

# Oregon establishes an electronic laboratory reporting data quality assurance protocol



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CATEGORY: **Laboratory Data Exchange**

With the influx of COVID-19 electronic laboratory results, Oregon Health Authority (OHA) noted data quality issues. Remediation was needed to support timely response activities. OHA implemented a protocol and report cards to assess laboratory adherence to reporting standards.

For more than a decade, Oregon Health Authority (OHA) has planned to implement a robust data quality assurance protocol for electronic laboratory report (ELR) submitters. However, lack of resources (including lack of staffing) and competing priorities have kept this in the "important but not urgent" category. Oregon was an early ELR implementer, receiving messages from Quest and LabCorp in 2004. Over time, their flexible acceptance criteria meant they were able to receive and process data from all major health systems and several reference laboratories, and their volume was low enough they could deal with data quality issues on a case-by-case basis.



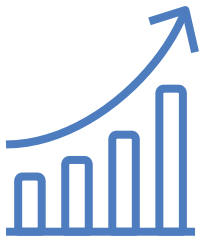
## The "What"

When the COVID-19 pandemic struck, the volume of ELRs received in Oregon increased by over 2500%. The "minor" data quality issues they were dealing with were exacerbated, and new submitters (not conforming to messaging standards) made those issues even more salient. With additional staffing brought on during the COVID-19 response, OHA resumed efforts to address data quality by creating a parallel repository for ELRs for the sole purpose of data quality evaluation. They have drafted a data quality protocol, validation, and remediation guide, internal dashboards, and submitter report cards that were piloted in April 2023. They are in the process of working with submitting partners to review this first iteration, which includes validity and completeness checks for all required elements. Thus far, they have successfully met with one of four pilot sites and the requested data quality revisions have been implemented by the site. Sites will be required to comply with remediation plans or be subject to civil penalties (which has always been in statute, but never been enforced).



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**>2,500%  
increase**

in lab results due to  
COVID-19 testing

### The “So What”

The impact, which has not yet been realized, will be more complete, accurate, and timely submission of data that conforms to nationally recognized standards. With this, OHA will also be targeting sites that have long failed to comply due to the historically lenient enforcement of standards without losing the high rate of participation. They also anticipate this will improve the ability to correctly classify cases, link subsequent ELRs without manual intervention, and provide more timely and accurate reporting (e.g., during the pandemic they struggled with correctly classifying test types because they were not receiving standardized order or test values).



### The “Now What”

OHA plans to have a rotating report/review cycle which will require automation, project management, analysis and feedback. Their longer-term goals are to be able to develop and implement partner-facing and public-facing data quality dashboards. They hope these tools will allow partners to see their data and fix data quality concerns in near-real-time while public-facing dashboards will allow OHA to share the challenges they face with data quality tied to ELR.

In addition to the ELR Coordinator, OHA will require a Data Exchange Partnership Coordinator and a Data Quality Analyst. All three of these positions are set to expire in June 2024. If they are not able to retain the positions, OHA will not only lose momentum, but also may have to discontinue the policy of broad acceptance of ELR in lieu of fewer but more standardized reports.

Key contributors to this project include Larissa Williams, Data Quality Analyst; Heather Crawford, Data Exchange Informatician; and METIS, Merged Epidemiology, Technology, Informatics and Surveillance Team.