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3. *The questions we need to answer*
4. Defining CRM, case management
5. Assessment report content highlights
6. Tool profile example
7. Key public health consideration
8. Digital Contact Tracing Tools Key Functions and Requirements
Purpose of Assessment

1. To provide guidance to public health authorities (PHAs) to help them understand the landscape of available digital contact tracing tools

2. To provide a set of prioritized requirements to evaluate these tools and aid in decision-support for selecting the appropriate tool.

- Provides a snapshot of information on a small subset of digital contact tracing tools currently available, not an exhaustive inventory
- Designed to educate public health officials on the various types of digital contact tracing tools in the marketplace and on proximity notification technology.
- Allow PHAs to prioritize technical and functional capabilities of available tools and measure their efficiency.
Workgroup charge and objectives

<table>
<thead>
<tr>
<th>Group Name</th>
<th>Digital Tools for Contact Tracing Assessment Review Workgroup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Articulate high-level assessment of existing digital tools for contact tracing that could be leveraged by public health officials.</td>
</tr>
</tbody>
</table>
| Proposed Objectives | 1. Review and rally around the workgroup's charge, deliverables, and schedule  
2. Articulate the purpose of the DT4CT Assessment Report  
3. Identify and answer key questions that the report should address:  
   ○ What are the prioritized tools?  
   ○ What are the key requirements?  
4. Identified any major edits/changes that need to be made to the assessment report |
| Deliverables (due by 6/30) | 1. Review and finalize tool assessment  
2. Identify short- and long-term objectives/actions/deliverables to support public health authorities regarding DT4CT (e.g., matters for convening with tech industry partners) |
Workgroup volunteers and schedule

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oscar Alleyne</td>
<td>NACCHO</td>
<td>Brittane Wise-Goddard (Scheduler) <a href="mailto:BWise-Goddard@naccho.org">BWise-Goddard@naccho.org</a></td>
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<tr>
<td>Megan Light</td>
<td>CDC</td>
<td><a href="mailto:wpa8@cdc.gov">wpa8@cdc.gov</a></td>
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<td>Dave Ross</td>
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<td>Puneet Sharma</td>
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</tr>
<tr>
<td>Kathryn Turner</td>
<td>Idaho Department of Health and Welfare</td>
<td><a href="mailto:Kathryn.Turner@dhw.idaho.gov">Kathryn.Turner@dhw.idaho.gov</a></td>
</tr>
</tbody>
</table>

Schedule

- June 22 - PHII will share updated assessment report to workgroup for review/feedback by EOD
- June 24 – Workgroup share additional feedback with PHII
- June 25/26 - next meeting
- June 30 - deliverables completed
The questions we need to answer

**What are the prioritized tools?**

- Do we focus on CommCare, MTX, Sara Alert?
- Do we expand the list?
- If so, where do we direct our focus? (e.g., CRM/case management tools)

**What are the requirements?**

- Public health key considerations (design team meeting)
- Functional requirements for DT4CT (as listed on CDC website)
CRM Tools and Public Health Systems for contact tracing

Traditional CRM tools and case management systems are being used to perform contact tracing.

**Customer relationship management (CRM) system** manages a company’s relationships and interactions with customers and potential customers. CRM tools help with contact management, sales management, productivity, etc.

**Case management** captures data on cases and contacts and can help improve the efficiency of manual contact tracing and medical monitoring methodologies.

For the purpose of this assessment, these terms are used interchangeably.

SOURCE: [SALESFORCE CRM DEFINITION](#); [CDC CASE MANAGEMENT TOOLS](#)
The assessment analyzes 16 tools across 3 types and 6 domains.

This report outlines three types of digital contact tracing tools (below). Most tools may fall under one or more of these types.

