

CLOUDTICITY HEALTHCARE DATAHUB™ & HEALTHCARE DATAVIEW™





Raw Real-Time Sources

- Production ADT, ORU, MDM
- CCDs on COVID patients
- · Could be:
- Death Reporting Systems
- ELR data
- EMS data

HOW IT WORKS



Batch Data from Files

- Systems CSV
- · .XLS
- Epi Info
- Many more

COVID-19 **Data Repository** Individual Raw Data Stores

Real-time data translation Data Marts for BI

Turn AI/ML models into real-time Traditional Queries, R and SQL

Expose Data for

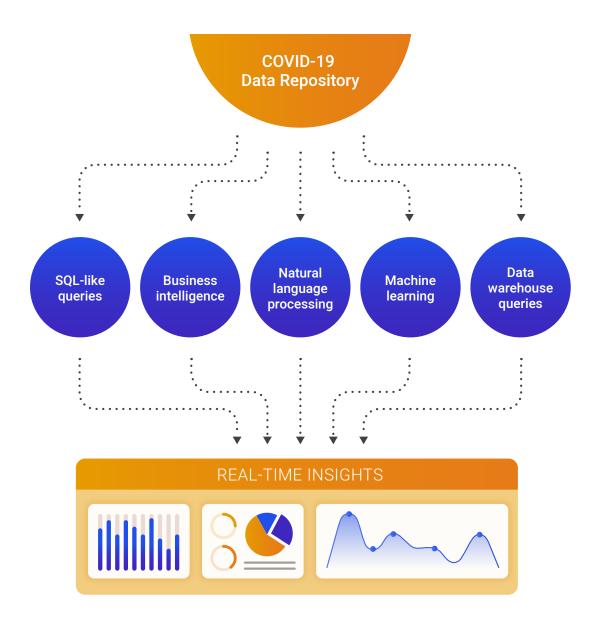
powered by aWS

Cloudticity Healthcare DataHub

A real-time analytics environment, built on Amazon Web Services (AWS), makes COVID-19 surveillance data available in moments. Just deploy the cloud-native ingestion engine, configure and normalize the data, and within minutes, analysts, data leaders, and epidemiologists can begin creating dashboards, heatmaps, and reports.

- · SPEED TO VALUE: Environments stood up in a matter of hours, onboard other entities in seconds.
- CONSOLIDATED DATA STORE: A single environment for all COVID-19 clinical and lab data.
- AUTOMATED DATA PARSING: Seamlessly integrate HL7v2, CCDA, JSON, XML, CSV, and custom file formats.
- ADVANCED ANALYTICS TOOLS: Train and leverage ML models, BI tools, integrate data from unstructured clinical notes.
- OUT-OF-THE-BOX DASHBOARDS: Comorbidities, patient trends, geographic swells, hospital capacity, and more.
- EASY TO USE: Query the data using SQL or more advanced tools like Spark and R. Integrate with your MPI solution.

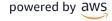




Cloudticity Healthcare DataView

Don't have a team of analysts? Let our data visualization-as-a-service solution get you the answers you need right away. Submit your requirements, then go about your day. Access meaningful dashboards that drive population health management activities within hours.

- VISUALIZATIONS DELIVERED ON DEMAND: Submit your requirements, then go about your day.
- DASHBOARDS, HEATMAPS, AND REPORTS: Real-time monitoring ensures data is continuously refreshed and up to date.
- ADVANCED DATA SCIENCE: Our expert analysts leverage AWS-native analytics tools to uncover hidden insights.
- KEEP YOUR COMMUNITY INFORMED: Securely share particular dashboards on public facing websites.







What Questions Are We Answering?



COMORBIDITIES

What comorbidities signal higher risk for an individual's hospitalization and ventilation?



PATIENT TRENDS

How do various patient trends impact length of stay, discharge disposition, recovery rate, and reinfection?



HOSPITAL CAPACITY

In what geographic areas does the COVID-19 impact exceed the existing hospital/supply capacity?



VENTILATOR INVENTORY

What does my current ventilator inventory look like? When can I expect a ventilator to be freed up?



GENETIC PREDISPOSITIONS

Which genes are linked to complications? Which genes are linked to mild or asymptomatic patients?



CONTACT TRACING

Who may have been exposed to COVID-19 so my agency can inform them?



TRACKING RECOVERIES

How many have recovered vs. how many have not based on particular filters?



CASE STUDY

State Hit Hard By Virus Flattens the Curve

Need

90% of COVID-19 data lacks the clinical depth needed to derive anything meaningful about how to respond. With the virus rapidly spreading, a state department of health reached out to AWS and Cloudticity in need of a solution that could ingest massive quantities of healthcare data, normalize and consolidate the data, and provide real-time insights to drive the COVID-19 response activities.

Solution

Cloudticity and AWS deployed Cloudticity Healthcare DataHub. They organized requirements across multiple HIEs and over 100 stakeholders. They trained the health department's analysts and had the team working with production data in 11 days. You can learn more about Healthcare DataHub COVID projects here.

Outcome

- Began visualizing real-time COVID-19 clinical data in just 11 days
- · More accurate, relevant reports on risk factors, comorbidities, and infections
- Able to intelligently manage ventilator inventory, hospital capacity, and ICU beds needed using machine learning algorithms
- Performs contact tracing by pushing positive tests to tracing mechanism
- State is now "in the green" and on track to recovery



