Using Informatics to Improve Connections Between People and Systems

August 3, 2021  3:00 – 4:00 PM ET

Sponsored by NCSD and CDC DSTDP
Informatics Webinar Facilitators and Presenters

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National Coalition of STD Directors (NCSD)

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National Coalition of STD Directors (NCSD)

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CDC Division of STD Prevention Surveillance and Data Science Branch

Jim Ivey
COO/Co-Founder
Chexout
A Few Housekeeping Items

• Use the chat function to talk with or ask for help from facilitators
• Use the question and answer function to ask questions for the presenters
• If the facilitator loses web or voice connection during the presentation, please keep your video and audio connections until the facilitator reconnects
• Download today’s webinar slides from the chat function
• An audio/video recording and slides of this webinar will be posted on the NCSD Web site in the next week
Webinar Agenda

• Welcome and Introductions – Charlie Rabins and Robin Hennessy
• Informatics: Past, Present and Future – Charlie Rabins
• Informatics and System Modernization – Dr. Mishra
• Chexout for Clinic Management, Surveillance and Contact Tracing – Jim Ivey
• Webinar Evaluation – Charlie Rabins
Informatics: Past, Present and Future
Today’s Webinar Participants
Findings from Registration Questions

• 211 persons preregistered, ~143 different organizations

• 64% work in a state health department

• 16% work in a county or city health department
## Primary Job Role of Registrants – Self Identified

<table>
<thead>
<tr>
<th>Job Role</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>STD Program Management/Leadership</td>
<td>58</td>
<td>27%</td>
</tr>
<tr>
<td>Surveillance/Epidemiology</td>
<td>52</td>
<td>25%</td>
</tr>
<tr>
<td>DIS/Partner Services/Contact Tracing</td>
<td>35</td>
<td>17%</td>
</tr>
<tr>
<td>Other</td>
<td>27</td>
<td>13%</td>
</tr>
<tr>
<td>Informatics/IT Support</td>
<td>25</td>
<td>12%</td>
</tr>
<tr>
<td>Training and Technical Assistance</td>
<td>11</td>
<td>5%</td>
</tr>
<tr>
<td>Clinical or Lab Services</td>
<td>3</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>211</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Does your STD Program use texting to send messages or test results to clients?

N = 141

- Yes: 87 (62%)
- No: 54 (38%)
Rate your program’s capacity to assign, monitor and evaluate DIS Services (1-5, 5=High)

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>9</td>
<td>12%</td>
</tr>
<tr>
<td>4</td>
<td>17</td>
<td>23%</td>
</tr>
<tr>
<td>3</td>
<td>34</td>
<td>47%</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
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<tr>
<td>1</td>
<td>6</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>73</td>
<td>100%</td>
</tr>
</tbody>
</table>
Does your Program use cloud-based computing?

N = 106

Yes: 69, 65%
No: 37, 35%
Informatics and System Modernization

Dr. Ninad Mishra
Using Chexout for Infectious Diseases Surveillance, Clinic Management and Contact Tracing

Jim Ivey
Infectious Disease Management
Jim Ivey
COO/Co-Founder, Chexout

- **Chexout was established in 2010** to meet the unique needs of public health departments – HIV/STD

- **Prior to COVID - Chexout released NEW infectious disease management platform in January 2020**: designed to meet client needs for the future of public health data management including:
  - Disease Surveillance
  - Outbreak Management
  - Investigations & Contact Tracing
  - Clinic Management
  - Lab Communications/ECR
  - Patient Management – Dynamic Communications
WHAT LESSONS CAN BE TAKEN FROM COVID?

Software for Public Health should:

• Support **multiple program areas** and **rapidly configure** for new infections

• Be **scalable** for both your workforce and data transfer mechanisms

• Easily adapt to **meet new requirements**, feature development and emerging technologies

• Be **data agnostic**. Play nice with other systems!
• **Avoid open-source software** that only performs one function well or several poorly [it’s not free]

• **Avoid legacy systems** reworked to meet yesterday’s needs

• **Avoid** systems that require your staff to perform critical functions outside of the platform or requires multiple entries

• **Avoid** systems that are still in build mode or big box software *not originally built* for Public Health infectious disease management
Modernized public health infectious disease software should offer the following and let you choose only the features you need:

- Clinic Management and outreach testing
- Investigation management and contact tracing
- Outbreak management
- Symptom monitoring
- Automated and ad hoc patient communications via text/email/VoIP
- Electronic lab ordering/receiving
Modernized public health infectious disease software should offer the following and let you choose only the features you need (2):

- Results and educational material delivery via patient portal
- Visual analytics and automated cluster diagrams
- Workforce Management
- Interoperability with other data systems in multiple formats (HL7, XML, CSV, Flat-file, etc.)
- Data hub for community partners
- Reporting to state and federal systems
Integration of services: Breaks down information silos, Creates a single source of truth (SSOT) and Drives greater efficiencies