- Proximity tracing tools
- Case management
- Health education

The tools are assessed across the 6 domains:
- Case/PUI Identification
- Case Investigation & Contact Elicitation
- Contact Tracing (Notification & Follow Up)
- Monitor Contact
- Bluetooth Tracking Technology
- Device GPS/Wi-Fi Location Technology

<table>
<thead>
<tr>
<th>Tool</th>
<th>Tool Category</th>
<th>Case/PUI Identification</th>
<th>Case Investigation &amp; Contact Elicitation</th>
<th>Contact Tracing (Notification &amp; Follow Up)</th>
<th>Monitor Contact (Self-Reporting)</th>
<th>Bluetooth Tracking Technology</th>
<th>Device GPS/Wi-Fi Location Technology</th>
</tr>
</thead>
</table>
The contract tracing workflow aligns on 4 function domains, supported by 2 technology domains.

1. Test
2. Investigate & Elicit
3. Workplace/Congregate Setting Protocol
4. Trace
5. Quarantine & Isolate
6. Follow Up

- Case/PUI Identification
- Case Investigation & Contact Elicitation
- Contact Tracing (Notification & Follow Up)
- Monitor Contact (Self Reporting)

Proximity Tracking: Bluetooth Tracking Technology; Device GPS/Wi-Fi Location Technology

SOURCE: WORKFLOW STEPS – CENTERS FOR DISEASE CONTROL: CONTACT TRACING TRAINING PLAN
## Tools Profile Example

### Key

<table>
<thead>
<tr>
<th><strong>Creator(s)</strong></th>
<th>Organization(s) that created and developed the tool</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose and Background</strong></td>
<td>A brief synopsis of the tool based on publicly provided information as well as background shared with the Public Health Informatics Institute</td>
</tr>
<tr>
<td><strong>Tool Type</strong></td>
<td>Case Management</td>
</tr>
<tr>
<td><strong>Jurisdiction(s) Currently Using</strong></td>
<td>List of jurisdictions (e.g., local/state public health agencies) that are currently using the tool or are in the process of implementation</td>
</tr>
<tr>
<td><strong>Contact Tracing Function</strong></td>
<td>Case/Patient Under Investigation (PUI) Identification</td>
</tr>
<tr>
<td><strong>Link</strong></td>
<td>Main website for more information about the tool</td>
</tr>
<tr>
<td><strong>Integration</strong></td>
<td>Indicates if the tool has the ability to integrate with existing public health systems or apps. The options for this are:</td>
</tr>
<tr>
<td></td>
<td>- Yes – there is some ability to integrate. This ability will need to be qualified by individual public health agencies following up with the tool creator and discussing in more detail</td>
</tr>
<tr>
<td></td>
<td>- No – there is no ability to integrate at this current time. However, integration capabilities might be available in the future</td>
</tr>
<tr>
<td></td>
<td>- TBD – PHII was not able to evaluate if the tool has integration capabilities</td>
</tr>
<tr>
<td><strong>Additional Information</strong></td>
<td>Any additional information that might be helpful to public health agencies and practitioners (e.g., links to presentations, news articles, insights from the tool creator, etc.)</td>
</tr>
</tbody>
</table>

Each tool has a corresponding profile that provides more granular details.
16 tools and counting...

1. Apple|Google Exposure Notification API
2. C19check.com
3. Care19
4. **CommCare**
5. Kontakt
6. CovidSafe
7. Estimote
8. Healthy Together
9. HFP Technologies Emergency Preparedness and Response System
10. Maven – COVID19 Module
11. **MTX (Salesforce/Google Cloud)**
12. REDCap
13. SaferMe
14. **Sara Alert**
15. Time Clock Plus
16. TraceTogether
<table>
<thead>
<tr>
<th>Tool</th>
<th>Tool Category</th>
<th>Case/PUI Identification</th>
<th>Case Investigation &amp; Contact Filtration</th>
<th>Contact Tracing (Notification &amp; F/U)</th>
<th>Monitor Contact (Self-Reporting)</th>
<th>Bluetooth Tracking Technology</th>
<th>Device GPS/Wifi Location Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>CommCare by Dimagi</td>
<td>Case management</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
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<tr>
<td>MTX (Salesforce/Google Cloud)</td>
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<td>yes</td>
<td>yes</td>
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<tr>
<td>Sara Alert</td>
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<td>yes</td>
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<tr>
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<tr>
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<tr>
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<tr>
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<tr>
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<td>Health education</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Maven - COVID19 Module</td>
<td>Case management</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>REDCap</td>
<td>Case management</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>SaferMe</td>
<td>Proximity tracking</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>TraceTogether</td>
<td>Proximity tracking</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>
Key Public Health Key Considerations

1. **Protection of public health information.** Insurance of protected health information (PHI) security is a central factor in any public health system design. Confidentiality of significant volumes of client information must be maintained.

