

Development and use of Salesforce for auto-cluster detection



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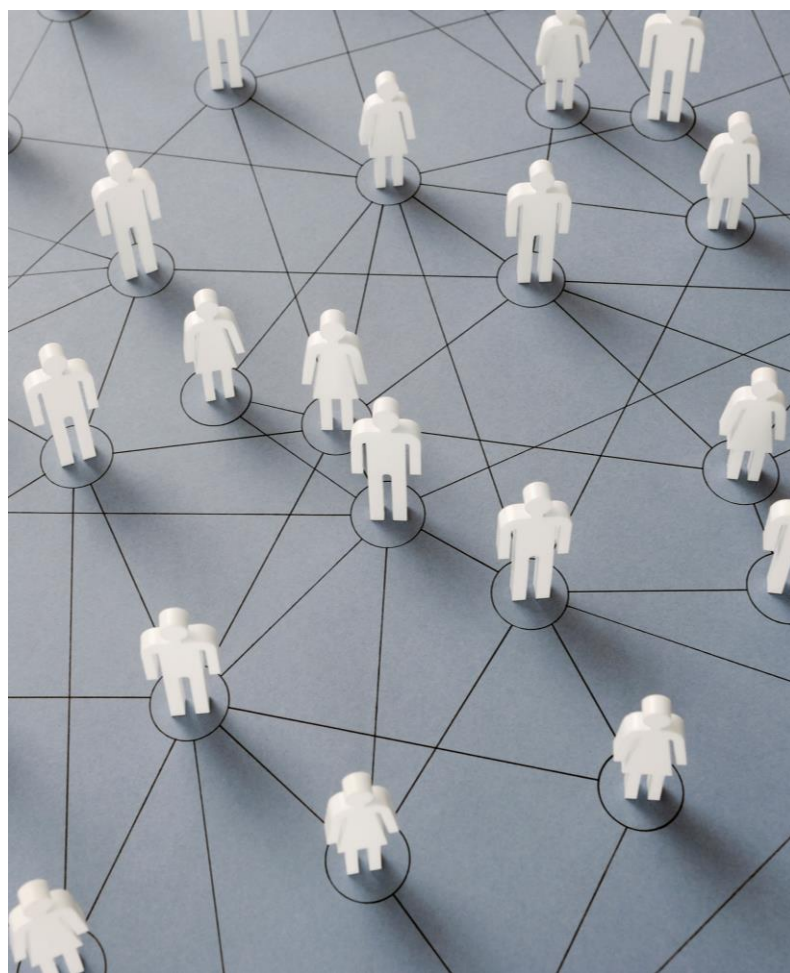
CATEGORY: **Epidemiology and Laboratory Capacity (ELC)**

CATEGORY: **Nationally Notifiable Diseases Surveillance System**

Rhode Island Department of Health (RIDOH) implemented an auto-cluster detection system that found 65% of COVID-19 clusters. RIDOH is now considering utilizing this technology to assist in detecting outbreaks of other reportable conditions.

The “What”

The COVID-19 pandemic led to an extremely high volume of lab results and case reporting. Rhode Island Department of Health (RIDOH), like other jurisdictions, expanded case investigation and contact tracing staff and services to support this additional work. With this volume increase and staff increase, it became harder to run manual systems to detect potential clusters. Salesforce, as the RI COVID-19 System, was used to create an auto-cluster detection system. Based on information entered and predefined logic in the system, the system would flag potential clusters and put them in a queue for review.



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SUBMITTED JUNE 2023



Between May 15, 2021, and November 15, 2023, RIDOH detected 12,738 COVID-19 clusters. Of the clusters detected, 65% (n=8,261) were automatically detected by the Salesforce system. This allowed RIDOH to engage with facilities 9,557 times to respond to 4,326 clusters at over 900 unique locations.

The “So What”

This automated analysis of epidemiologically important fields significantly reduced the burden on staff. RIDOH was able to identify more potential outbreaks and respond to outbreaks more quickly as a result of auto-detection in the surveillance system. Between May 15, 2021, and November 15, 2023, RIDOH detected 12,738 COVID-19 clusters. Of the clusters detected, 65% (n=8,261) were automatically detected by the Salesforce system. This allowed RIDOH to engage with facilities 9,557 times to respond to 4,326 clusters at over 900 unique locations. The locations RIDOH engaged with include businesses and healthcare facilities (n= 1,539 engagements), educational facilities (n=4,288 engagements), and long-term care and other congregate facilities (n=3,730 engagements).




The “Now What”

Auto-cluster detection via Salesforce should be considered for implementation for other diseases and with other surveillance systems. RI, like other jurisdictions, uses multiple systems for different diseases – National Electronic Disease Surveillance System (NEDSS) Base System (NBS), Enhanced HIV/AIDS Reporting System (eHARS), and Salesforce, for example. Auto-cluster detection could be beneficial for high-volume diseases that require investigation. There is a need for more funding and work at the national level to describe

the capacities of various surveillance systems, lessons learned from jurisdictions about the strengths and limitations of surveillance systems and their functionality, and how innovation learned via the COVID-19 pandemic can be applied to other surveillance activities. Advocacy from the national level may be more influential than local advocacy as jurisdictions grapple with descoping the COVID-19 response, "returning to traditional ways of public health" but also "building back better" and learning from the last three years.

Key contributors to this project include Jaime Comella, Alison Green, Morgan Wieck, Center for COVID-19 Epidemiology, COVID-19 Tech Team, Simplus/Infosys Salesforce vendor.

 Funding source: This work was supported in part by the Centers for Disease Control and Prevention (CDC) cooperative agreement #NU38OT000297. Its contents are solely the responsibility of the authors and do not necessarily reflect the views of the CDC.