Contact Tracing: Key to stop Ebola spread
Dallas, Texas

Thomas Eric Duncan died of Ebola in a Dallas hospital after contracting the virus in Liberia.

- USA’s first case was diagnosed in September.
- Health officials cleared 51 people who had direct or indirect contact with Thomas Eric Duncan before he was admitted to Texas Health Presbyterian Hospital in 28 September.
- Health authorities are now monitoring 116 people, including nurses & other hospital employees, who potentially had contact with Duncan.
- Duncan died on 8 October.
Triumphant stories...

-Nina Pham: 1st health care worker to get the disease while treating Duncan who was admitted on the 28th Sep
-12 Oct-announcement of her Ebola disease
-15 October-colleague Amber Vinson’s announcement of the disease
Ohio story...

Amber Vinson

*great challenge: getting information from the bridal shop patronized by Vinson-no record of names, no files; made a reach-out through media that possible contacts give the contact tracers a call

<table>
<thead>
<tr>
<th>Tier</th>
<th>Type of contact &amp; No. of Contacts</th>
<th>Level of monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>people w/ very close contact w/ Vinson, including skin contact (3)</td>
<td>Quarantined w/ enforced restrictions on movement &amp; travel; Temp monitoring 2x/day by public health official</td>
</tr>
<tr>
<td>2A</td>
<td>No direct contact but w/in 3 feet of her for &gt;1hr (20)</td>
<td>Temp monitoring 2X/day, once in person by public health official; prohibited from commercial travel</td>
</tr>
<tr>
<td>2B</td>
<td>No direct contact, w/in the same enclosed space but NOT w/in 3 feet for &gt;1hr (77)</td>
<td>Self-monitoring of tem 2X/day and reports to public health official; w/ international travel restrictions</td>
</tr>
<tr>
<td>3</td>
<td>No direct contact, w/in the same enclosed space but NOT w/in 3 feet &amp; &lt;1hr (42)</td>
<td>Self-monitoring of temp 2X/day but need not report public health official BUT have to call public health official if temp changes</td>
</tr>
</tbody>
</table>
Contact tracing in Nigeria

1st case: Contact tracing using GIS
Declared as Ebola-free

July 20 Oct
Elements of Contact Tracing

• Contact Identification
  – Carried out for all cases meeting the standard/surveillance case definitions of EVD: suspect/probable/confirmed
  – Conduct verbal autopsy for all deaths attributable to EVD to detect chain of transmission
  – Tool: Case Investigation Forms
Elements of Contact Tracing

• Contact Identification
  – Begins from a case
  – Ask activities of the case/deceased
  – Ask activities & roles of the people around the case/deceased since onset of symptoms
  – Interrogation should identify the following:
    • All persons who live w/ case/deceased in the same household since onset of illness
    • All persons who visited the case/deceased at home/health facility since onset of illness
    • All places visited by the case/deceased since onset of illness & contacts identified
    • All health facilities visited by the case/deceased & all health workers who attended to the case/deceased w/o appropriate IPC
    • All persons w/ contact w/ the corpse from the time of death & during the traditional burial procedure
    • During home visit, the follow up team should inquire about persons who might have contact w/ the case/deceased but were not identified as contact through the above process
Elements of Contact Tracing

• Contact Identification
  – Prioritize high risk categories of contacts
    • Touched body fluids of the case (blood, vomit, saliva, urine, feces)
    • Had direct contact w/ the body of the case/deceased
    • Touched /cleaned the clothes/linen of the case
    • Slept/ate in the same household as the case
    • Health care worker who suffered from a needle stick injury from a contaminated instrument while attending to a probable/confirmed EVD case
    • Health care worker who had a breach of barrier while attending to a probable/confirmed EVD case
Elements of Contact Tracing

• Contact Listing:
  – All persons falling under the categories of contacts should be listed as contacts using the Contact Listing Form
  – Physically identify each listed contacts
  – Inform contacts of their contact status
    • What it means, subsequent actions to follow & importance of early care once symptoms develop
    • Should be done w/ tact & empathy
Contact Listing

• Advice to contacts for them to adhere to:
  – Remain as much as possible at home & restrict close contact w/ other people
  – Avoid crowded places, social gatherings & public transport
  – Report any suspicious signs & symptoms such as fever, bleeding, etc (provide contact numbers: Ebola hotline, supervisor’s number or Ebola contact team’s number)

**Contact identification & listing, including informing the contact status should be done by the Epidemiologist/Surveillance Officer & NOT the community volunteer

**Community volunteer will do the follow up, thus should be involved during the 1st visit
Contact Follow up

• Epidemiologist/Surveillance Officer should form a competent team compose of community health workers, volunteers, community leaders to do the follow up
• Foster a relationship of TRUST w/ the community that would facilitate referral of other symptomatic contacts to designated isolation facilities
• Community structure for contact follow up should be supervised by a trained health worker
Contact Follow up

• Community volunteers & supervisors should be trained on a one-day orientation:
  – Basic facts on EVD
  – How EVD is spread
  – Preventive measures for EVD
  – Roles/procedures for contact tracing/follow-up
  – Orientation on the tools, monitoring temperature, reporting, etc
  – Recommended safety precautions for the contact tracing team
Act rapidly

- Contact identification, listing & follow up should start as soon as a case/death is detected

- Follow up of contact of suspected case that tests negative for EVD should stop forthwith & contacts discarded from the contact list
Contact follow-up procedure

