



NYC  
HEALTH+  
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# NYC Health + Hospitals Empowers 50K+ Healthcare Professionals with Trusted Data and Analytics



*“Data is critical for achieving situational awareness in any health system. When COVID-19 arrived in New York City, we needed to support our medical workforce with actionable data to better respond to the pandemic – Informatica helped us do just that.”*



**Alexander Izaguirre**  
PhD, Chief Data Officer  
NYC Health + Hospitals

## Goals

Bolster employee confidence in data and foster a culture of data citizenship and innovation

Integrate legacy data sources—including electronic medical records (EMR), clinical, HR, and revenue information—into a single, trusted enterprise view

Accelerate time to market for new data projects, including COVID-19 response dashboards, predictive analytics, and regulatory compliance

## Solution

Build DnA Dash, a one-stop shop for all employees to access healthcare data and analytics, powered by Informatica Data Quality and Informatica Enterprise Data Catalog

Cleanse and standardize data from 25+ sources to create a business glossary of 1200+ medical definitions, measures, metrics, and KPIs using Informatica Axon Data Governance

Migrate existing data repositories into a Snowflake cloud data warehouse, hosted on AWS, using Informatica’s ETL (extract, transform, load) capabilities

## Results

Drives better, faster, and more confident decision-making throughout the organization, from board members to front-line health workers

Improves quality of patient care by arming doctors, clinicians, and facility leaders with data tools to better surveil, analyze and respond to the pandemic

Saves time and resources with a modern data infrastructure that can develop reusable data assets with greater speed and consistency



## About NYC Health + Hospitals

NYC Health + Hospitals is the largest public health care system in the United States. It provides essential inpatient, outpatient, and home-based services to more than one million New Yorkers every year in more than 70 locations across the city's five boroughs.

## Informatica Success Story: NYC Health + Hospitals

NYC Health + Hospitals is the home base for more than 50,000 healthcare heroes who strive to provide high-quality, affordable healthcare for all New Yorkers. As the largest public healthcare system in the U.S., NYC Health + Hospitals treats nearly 1.4 million patients—who collectively speak more than 190 languages—through a network of more than 70 hospitals, clinics, and centers in all five boroughs.

Managing the data zipping across this vast network is Chief Data Officer (CDO), Alexander Izaguirre, PhD, whose team has been working to modernize the analytics practice at the 52-year-old medical institution. “Healthcare providers are looking beyond data that simply provides a historical view and embracing new predictive models that spot conditions, detect clinical deterioration, and help diagnose diseases and target therapies, as well as improve hospital operations,” Izaguirre says.

To support this transformation, Izaguirre’s team helms a multi-pronged strategy that spans data governance, cloud modernization, and self-service dashboards that help foster data literacy across the organization. These investments proved critical in March 2020, when New York City became the epicenter of the COVID-19 pandemic. The already complex healthcare system met the unprecedented complexity of an emerging global crisis.

“Data is the new gold, and when COVID-19 arrived in New York City, we needed to position our staff members to quickly respond to the pandemic,” Izaguirre says.

## Laying the Groundwork for Healthcare Data Governance

Before embarking on its cloud modernization journey, NYC Health + Hospitals saw a tremendous amount of confusion among staff when it came to data. Legacy systems required healthcare workers to manually gather data, send huge files, and approve who could access a given file. There was little consensus about data taxonomies, and the dictionaries that did exist were incomplete, covering only specific lines of business.

“When I came on board, it was obvious that many of our healthcare professionals didn’t know what patient and medical data we had, or how to use it effectively,” Izaguirre says. In his early days on the job, he visited several hospitals and facilities across the network, gathering a sense of each team’s needs or pain points. “Many people were starving for data, but it’s not necessarily comfortable or easy to use those tools,” he says. Instead, there was often fear or anxiety, or a lack of confidence in data.

As a former Chief Information Officer (CIO) – who also holds a PhD in viral immunology – Izaguirre could empathize with these challenges. He knew that clinical and administrative teams need both trusted data and intuitive tools to infuse the power of data into their day-to-day workflows. “From a CIO perspective, it’s all about expediting processes and making things happen faster,” Izaguirre says. “As a CDO, I realized my role was more about certainty, leveraging data to support more confident decision-making.”





