

Tracking Cancer Cases with Better Data: Nationwide Cancer Reporting to Public Health

Innovations in Informatics: Laboratory and Cancer Registry Success Stories

This story reflects insights gathered from interviews and information-gathering sessions with multiple pathology laboratories and public health agencies involved in this initiative.

APHL, in collaboration with CDC, is onboarding high-volume pathology labs to the AIMS Platform to send diagnostic results to cancer registries in all 50 state departments of public health. Reporting through AIMS as a trusted public health intermediary streamlines data exchange and eases the burden on labs and public health agencies. With high-quality, complete and more timely data on cancer case incidence, researchers and epidemiologists at the local, state and federal level can evaluate trends and produce actionable reports that contribute to reducing cancer-related death and illness.

The situation

State laws require healthcare entities—including hospitals, radiation and surgery centers, pathology labs and physician offices—to report incidence data on many types of cancer to state, tribal and territorial public health departments. Millions of pathology reports are submitted to cancer registries annually and, while critical for public health surveillance and response, the process is time-consuming and complex for data senders (or data submitters) and public health agencies (PHAs). Pathology labs that conduct testing across state lines send results to multiple PHAs, each with its own requirements. PHAs receive results in various formats, including hard copies, faxes, PDFs, CSV files and HL7-compliant messages. PHAs must consolidate these formats and import them into cancer registry systems for these data to be usable. Timeliness is another important factor as some labs report daily or weekly, while others monthly or quarterly. This reporting often involves significant administrative overhead, manual data entry for labs and PHAs, and issues with poor data quality. With little standardization, PHAs sometimes receive excessive or irrelevant information, while other records may be incomplete or missing critical data elements. PHAs and pathology labs need a standardized approach to share higher quality data more efficiently.

Impact

- More comprehensive and timely visibility into cancer incidence
- Simplified workflow
- Improved data quality
- Staff hours saved

Today, well over 200 individual facilities send data to cancer registries in 50+ public health jurisdictions through AIMS, with many more labs in queue.

The solution

Reporting to cancer registries is part of CDC's strategy to standardize electronic cancer registry reporting from public and private pathology labs. A project cornerstone is simplified reporting through AIMS, which provides a centralized reporting pathway for labs to transmit reports to all US state and territorial PHAs. Each lab maintains a single connection through AIMS instead of 50+ individual point-to-point connections. Labs implement messages compliant with the North American Association of Central Cancer Registries (NAACCR) Vol V Standard for laboratory electronic reporting to cancer registries. Along with reporting via the AIMS platform, this standardized guidance enables labs to deliver more complete and reliable data to cancer registries in near real-time. Labs send reports to AIMS, which then routes them to appropriate PHAs using each agency's preferred transport protocol.

Cancer Reporting through a Public Health Intermediary

Reflections

Maximizing Efficiency

This project builds on the success of previous private-public partnerships to send electronic lab reports (ELR) through AIMS. All PHAs are already connected to AIMS as a result of these ELR initiatives or efforts. CDC works with APHL and PHAs to prioritize pathology labs based on testing volume and geographic coverage. The technical assistance team has developed an efficient onboarding process that enables labs to follow and internally validate NAACCR messages before engaging the PHAs.

Participating labs have reduced the time spent troubleshooting. For example, PathGroup previously staffed a full-time developer dedicated almost exclusively to supporting cancer reporting. By streamlining their reporting via AIMS, the developer can now focus on other critical lab infrastructure needs.

"These initiatives advance key goals in public health and laboratory excellence and strengthen the partnerships that make this work so impactful." - PathGroup

For the Georgia Department of Public Health (GA DPH), benefits extended beyond the immediate relief of manual data entry. Consistent, timely reporting for labs means less time spent on cumbersome end-of-year audits and tracking missing data. Onboarding a lab takes approximately 1-2 hours of staff time to review test messages, while exponentially saving more by eliminating the onerous legacy reporting process.

"Far more efficient, saves us time and effort." - GA DPH

Challenges

Although many pathology labs are in the queue, administrative hurdles inhibit onboarding timelines. The team is exploring strategies to increase the number of labs onboarded each year. Meanwhile, PHAs continue to receive reports in multiple formats through various mechanisms. Public health will realize an even greater return on investment (ROI) as more pathology labs transition to automated, and standardized reporting.

Suggestions for Others

The benefits of simplified, standardized public health reporting are evident for labs, PHAs, Central Cancer Registries and public safety. This partnership model can be replicated across other use cases, and AIMS pipelines can also be leveraged during public health emergencies to route data quickly and efficiently.

Annapath

AP Derm

Bioreference

Capital Digestive Care

Inform Diagnostics

ICM Diagnostics

NeoGenomics

PathGroup

QDx Diagnostics

Quest Diagnostics

Summit Health

VitalAxis

Vizia Diagnostics

West Cancer Center

Labs in production as of March 2026

Up next

APHL, CDC, PHAs, Central Cancer Registries (CCRs) and participating labs are exploring expansion opportunities, including reporting to other public health registries, cancer follow-up information and validating the format of incoming messages. “

"We would love to have everything come through APHL. That would be awesome!" - FL DOH

Share your laboratory's success stories!

Help us reveal what the public health community continues to benefit through dedicated and long-term support. Share your story with APHL by scanning the QR code or visiting bit.ly/Lab-Informatics.

The *Innovations in Informatics: Laboratory Success Stories* series from the Association of Public Health Laboratories (APHL) showcases innovations and enhancements in informatics. It highlights the critical need for ongoing, targeted and sustainable informatics funding, while celebrating the progress that has been made.

