UTAH DEPARTMENT OF HEALTH

COVID Technologies, Apps, and Automated Contact Tracing

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COVID Technologies

- Statewide disease surveillance system used by UDOH, all 13 LHDs, 5 tribal public health agencies, and HAFB PHO
- Used for all communicable disease surveillance and some environmental conditions
- All COVID Surveillance and Contact Tracing

Not on our watch!

The New York Times

Bottleneck for U.S. Coronavirus Response: The Fax Machine

Before public health officials can manage the pandemic, they must deal with a broken data system that sends incomplete results in formats they ...

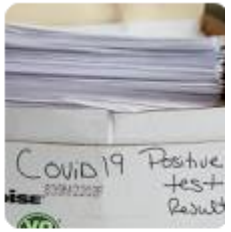
Jul 13, 2020

Cleveland.com

What Ohio could have learned about the coronavirus – if the state had the data

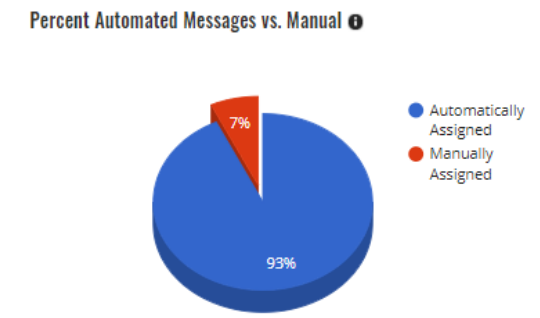
COLUMBUS, Ohio – Public health is a topic that has inspired little ... At two decades old, Ohio's infectious disease reporting database is antiquated. ... some laboratories were emailing and faxing COVID-19 test results, which ...

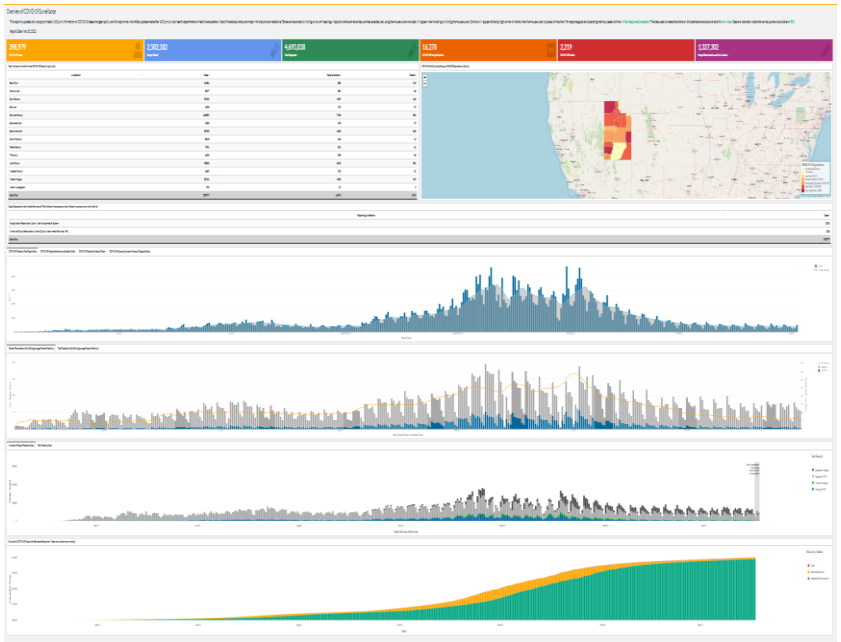
3 weeks ago

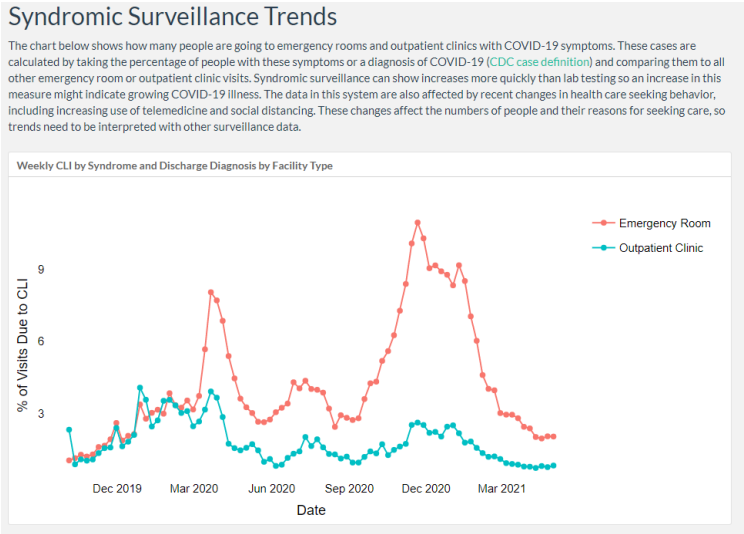


Existing Electronic Surveillance

- Electronic Laboratory Reporting (ELR)
- Electronic Case Reporting (eCR)
- Syndromic Surveillance (SyS)