*“Informatica is helping us improve consistency and data quality by governing data as we’re ingesting it into our cloud data warehouse. That leads to the higher level of trust that we want to establish.”*

**Angelie Oberoi**

Senior Director, Data & Analytics

NYC Health + Hospitals

For large public healthcare systems, which don't turn anyone away and rely on the smart use of time and resources, every operational efficiency gained is critical. Izaguirre's team began working with Informatica to modernize its data infrastructure and establish an organization-wide integration and governance strategy.

### Powering Fast Collaboration in the Cloud

At the heart of this approach is a one-stop dashboard for any employee to easily access clinical and facility data and analytics. But delivering on this promise calls for clean, trusted data—integrated, aggregated, and readily accessible to the people who need it.

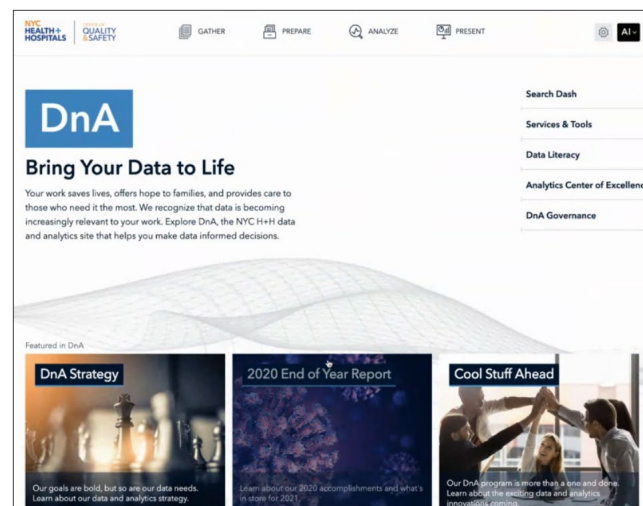
Izaguirre's team began by consolidating their existing data tributaries. Using Informatica Data Quality and ETL (extract, transform, load) capabilities, they rapidly cleanse, standardize, and integrate data from several sources, including Epic for electronic medical records, Dentricks for dental services, PeopleSoft for HR, and Tableau for business intelligence, among many others. Legacy data repositories are pooled into a central Amazon S3 data lake, then sorted into a Snowflake cloud data warehouse where projects can be efficiently scaled up and down.

“Informatica is helping us improve consistency and data quality by governing data as we’re ingesting it into our data warehouse,” says Angelie Oberoi, Senior Director, Data & Analytics at NYC Health + Hospitals, where she partners with clinical leadership on getting the right data into the hands of front-line health workers. “That leads to the higher level of trust that we want to establish.”

With the data lake and warehouse in place, NYC Health + Hospitals curates its data with [Informatica Axon Data Governance](#) and catalogues metadata using [Informatica Enterprise Data Catalog](#), creating a business glossary of 600+ medical definitions, measures, metrics, and KPIs. This makes it easy for teams to collaborate on data governance and understand data lineage across on-premises and cloud environments.

“Informatica has the most mature, robust, and open API stack of any vendor we looked at, which is important to us because we want to offer our healthcare professionals a one-stop shop for data,” Izaguirre says. “We don't want them to have to log into multiple tools.”

Using Informatica's open APIs, data passes seamlessly into the end-user interface: “DnA Dash,” a central resource where any NYC Health + Hospitals employee can easily find dashboards and reports with the patient care or facility information they need.





*“Trusted data has never been more important—it’s helping us drive a transformation in health outcomes and administration. With Informatica and Snowflake, we have the insights we need to deliver higher quality, lower-cost care. The accolades that I get for our team’s work day after day just keep mounting, and that’s partly due to the great tools that we’ve put in place.”*

**Alexander Izaguirre**

PhD, Chief Data Officer  
NYC Health + Hospitals



“When our application team provided a live demo of the dashboard, we could see all of the entries from Informatica appear in a beautifully curated business glossary,” Izaguirre says. “That showed us that our vision would play out correctly.”

Information from Epic EMR is regularly updated through a daily ETL feed, and DnA Dash offers quick links and tools to improve data literacy and governance.

