rVSVΔG-ZEBOV-GP Vaccine Acceptability Survey Among the Laboratory Response Network

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Survey Population: 

**LRN Facilities in the U.S. with Ebola Testing Capability**

- The Laboratory Response Network (LRN) quickly responds to biological and chemical threats and other public health emergencies.
- Ebola testing is available at ~62 LRN labs in the US.
- Estimate 10-15 laboratorians who can do Ebola testing per facility.

Image received from [https://www.cdc.gov/anthrax/lab-testing/isitanthrax.html](https://www.cdc.gov/anthrax/lab-testing/isitanthrax.html)
Prisma Flow Diagram

LRN facilities identified
(n = ~1,133)

Sent survey invitation
(n = 62)

Survey responses received
(n = 96)

Survey responses excluded due to incompleteness
(n = 26)

Facilities without Ebola testing capacity
(n = 1,071)

Responses included in data analysis
(n = 70)
Demographics: Age and Sex (n = 70)

<table>
<thead>
<tr>
<th>Age</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-40</td>
<td>17</td>
<td>24%</td>
</tr>
<tr>
<td>40+</td>
<td>53</td>
<td>76%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>45</td>
<td>64%</td>
</tr>
<tr>
<td>Male</td>
<td>25</td>
<td>36%</td>
</tr>
</tbody>
</table>
Demographics: Profession (n = 70)

<table>
<thead>
<tr>
<th>Profession</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Scientist</td>
<td>45</td>
<td>64%</td>
</tr>
<tr>
<td>Management</td>
<td>21</td>
<td>30%</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>6%</td>
</tr>
</tbody>
</table>

Survey respondents were given the options of: laboratory scientist, clerk or receptionist, environmental services, manager, or other. Of the four individuals who self-identified as other, all four described themselves as Director or Laboratory Director.
If you were eligible for vaccination and offered the rVSV Ebola vaccine today*, would you choose to be vaccinated?

*Today refers to the time between December 29th – January 21st 2021 when the individual took the survey. During this time, there were no active Ebola virus outbreaks in the world.
When would you choose to get vaccinated:

- Immediately: 34% (n = 24)
- When an EVD case imported to the U.S.: 29% (n = 20)
- When an EVD case imported to my state in the U.S.: 23% (n = 16)
- I would not choose to be vaccinated: 14% (n = 10)

n = 70
When would you choose to get vaccinated:

- Immediately: 34% (n = 24)
- When an EVD case imported to the U.S.: 29% (n = 20)
- When an EVD case imported to my state in the U.S.: 23% (n = 16)
- I would not choose to be vaccinated: 14% (n = 10)

When we gave participants an option of choosing when to get vaccinated, the interest in vaccine rose to 86%. 
Free-form responses: *Why would you choose not to be vaccinated?*

- **Low risk of exposure**
  - “Little risk in full PPE”
  - “At this time, there is not a good chance of my state seeing a potential Ebola case.”
  - “No current risk (no active cases in the US)”

- **Concerns about potential side effects (especially arthritis)**
  - “As someone who already has arthritis in the hands at a young age I am cautious about increasing my risk of further damage to my hands which could be career ending.”
  - “Have to think about my risk versus the possible lasting arthritis side effect.”
  - “Concerned about potential adverse reactions caused by the vaccine and I am not certain that my risk is high enough to offset that.”
Interest in Vaccine, by Age and Sex

Interest in Vaccine, by Age

- Age 18-40: 76% Interested, 24% Not Interested
  - Sample size: n = 17
- Age 40+: 53% Interested, 47% Not Interested
  - Sample size: n = 53

Interest in Vaccine, by Sex

- Male: 72% Interested, 28% Not Interested
  - Sample size: n = 18
- Female: 51% Interested, 49% Not Interested
  - Sample size: n = 23

n = 70
Interest in Vaccine, by Profession

- **Laboratory Scientist**
  - Interested in Vaccine: 64% (n = 29)
  - Not Interested in Vaccine: 36% (n = 16)

- **Management**
  - Interested in Vaccine: 52% (n = 11)
  - Not Interested in Vaccine: 48% (n = 10)

- **"Laboratory Director"**
  - Interested in Vaccine: 75% (n = 3)
  - Not Interested in Vaccine: 25% (n = 1)

Total respondents: n = 70
How serious do you think infection with Zaire ebolavirus is?

Perceived Severity of Disease

- Very Serious: 96% (n = 67)
- Serious: 4% (n = 3)
- Not Serious: 0% (n = 0)

How would you rate your risk of becoming infected with Zaire ebolavirus, if an Ebola virus sample was sent to your facility?

Perceived Risk of Infection

- High: 3% (n = 2)
- Intermediate: 24% (n = 17)
- Low: 59% (n = 41)
- Next to zero: 14% (n = 10)
Interest in Vaccine, by Perceived Severity of Disease and Risk of Infection

Interest in Vaccine, by Perceived Severity of Disease

- Very Serious: 58% Interested, 42% Not Interested (n = 67)
- Serious: 67% Interested, 33% Not Interested (n = 3)

Interest in Vaccine, by Perceived Risk of Infection

- High: 100% Interested (n = 2)
- Intermediate: 82% Interested (n = 14)
- Low: 56% Interested (n = 41)
- Next to Zero: 80% Interested (n = 8)

n = 70
Below are some possible reasons for choosing not to get vaccinated. Please mark all that apply to you personally.

