</td>
</tr>
<tr>
<td>2013-S2</td>
<td>12</td>
<td>109</td>
<td>121</td>
</tr>
<tr>
<td>2014-S1</td>
<td>15</td>
<td>160</td>
<td>175</td>
</tr>
<tr>
<td>2014-S2</td>
<td>8</td>
<td>117</td>
<td>125</td>
</tr>
<tr>
<td>2015-S1</td>
<td>7</td>
<td>90</td>
<td>97</td>
</tr>
<tr>
<td>2015-S1*</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**High risk:** Garissa, Wajir, Mandera and Turkana

- **Missing**
- **0 doses**
- **1-2 doses**
- **3+ doses**
RI-County Performance 2014

Immunizations

• Quality of SIA campaigns:
  – IM: >90% for most of the campaigns at national level as well as in high risk counties
  – LQAS introduced in Nov 14 in 5 counties

• Strategies for vaccination of nomadic and migrant populations:
  – Teams focusing on nomadic settlements
  – Vaccination teams at water points
  – Transit teams to vaccinate children in movement

• No campaigns since Dec 14:
  – Controversy around vaccines used for SIAs
Immunizations

• Permanent vaccination point at Turkana; no such points in NE counties.

• Vaccine management:
  – Vaccine utilization/wastage is being tracked
  – Need to improve data quality and timeliness
  – Wastage at storage level should also be tracked

• Low routine immunization coverage in some of the high risk counties:
  – Garissa and Mandera <70%
  – cMYP being updated, however, no specific RI improvement plan for high risk counties.
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Communications

• Outbreak Response and Legacy Communication Strategy to December 2015 in place and implemented but no outbreak plan in place for 2016.

• Existing strategy has contributed to reasonably good coverage (missed children above 5%) with refusal and non-compliance less than 10% of all missed children.
Reasons for non-vaccination/missed children during SIAs July 2013-December 2014
Communications (ACSM)

• Major activities within the highest risk Counties focused on:
  – social mobilization for campaign awareness,
  – engagement of community leaders,
  – national and county targeted media and IEC materials,
  – and the piloting of a school based polio/RI communication strategy.

• IM data used for tracking and course correction
Communications

• Religious leaders and other influencers at the local (sub-county level) engaged in response.

• However, recent issues around Immunization campaigns a cause for concern.

• IPC training of vaccinators is of suboptimal level.

• Cascade ACSM training not fully rolled out.

• Social mobilization movement and activity plan tools for SIAs and mobile populations seen.
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Outbreak preparedness and response plan

• Outbreak preparedness and response plan including communication response plan exists.

• However, it needs to be revised to make it comprehensive and specific.

• Country has 4 SIAs (SNIDs) planned for year 2015 (1 bOPV and 3 tOPV).
  – Postponed SIAs

• RI improvement plans?
# Response to the questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have the National authorities and supporting partners played their role as laid down in the WHA resolutions?</td>
<td><strong>Yes.</strong> The response under the leadership of government was commendable.</td>
</tr>
<tr>
<td>Were recommendations of previous outbreak response assessment fully implemented?</td>
<td><strong>Partially.</strong> 60% recommendations fully implemented.</td>
</tr>
<tr>
<td>Did the outbreak response activities meet the outbreak response standards?</td>
<td><strong>Partially.</strong> It was robust response however, 95% coverage as per IM not achieved.</td>
</tr>
</tbody>
</table>
## Response to the questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How likely is it that the country has stopped polio transmission</td>
<td>Yes. The evidence suggests that country has interrupted transmission.</td>
</tr>
<tr>
<td>based on analysis of surveillance, SIA and other programme data?</td>
<td></td>
</tr>
<tr>
<td>Is population immunity sufficient enough to reliably maintain a polio-free status?</td>
<td>No. Population immunity is good as of now. However delay in campaigns and low RI coverage pose a serious risk.</td>
</tr>
<tr>
<td>Is AFP surveillance sensitivity currently adequate to detect all transmission?</td>
<td>No. There has been significant drop in AFP detection in 2015.</td>
</tr>
<tr>
<td><strong>Response to the questions</strong></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Is country well prepared for responding to any new outbreak?</strong></td>
<td><strong>Partially.</strong> The outbreak response plan needs to be strengthened.</td>
</tr>
<tr>
<td><strong>Was the communication response to outbreak adequate?</strong></td>
<td><strong>Yes.</strong> Sustained high level of vaccine acceptability despite repeated campaigns.</td>
</tr>
<tr>
<td><strong>Is there strong outbreak response communication strategy in place?</strong></td>
<td><strong>Partially.</strong> The communication response plan needs to be strengthened and updated.</td>
</tr>
</tbody>
</table>
## Response to the questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the country have additional unmet financial or resource needs?</td>
<td>Yes. Particularly in surveillance (funds and human resources) and RI</td>
</tr>
<tr>
<td>What are the risks to maintaining polio free status?</td>
<td>• Declining surveillance sensitivity.</td>
</tr>
<tr>
<td></td>
<td>• Delay in SIAs in 2015</td>
</tr>
<tr>
<td></td>
<td>• Low RI coverage in high risk areas</td>
</tr>
<tr>
<td></td>
<td>• Population movement</td>
</tr>
<tr>
<td></td>
<td>• Risk of possible continuing circulation in Somalia</td>
</tr>
<tr>
<td></td>
<td>• Managing the effect of devolution.</td>
</tr>
</tbody>
</table>
Conclusions
Conclusions (1)

The assessment team commends the robust outbreak response by the country with strong vaccination, communication strategy and strengthened surveillance.
Conclusions (2)

• The assessment team believes that transmission in Kenya has been interrupted.

• Assessment team is concerned about decreasing sensitivity of surveillance in 2015; country may not be able to quickly detect any new importation/transmission, if it occurs.

• As of now population immunity is high. However, low RI coverage in some of the high risk areas and delay in SIAs pose significant risk.

• Outbreak preparedness and response plan including communication response plan needs to be strengthened and updated for ensuring a robust and rapid response
Recommendations
Recommendations

• Surveillance:
  – Rapidly improve sensitivity of surveillance by improving quality and frequency of active surveillance visits, documenting and updating reporting network, capacity building of staff and providing adequate resources.

• Population immunity:
  – Conduct the SIAs scheduled as quickly as possible.
  – Sustain and strengthen reach to high risk population groups for SIA and RI
  – Deploy Permanent vaccination points in towns, villages near border
  – Rapidly improve RI in high risk counties by developing and implementing county specific RI improvement plans
  – Fully implement communication strategy; IPC training of vaccinators, ACSM training of health workers
Recommendations

• Outbreak response preparedness:
  – Revise and update the outbreak response plan including communication response plan before next HOA TAG meeting.
  – Conduct a simulation exercise by the end of Q1 2016.

• Resources:
  – Ensure adequate resources for surveillance at national and county levels particularly related to active surveillance visits and sensitization of reporting network.
  – Rapidly fill the vacancies in health facilities
  – Develop and implement a plan for systematic capacity building of staff on RI and surveillance.
Thank you