

CASE STUDY

Public-private partnership maps COVID cases, variants at 4 international airports

Program snapshot

Testing at four international airports: JFK, EWR, SFO, and ATL

Public-private partnership with CDC and XpresCheck

In-airport pooled testing and at-home individual diagnostic testing

Sequencing of positive samples to track variants and sub-variants arriving in the U.S.

Notable outcomes:

40,000+

participants between September 2021 and May 2022

1850

average participants per week

Set up ATL location in 24 hours at the onset of Omicron surge

Sequenced the first confirmed instance of BA.2 and BA.3 sub-variants in the U.S.

"Early detection and sequencing of new variants entering the United States are crucial to our ability to better understand the virus and assess the threat it poses to public health."

Dr. Duncan MacCannell

Chief Science Officer for CDC's Office of Advanced Molecular Detection

posted by [Bloomberg](#), 12/18/21

Getting ahead of the gathering storm

Biology does not respect borders. For a fast-moving virus like COVID-19, travel-related transmissions can make landfall with the fury of a hurricane — but without any warning. When the CDC wanted a “weather map” of COVID cases and variants arriving in the U.S., it partnered with XpresCheck and Concentric to create the first in-airport monitoring program.

An early warning system for incoming COVID-19 cases

Concentric and XpresCheck designed lean infrastructure — a simple booth — that could slot in to the bustling international terminals at John F. Kennedy (JFK), Newark Liberty (EWR), San Francisco (SFO), and Hartsfield-Jackson Atlanta (ATL) International Airports to accommodate opt-in testing for arriving passengers.

Travelers could voluntarily contribute in a two-step process: swabbing at the airport for a pooled test, and performing an individual diagnostic test 3-5 days later using an at-home collection kit. Sequencing positive samples created a dynamic “weather map” of variants and sub-variants entering the country.

Staying on the go and in the know

Volunteered samples from more than 40,000 participants led to the first reported instances of Omicron sub-lineage BA.2 and BA.3 in the U.S. The program detected the variants seven and 43 days earlier, respectively, than reporting in [GISAID](#).

As the early warning system grows, we'll be better prepared to respond to COVID-19 surges before they sweep through a region.

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