

Wyoming: A Portal to Save the Day

Innovations in Informatics: Laboratory Success Stories

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The situation

Amid the SARS-CoV-2 pandemic, healthcare facilities across Wyoming were required to gather and submit information on patients' samples at a level never seen before. They had to include epidemiologic information, critical to the surveillance of the virus, but the manual data entry required was extremely time-consuming to an overburdened workforce. Submitters had to input the data into RedCap and send a packet of printed papers with every single sample. Healthcare facilities were forced to spend inordinate amounts of time on data at a time when they especially needed to focus on patient care. The Wyoming Public Health Laboratory staff was equally overwhelmed. The two-person team ballooned to a 10-person crew to handle the onslaught of samples and the increased time required to accession and label each sample.

The solution

It was clear that submitters could not indefinitely keep up with the manual data entry demands. Throughout the spring and summer of 2020, through an initiative sponsored by the Association of Public Health Laboratories (APHL), the laboratory worked with state epidemiology and a number of high-volume pilot sites to implement iConnect's Laboratory Web Portal. This portal is a web-based platform that streamlines test ordering and results reporting between submitting partners and testing laboratories, allowing them to electronically exchange information. The organizations worked together to define the information collected and shared in the test order forms to develop standard templates that could be universally used by submitters. The pilot sites were also critical to defining needed functionality for the portal, like the ability to batch upload orders.

This solution provided immediate relief. On July 29, 2020, as cases of SARS-CoV-2 soared, Wyoming went live with the Laboratory Web Portal. This significantly decreased submission time for submitters and eased their burden, allowing them to focus on patients first. It also streamlined the internal processes in the laboratory, ensuring data quality and efficiency for every sample received.

Impact

Implementing the laboratory web portal allowed Wyoming to streamline their pre-analytical process. This allowed the laboratory to process more samples in the same amount of time, accessioning hundreds of samples in minutes rather than hours. This enabled result turn arounds at a previously unreachable rate. Submitters' real-time access to patient results allowed for quicker patient treatment and mitigation of transmission. And because the portal connected directly to the laboratory's LIMS, they could forecast volume and staff accordingly. They were also able to eliminate the need for staff to enter data by hand, improving quality and saving time.

Faster turn around times.
Improved data quality.
Better patient care.

Reflections

Collaboration

This was a hugely collaborative project and required dedication from a variety of different organizations. The adoption of the Lab Web Portal was made possible with support from APHL and iConnect Consulting, but the implementation required the Wyoming Public Health Laboratory, State Epi and submitters across the state to participate in the pilot. Each organization had different needs and goals, but at the heart of the initiative, everyone was effectively working to improve the health outcomes of the citizens of Wyoming.

Challenges

It was difficult to find the time and resources (people) to dedicate to the piloting and implementation at a time when all resources were being directed to patient care or testing. Even then, it was a challenge to convince the laboratory that this was a worthwhile effort and would ultimately save time. Overcoming the “fear of change” is a chronic informatics challenge. It wasn’t until everyone felt their basic needs would be met—epidemiology would get the specific information they wanted, providers were assured of a smooth process, and the laboratory would gain an efficient and logical workflow—that everyone came on board.

Suggestions for others

Be prepared to hear criticism and take suggestions for improvement. Every entity has slightly different needs and goals, and each one will have to be somewhat flexible to be successful. Onboarding documentation is key to a successful implementation. Make sure that there are resources (people, time, space) allocated towards good documentation and that it is widely accessible. Finally, be bold and ask for what you want; there is a good chance the developers can make it happen.

Up next

Once the portal was stable for SARS-CoV-2 test order submission, the laboratory began to migrate their entire testing catalog, **ensuring that critical connections are in place for future emergencies.**

Wyoming is currently evaluating ways to build upon the success of the Lab Web Portal and enhance its capabilities to improve laboratory operations on a wider scale. They are looking to:

- Implement supply order functionality through the portal,
- Develop the ability to allow submitters to print labels at the time of submission and
- Expand across programs and accommodate the addition of the laboratory’s Chemical Testing Program.

Share your laboratories’ success stories!

Help us reveal what the public health community stands to lose without 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, made possible by recent funding opportunities related to COVID-19, data modernization and public health infrastructure. It highlights the critical need for on-going, targeted and sustainable informatics funding, while celebrating the progress that has been made.*