Washington Public Health tackles disease surveillance, intervention issues using new technology and partnerships

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

As the sheer magnitude of the COVID-19 pandemic became increasingly evident, public health officials realized that traditional methods of case investigation and contact tracing were not going to keep up with the demand. Surges in case volumes, the inability to identify unknown contacts, and an unwillingness by the public to respond to outreach hampered officials' ability to track the spread of the outbreak. Without a clear understanding of exactly what was happening, it was difficult to make critical and timely decisions about how to keep the public safe.

The "What"

Eager for a new tool, Washington State Department of Health (WADOH) found exposure notification (EN). It offered a way to capitalize on the facts that:

- the virus spread through proximity,
- smart phones are ubiquitous worldwide, and
- there were established methods in the security community to ensure anonymity.

Within months, efforts were underway to create a new, digital tool to support public health's pandemic response.

WA Notify

Apple and Google smartphones were used to alert users of exposures based on detected proximity and duration to individuals who subsequently and anonymously inform other users of a potential exposure. The tool could also provide those who were exposed with timely, up-to-date guidance.

The collaboration evolved to include University of Washington (UW), Apple, Google, APHL, Microsoft Research, the Brotman Baty Institute, the Public Health Informatics Institute, MIT, MITRE, NIH, Amazon Web Services, and the CDC.

The result was WA Notify, a novel, opt-in, privacy preserving, EN system using Bluetooth, which was launched on November 30, 2020.

WA Verify

As the pandemic shifted and people began gathering again, many public places asked patrons for proof of vaccination. Building on the success of WA Notify, WADOH worked closely with partners at MITRE, Microsoft, UW, University of California San Diego, Apple, Android, The Commons Project, and the states of California and Oregon to launch SMART health cards, a web app, and smart phone wallet integration that could provide current, timely vaccination validation.

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> ## "We completely reinvented how people interact with public health."
>
> Bryant Thomas Karras, MD, Chief Medical Informatics Officer at WADOH

Using records from the state's immunization information system, WADOH launched WA Verify, a Digital COVID-19 Verification Record that includes a QR code for easy scanning. Users can also access their information through provider portals like myChart or MyIR Mobile.

To use the tool, people enter their name, date of birth, and an email or phone number associated with their vaccination record. If the information matches an official record, they receive a text or email with a link to their Digital COVID-19 Vaccine Record. This information can be easily added to digital wallets, printed on paper, or used for a "real" card that is more secure and verifiable than the CDC white cards.

The "So What"

WA Notify

Since the launch of WA Notify, users have confirmed more than 235,000 positive test results using the app, generating more than 2.5 million anonymous exposure notifications and preventing tens of thousands of COVID-19 cases.

Strong collaboration with partners, a diverse advisory committee, thoughtful planning, an emphasis on accessibility, campaign development, and pilot testing all helped give Washington one of the highest rates of EN system adoption in the U.S.

WA Verify

Since its launch in November 2021, WA Verify has successfully generated more than 1.8 million QR codes for Washington residents.

"I've done a lot of nerdy things in my life, but this is the thing that is most impactful," Karras said. "We proved that government, in partnership with the academic and private sector, can make a difference in people's lives and health. We raised the bar for what government can do."

The "Now What"

WA Notify

In alignment with the end of the COVID Public Health Emergency, WADOH sunset WA Notify on May 11, 2023. However, don't expect the app to disappear forever. WADOH is exploring other ways to leverage this important technology in the future.

WA Verify

Currently the WA Verify card only works for COVID-19 vaccinations. WADOH is looking for ways to expand to other immunizations and include other important medical records.

Key contributors to this project include Dr. Bryant Thomas Karras, Michelle Campbell, Amanda Higgins, Laura West and Theresa McCallion.