2. **Diagnostic capabilities.** Digital tools that accurately report the health status or increased severity of symptoms will provide timely, efficient and critical information to public health entities. There should also be interoperability of information between diagnostic lab results and information received manually by public health workers.

3. **Epidemiological capabilities.** Digital tools can support increased understanding of broader contact exposure that is not dependent on an individual’s memory or recall. In addition, digital tools will need to support future PH surveillance needs beyond COVID-19 response efforts.

4. **Rapid notification.** Digital tools must account for rapid notification required within the contact tracing workflow. Tools must enable automated notification to community contacts who opt in to being notified, while also preserving anonymity of patients within a 24-hour period.

5. **Rapid and easy implementation.** Digital tools must be easily and rapidly adopted by various entities within the contact tracing workflow not to overwhelm an already-stressed public health system and increase chances of adoption. Staff training and IT resources must be considered in the implementation process.

6. **Integration with state health authority systems.** Digital tools must have the ability to easily integrate with existing state health disease surveillance and laboratory systems. Integration allows for rapid sharing of information. During an emergency response situation, such as COVID-19, it is essential for public health officials to be able to quickly share vital information on infected persons and to track and notify contacts who have been exposed or suspected of being infected.
**Appendix A: Digital Contact Tracing Tools Key Functions and Requirements**

We identify key requirements for:

1. **Case Identification**
2. **Case Investigation**
3. **Contact Tracing**
4. **Monitor Patients/ Case Intervention**
5. **Platform**
6. **Interoperability**

<table>
<thead>
<tr>
<th>Contact Tracing Category</th>
<th>Requirements</th>
</tr>
</thead>
</table>
| **Case Identification**  | - Ability to receive initial notification of confirmed or presumptive case (including CFR)  
- Capture patient contact information  
- Ability to obtain user/patient’s consent  
- Flag records to indicate when laboratory report results has been received  
- Support multiple lab formats for specimen type; test performed; quantity of specimen available; specimen quality (e.g., how stored, how long stored)  
- Allow user to edit filter settings (i.e. based on jurisdictional rules)  
- Support specific laboratory testing requirements for each condition  
- Send communication to sender to notify of the receipt of conditions report (Communications functionality - automation of notification)  
- Promote case routing to respective program areas within the system  
- Ability to update as new data is received  
- Have the ability to match and update any new data obtained  
- Have ability to appropriately route referrals for additional investigation within agency/programs  
- Ability to receive laboratory messages in a standard format; with the ability to adjust format  
- Have the ability to match case to existing data/records  
- Have the ability to view and query updates  
- Support the use of algorithms to identify a case  
- Have the ability to log the event if additional investigation is not warranted  
- Have the ability to recognize trends/clusters  
- Have ability to re-categorize or regroup data based on the introduction of new data |

| **Case Investigation** | - Patients interview information  
- Notify patient of exposure  
- Ability to contact patient via SMS notification  
- Ability to assign case to an investigator; capturing the date of assignment  
- Ability to generate a new case from a contact record  
- Ability to accept/reject case based upon signoff definition (PHA)  
- Allow user to attach documents and images related to a specific case  
- Facilitate the recording of standard demographic information (race, ethnicity, etc.) as well as be extensible in nature to allow for multiple of these instances to be captured within the same area |
Next Steps

• June 22 - PHII will share updated assessment report to workgroup for review/feedback by EOD

• June 24 – Workgroup share additional feedback with PHII

• June 25/26 - next meeting

• June 30 - deliverables completed and published