Chexout’s platform allows for integration from the clinic to surveillance

**CLINIC MANAGEMENT**
- Appointment scheduling
- Custom risk assessments
- E-charting
- Patient portal

**COMMUNICATIONS**
- Automated results notifications
- Automated reminders
- Ad-hoc text and email
- Language support
- Integrated VoIP

**INVESTIGATIONS**
- Ability to support all reportable conditions
- Automated cluster diagrams
- Predictive outbreak management
- Workforce collaboration tools

**DATA MANAGEMENT**
- Order and receive from multiple labs
- Data agnostic
- Auto-assignment of incoming investigations
- Easy data export
- SSOT for multiple disparate systems

**SURVEILLANCE**
- View data in one place for entire area of responsibility
- Alerts when outbreaks occur
- eCR
- State and federal reporting
Chexout was designed to be flexible enough that customers can utilize the entire solution or choose only the features they need to supplement existing systems.

- Chexout can work with other software in your ecosystem
- Chexout can fill gaps in existing features
- Chexout can work as a data aggregator or pass through for other systems
- Chexout can work as a data distribution point for your PHL
- Chexout can phase in features as you move away from legacy systems
Chexout was designed as a Software as a Service (SaaS) platform to take advantage of benefits not available in traditional on-premise software.

Benefits include:

- Ability to run on a browser from any device
- On-demand scalability
- Flexibility in infrastructure configuration
- Easily customized and maintained
- No upfront hardware costs
- We can be our client's tech support team
• The system should collect places and contacts reported by patients and automatically aggregate system wide and by individual cluster to let staff know when an outbreak is emerging so resources can be quickly deployed.

• You should be able to view location-based outbreaks by zip code, heatmap or in a line list and easily upload a list of potential contacts to a location.

• The outbreak manager role should have a custom dashboard to keep tabs on emerging outbreaks, outbreaks that are ready for closure and and a view of outbreaks in community and communal settings.

• You should be able to drill down to the exact time an index patient was at a location like a gym, bar or event to more accurately filter potentially exposed individuals.
Investigations can start with a call to the clinic from a healthcare provider, a fax, ELR, a positive lab or presumptive positive for a patient seen in one of your clinics and many other ways.

Your software system should have tools to handle each scenario, **quickly ingest and distribute available data, initiate an investigation** and help your staff efficiently get the information needed for reporting and to work the investigation.
Features you should expect:

- **Auto-assignment** of incoming investigations to the appropriate DIS based on workgroup, patient demographics and other data points
- Dynamic automated and manual communication methods including integrated VoIP, text and email
- Build a **library of places** in your community to easily collect where patients and contacts may have been exposed
- **Easily collect reported contacts** by referral basis and log any information the index patient provides that helps with identifying and locating the contact
- View automated dynamic **cluster diagrams**
- **Predictive location-based outbreak management**
- **Automated symptom monitoring** with alerts to staff when patients report specific symptoms
Integrated patient communications should include features like:

- Automated results notifications via text or email.
- Only sends “Contact the Clinic” messages to positives when you have staff available.
- Can continue to automatically message patients until they contact your clinic.

- Dynamic messaging to support communications with patients and contacts.
- Integrated VoIP or imbed your own
- Build message templates to standardize messaging and speed up communications.
West Virginia needed our software in May of 2020 with only 30 days lead time, requiring the capability to scale their workforce to 1,000 CTs working remotely and accept, distribute and utilize thousands of ELRs and patient interactions an hour. A set of requirements their current EDSS couldn’t handle. WV is now working with Chexout to replace WVEDSS in all their program areas.

Indianapolis purchased the software with the NCAA Basketball Tournament fast approaching. They needed us to manage Contact Tracing and work as a hub between their other data sources including their PHL, the State’s Microsoft Dynamics, another third-party vendor, and do it all in 23 days.

Philadelphia needed Chexout to run multiple program areas and to fill gaps left by other vendors. We adapted Chexout to run their Mobile COVID Testing Vans with online appointment scheduling, do Immunization Appointment Reminders and now run their Mobile Vaccination Vans.
Brief Demonstration
Modern Infectious Disease Management Software In Action

• Collaboration Tools
• Investigations
• Patient Communications
• Cluster Diagrams
• Outbreak Management
Thank you for your time today!

Contact: Jim Ivey
540-270-9960
jimivey@chexout.com
Webinar Evaluation Poll Questions

Q1: Webinar Rating

Q2: Webinar Time Value
Thanks for Participating

- We hope you found this webinar worthwhile.

- If you have topic suggestions for future Informatics Webinars, please email us:

  - Charlie Rabins crabins@ncsddc.org
  - Robin Hennessy btj2@cdc.gov