### Improving Care with Predictive and Prescriptive Analytics

The richer, higher-quality, and more timely data made available through the cloud data warehouse provides the foundation for valuable insights across the healthcare system. This improves the efficiency of daily operations and clinical care, as well as streamlined compliance with regulatory bodies, who can be granted a key or token for timed access to targeted data segments.

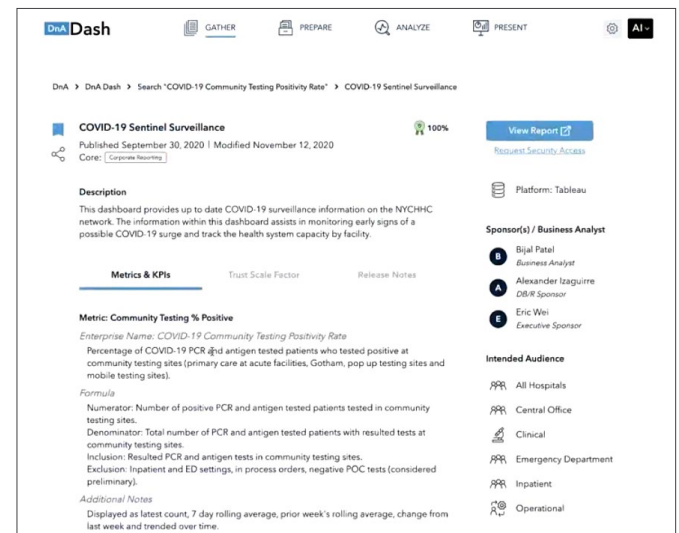
“Informatica and Snowflake give us the ability to develop reusable data assets that will allow us to create patient care reports and dashboards faster, and with better performance, consistency, and accuracy,” says Izaguirre.

Most importantly, these insights improve the resiliency of healthcare systems, especially in times of crisis such as a natural disaster or pandemic.

For example, if a doctor wants to see the number of inpatient admissions with a confirmed COVID-19 diagnosis, they can immediately find the data within DnA Dash and explore any related dashboards. The physician can also see where the data is in its lifecycle and determine if it has been ratified by governance procedures.

Self-service access to data for predictive analytics can lead to better quality of care, helping doctors predict how infectious diseases such as COVID-19 will affect facilities utilization and resources. It can also help the hospital establish predictive analytics scores to help gauge patients’ risk of conditions such as sepsis that can be potentially life-threatening.

“When COVID-19 first hit, we didn’t have the data-driven capabilities we have today with Informatica,” says Izaguirre. “We hope there are no more pandemics in our future, but should such a situation





### Inside The Solution:

- Informatica Axon Data Governance
- Informatica Data Quality
- Informatica Enterprise Data Catalog
- Amazon Web Services (AWS)
- Snowflake
- Tableau



occur, we are now much better positioned to do that type of data work and report numbers to agencies faster to support population health control.”

### Driving Healthcare Transformation in New York City

Tasked with the health and well-being of the largest city in the U.S., NYC Health + Hospitals continues to use data to help save lives and provide high-quality healthcare to those who need it most.

As the pandemic endures, Izaguirre’s team is improving COVID-19 business intelligence dashboards with more timely and enriched data sets. Using governed definitions, hospitals can better understand if specific comorbidities are affecting a patient’s stay, which age groups and communities are most impacted, and how conditions can shift during a pandemic.

“Informatica and Snowflake will continue helping us once we’re past the pandemic as well, giving us the information we need to improve operational and staffing efficiency, so we can make the best use of our resources,” says Oberoi.

Through its ambitious vision for a data-driven culture, NYC Health + Hospitals is empowering every health professional with the tools to make smarter, more confident decisions, providing a glimpse into the future of intelligent care.

“Trusted data has never been more important—it’s helping us drive a transformation in health outcomes and administration,” says Izaguirre. “With Informatica and Snowflake, we have the insights we need to deliver higher quality, lower-cost care. The accolades that I get for our team’s work day after day just keep mounting, and that’s partly due to the great tools that we’ve put in place.”

Digital transformation is changing our world. As the leader in enterprise cloud data management, we’re prepared to help you intelligently lead the way. To provide you with the foresight to become more agile, realize new growth opportunities or even invent new things. We invite you to explore all that Informatica has to offer—and unleash the power of data to drive your next intelligent disruption. Not just once, but again and again.

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