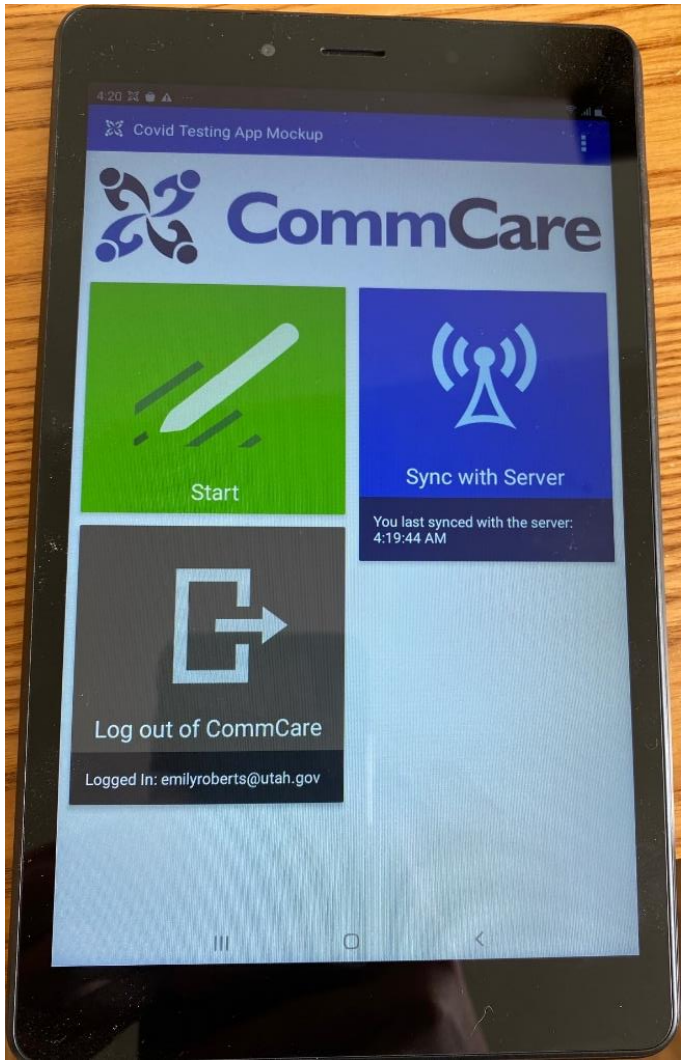


Utah eCR Implementations

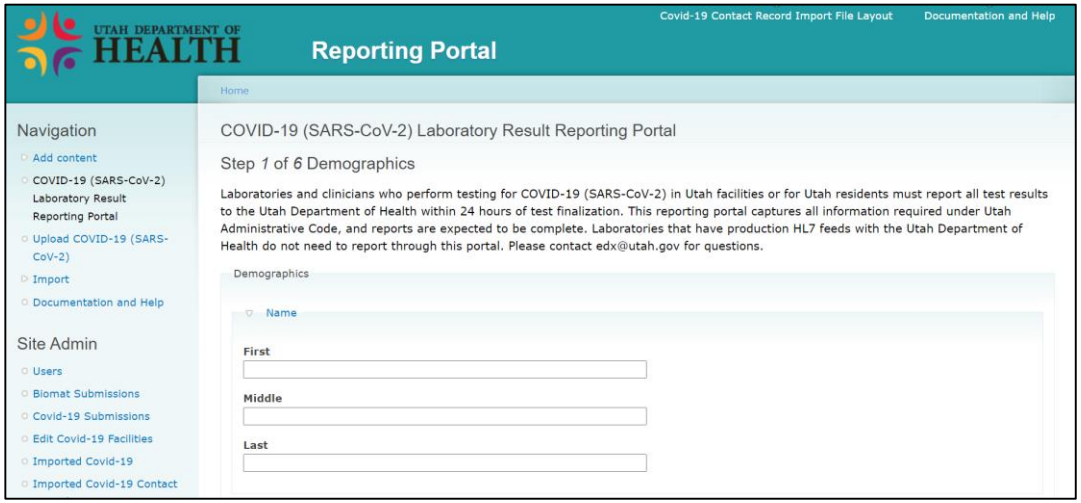
- Family planning organization – October 2016
  - 9 clinics
  - Chlamydia, gonorrhea, syphilis, HIV
- Largest healthcare system – December 2019
  - 22 hospitals, ~160 clinics
  - Pertussis, chlamydia, gonorrhea, salmonella, zika virus, COVID
- Academic healthcare system – June 2020
  - 5 hospitals, 12 community clinics, several specialty centers
  - COVID