• Each morning, epidemiologist/surveillance officer in-charge prepares the list of contacts to be followed up that day
• Epidemiologist/surveillance officer provides the list of contacts to the supervisors
• Supervisors travel to respective areas of work, meet the teams & assigns contacts/household/homes to visit
• Teams then go to their respective communities to do the visit
• At the homestead, give the culturally acceptable greeting but avoid any physical contact like shake hands and hugging. Explain the reason for this
• Inform the interviewee that you will not stay long & need to catch up w/ other interviewees for that day
Contact follow-up procedure (cont)

- Interview & assess the contact for symptoms using the form & monitor temperature if recommended
- If the contact is not at home, inform the supervisor immediately. Valid reason should be obtained for the absence of contact
  - *this is where the crucial part of the community leader is needed
- If contact develops signs & symptoms, inform immediately the supervisor, who will immediately contact an ambulance/mobile team to assess and/or evacuate the contact to the treatment center (if necessary)
  - *contact follow-up team should not take the temperature of contacts who develop symptoms.
  - **case definition should be disseminated in the community to facilitate identification of contacts who develop symptoms
Contact follow-up procedure (cont)

- Do an active case search: after interview of the contact, ask if there are other members in the household who is not feeling well (even if the person is not a contact)
- Contact Follow-up team prepares a report using the Reporting Form
- On a rotating basis, supervisor should join the team in their visits to monitor the team & ensure that they are doing their work correctly
- After completing home visits, teams should meet the supervisor & provide feedback
- Supervisor collects the reporting form who in turn summarizes the reports and submit to the epidemiologist. Report should also include emerging issues encountered during the visits
- Epidemiologist makes a consolidated contact follow-up activity which forms part of the Surveillance sub-committee Report to be submitted to the Task Force
Discharge of Contacts

• Contacts completing the 21-day follow-up period should be assessed by the team on the last day.

• In the absence of symptoms, contacts should be advised that they are discharged from the follow-up, can resume normal activities & social interactions.

• The team should take time in assuring the neighbors & close associates that the contacts no longer pose risk of transmitting the disease.
Recommended safety precautions for the Contact Tracing Team

• Avoid physical contact like shaking of hands / hugging
• Avoid sitting on chairs offered
• Avoid touching/leaning on objects that can serve as fomites for EVD
• Resist the temptation of eating/drinking in follow up contacts. Take breakfast before the activity
• Do not go for contact tracing while donning PPE like masks, gloves, gowns
• Put on disposable gloves if you will take the temperature of the contacts
Resource Requirements for Contact Tracing

- Number of contacts to be visited per day by a team
- Number of contact follow-up teams
- Number of supervisors
- Transportation & fuel
Annex 1: Contact listing form

EBOLA CONTACT LISTING FORM

<table>
<thead>
<tr>
<th>Case Information</th>
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<tbody>
<tr>
<td>Outbreak Case ID</td>
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<td>------------------</td>
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<table>
<thead>
<tr>
<th>Contact Information</th>
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<tbody>
<tr>
<td>Surname</td>
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</tbody>
</table>

*Types of Contact:
1 = Touched body fluids of the case (blood, vomit, saliva, urine, feces)
2 = Had direct physical contact with the body of the case (alive or dead)
3 = Touched or cleaned the linens, clothes, or dishes of the case
4 = Slept or ate in the same household as the case

Contact sheet filled by: Name: 

Title: 

Telephone:
Annex 2: Contact follow up form

**CONTACT FOLLOW-UP FORM**

Contact Tracing Form – by Community Volunteer  
Volunteer’s name: ..................................................

Address: ..........................................................  
Town: ..............................................................  
District: ................................................................

<table>
<thead>
<tr>
<th>CN</th>
<th>Family Name</th>
<th>First name</th>
<th>Age</th>
<th>Sex</th>
<th>Date of last contact</th>
<th>Day of Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21</td>
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</table>

Tick “0” if the contact has not developed fever or bleeding
Tick “X” if the contact has died or developed fever and/or bleeding (complete Case Report Form and, if alive, refer to the hospital)
## Annex 3: Reporting form for field team

### Reporting Form for the Field Teams

<table>
<thead>
<tr>
<th>Variable</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team name:</td>
<td></td>
</tr>
<tr>
<td>Team members</td>
<td></td>
</tr>
<tr>
<td>Villages assigned</td>
<td>No villages</td>
</tr>
<tr>
<td></td>
<td>No. of households</td>
</tr>
<tr>
<td></td>
<td>Names of villages</td>
</tr>
<tr>
<td>Villages visited</td>
<td>No villages</td>
</tr>
<tr>
<td></td>
<td>No. of households</td>
</tr>
<tr>
<td></td>
<td>Names of villages</td>
</tr>
<tr>
<td>Total cases under follow-up (list names)</td>
<td></td>
</tr>
<tr>
<td>Total contacts under follow-up</td>
<td></td>
</tr>
<tr>
<td>Contacts who have completed 21 day follow-up today</td>
<td></td>
</tr>
<tr>
<td>Total cases followed up today</td>
<td></td>
</tr>
<tr>
<td>Total contacts followed up today</td>
<td></td>
</tr>
<tr>
<td>Contacts who developed symptoms</td>
<td></td>
</tr>
<tr>
<td>Details of community alerts responded to</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks/Other issues arising**

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EVD Surveillance and Control

An integral component of active surveillance during Ebola virus disease (EVD) outbreak is Contact Tracing.

Early detection and prompt isolation of new EVD cases is requisite for interrupting secondary transmission of Ebola virus in the community.