<table>
<thead>
<tr>
<th>Reason</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risks of vaccine outweigh benefits</td>
<td>28</td>
<td>51%</td>
</tr>
<tr>
<td>Might transmit vaccine virus to family or friends</td>
<td>21</td>
<td>38%</td>
</tr>
<tr>
<td>Concerned vaccine may not be effective</td>
<td>10</td>
<td>18%</td>
</tr>
<tr>
<td>Might have to miss work</td>
<td>4</td>
<td>7%</td>
</tr>
<tr>
<td>Might be expected to work with or near a patient with Ebola virus</td>
<td>4</td>
<td>7%</td>
</tr>
<tr>
<td>Might transmit vaccine virus to patients</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Might be expected to work extra hours if a patient with Ebola virus was admitted to my facility</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

* 15 individuals answered “Definitely Yes” to the “would you choose to be vaccinated” question, and thus did not answer this question.
In deciding whether or not to be vaccinated, which of the following vaccine adverse reactions would you be most concerned about?

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential increased risk of arthritis</td>
<td>21</td>
<td>30%</td>
</tr>
<tr>
<td>Potential increased risk of transmission of the vaccine virus to close contacts or patients</td>
<td>18</td>
<td>26%</td>
</tr>
<tr>
<td>Potential for a serious adverse event</td>
<td>16</td>
<td>23%</td>
</tr>
<tr>
<td>None</td>
<td>12</td>
<td>17%</td>
</tr>
<tr>
<td>Pain, redness, or swelling at the injection site</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1%</td>
</tr>
</tbody>
</table>
To help you decide whether or not to be vaccinated, additional information on which of the following would be important to you? Please mark all that apply to you personally.

<table>
<thead>
<tr>
<th>(n = 70)</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood and nature of adverse events from vaccination</td>
<td>41</td>
<td>59%</td>
</tr>
<tr>
<td>Likelihood and severity of transmitting vaccine virus to others</td>
<td>33</td>
<td>47%</td>
</tr>
<tr>
<td>Whether infectious disease experts or other peers I respect were being vaccinated</td>
<td>30</td>
<td>43%</td>
</tr>
<tr>
<td>My individual risk of contracting Ebola virus disease</td>
<td>29</td>
<td>41%</td>
</tr>
<tr>
<td>Liability and compensation if I, my patients, or other contacts developed a serious adverse reaction due to my vaccination</td>
<td>21</td>
<td>30%</td>
</tr>
<tr>
<td>Facts about Ebola virus disease, including infectiousness and risks of serious sequelae</td>
<td>11</td>
<td>16%</td>
</tr>
<tr>
<td>None</td>
<td>7</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
Do you think ACIP should vote to “recommend” the rVSV vaccine to staff at LRN facilities*?

*Did not ask about “Shared Clinical Decision Making”.

Yes
n = 41
59%

No
n = 6
9%

Not Sure
n = 23
33%

n = 70
Free-form responses: Yes, ACIP should recommend

- It provides an added layer of protection against a laboratory-acquired infection (LAI)
  - “The risk of a LAI is never zero. I think the role LRN personnel play in any outbreak response is vital, and... should have access to all available safety measures”
  - “It would be an additional layer of protection in case PPE and/or engineering controls failed while working with patient specimens potentially containing Ebolas Virus.”

- The LRN population is at increased risk of exposure to ZEBOV
  - “LRN would be the first to contact an ebola sample”
  - “Their risk is higher than most after those already indicated to get the vaccine”
  - “Because it is very likely that LRN personnel will be handling Ebola samples for diagnostic purposes.”
Free-form responses: *No, ACIP should not recommend*

- The risk of exposure is so low
  - “Not considered a high risk facility”
  - “Little risk if performing nucleic acid extraction.”
  - “Low risk to exposure in the laboratory.”
Free-form responses: *Not sure ACIP should recommend*

- **Need more information on the risk of exposure vs risk of side effects from vaccine**
  - “Still need to understand the risk of exposure compared to risk of adverse effects.”
  - “Need to determine risk level and do a risk vs reward analysis”
  - “I would like to see a complete risk analysis completed first.”
  - “It will depend on each individual staff member to weigh the risks versus rewards of receiving the vaccine.”

- **LRN may not be a high risk group**
  - “I’m unsure of how serious an Ebola outbreak could get to be in the US. If it always remains low in cases, I would think first responders should be a higher priority to receive the vaccine.”
  - “Not sure if necessary given the # of cases in the US. LRN testing staff would also be wearing appropriate PPE in a BSL-3 facility and using all necessary safety precautions.”
  - “Depending on the supply”
Conclusions

- **59%** of the study population expressed interest in receiving the vaccine if eligible and offered the vaccine today*
- When people were given the choice to get vaccinated at different time points (when there was an EVD case in the US or their state), interest in vaccine increased to **86%**
- Common reasons for not wanting the vaccine were **low risk of exposure** and **concerns about potential side effects** (especially arthritis)

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.