CSTE COVID-19 Reporting Application Pilot

- CSTE/World Economic Forum partnership
- Tablets customized with CommCare software
- Results automatically sent and housed in the cloud
- Full pilot implemented in less than 36 hours, actual training and setup per site averaging 2-3 hours total
- Successes:
  - Portability, data quality, workflow
- Challenges:
  - Software updates, API connection issues, pilot discontinued
- Pilot successfully demonstrated the benefits of a tool like this for low-resource sites who are not able to devote additional resources for electronic reporting



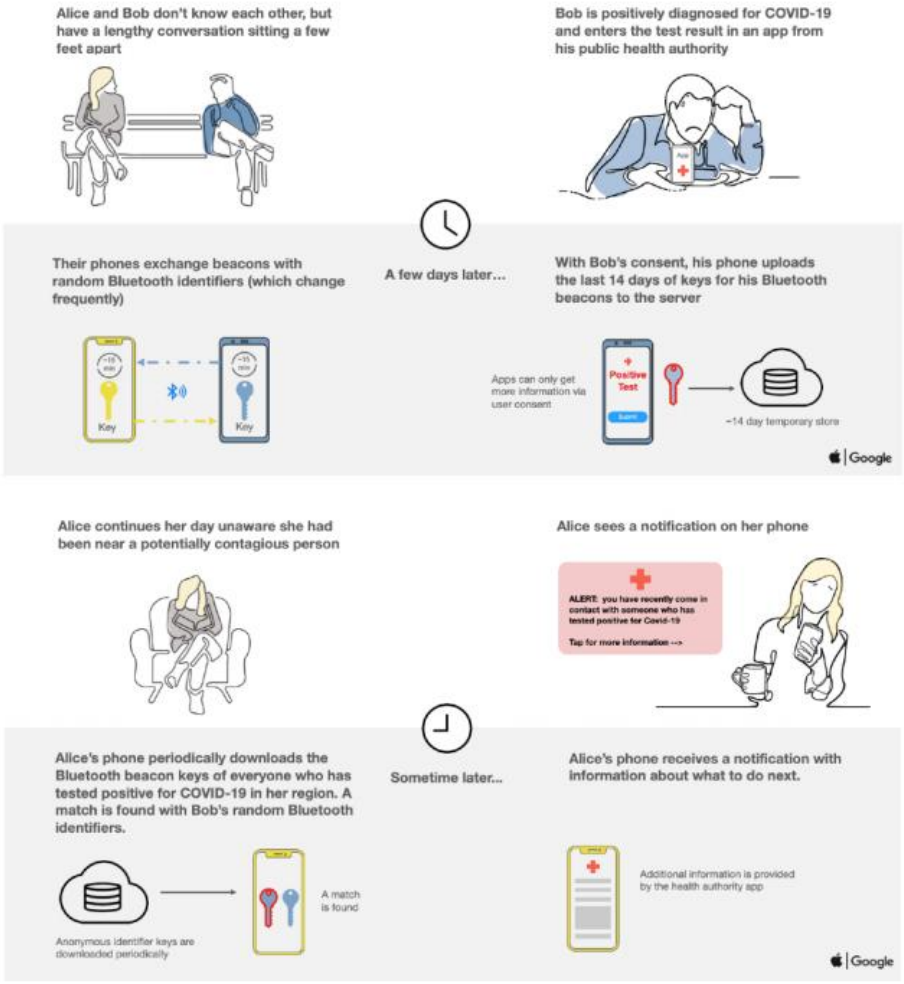
Reporting Portal



- UDOH developed an online reporting portal for organizations that cannot send results through HL7 messaging
- Within the portal, there are two options for reporting:
  - Users can enter results one-by-one using direct data entry form
  - Multiple results can uploaded at one time using a .csv formatted spreadsheet
- For .csv upload, submitters must match a very strict format; including headers of requested data elements and certain data element values

Mobile Technologies

- Healthy Together
- Apple|Google Exposure Notification Express

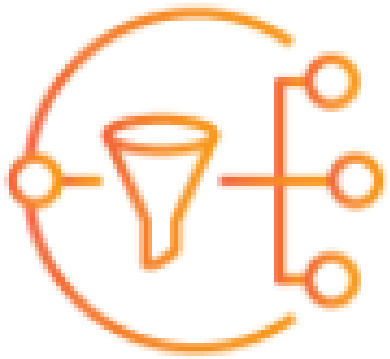


Online Access to Testing

test utah

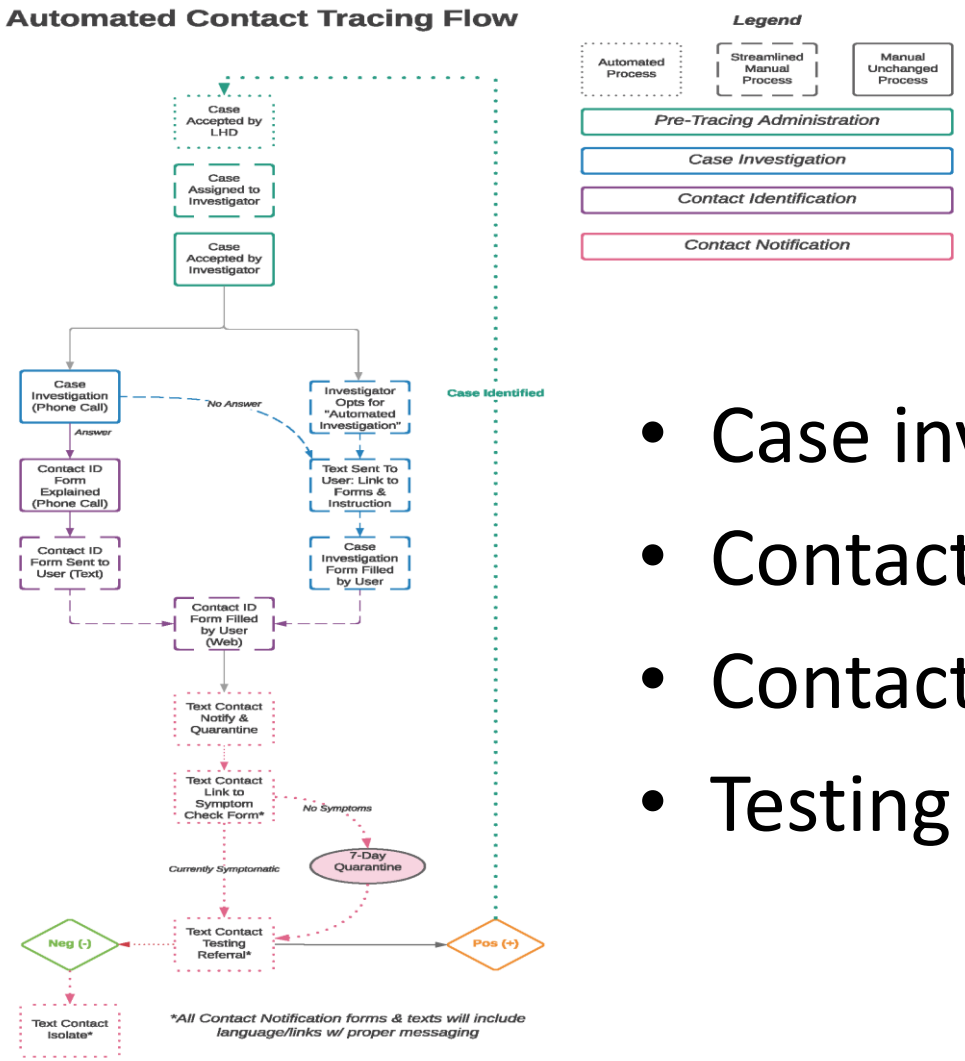
REDCap®
Research Electronic Data Capture

SMS Notifications and Referrals



Amazon SNS

Automated Contact Tracing System



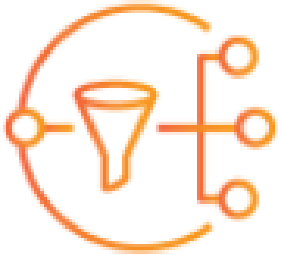
- Case investigation
- Contact Tracing
- Contact Notification
- Testing Referral

Automated Contact Tracing System

EpiTrax

REDCap®
Research Electronic Data Capture

NEXTGEN
CONNECT



Amazon SNS

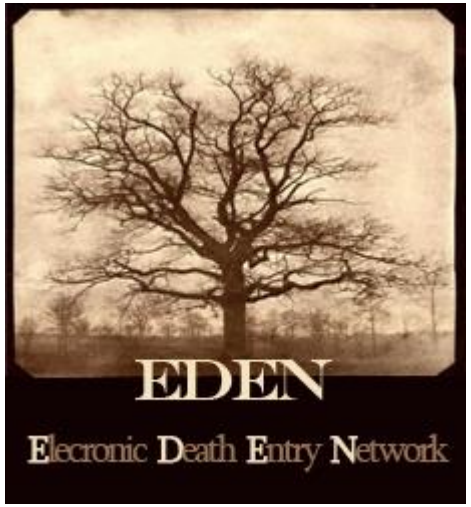
Internal Integrations

EpiTrax

DOHMPI API

FHIR

USIIS



Thank You!