Ohio Department of Health
COVID-19 Data
Performance Audit Digest

WHAT WE LOOKED AT (AUDIT SCOPE AREAS)

This audit is part of a multi-state project to examine data related to COVID-19. This effort was a collaboration among State Auditor offices from Delaware, Florida, Mississippi, Pennsylvania, and Ohio and was developed with assistance from the National State Auditors Association. This performance audit uses the multi-state audit program, with several Ohio-specific objectives included.[1,2] In this audit, we examined aspects of the following areas:

- **Data Collection**, including the types, frequency, technology and processes related to COVID-19 data collection.
- **Internal Reporting,** including guidance disseminated to providers, laboratories and local health departments (LHDs) and the timeliness of internal reporting.
- **Monitoring,** including monitoring COVID-19 coding for cases and sampling the testing and death certificate processes to ensure accuracy, as well as contacting and monitoring COVID-19 positive individuals.
- **External Reporting,** including the types of information and methods by which it was shared with the public; how useful, timely, meaningful, and accurate it was; and why certain data elements were selected for public reporting.

See **Appendix A** for more detail on these scope areas.

WHAT WE FOUND

The anonymized data we were provided by ODH from the Ohio Disease Reporting System (ODRS) appeared mostly accurate (See **Appendix A, On-Site Data Review**) but during the course of the audit, ODH identified over 4,000 death certificates that had not been reconciled to ODRS, thereby making the total Ohio COVID-19 deaths statistic inaccurate from approximately October 2020 to February 2021**.** Auditors were unable to determine the completeness of the data within (ODRS) due to the Department's assertion that the Health Insurance Portability and Accountability Act and other undefined constraints required it to deny AOS full access to test this data, thus limiting the scope of our review. These constraints also prevented us from reconciling data among systems (e.g. Death Certificate Data).

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[1] This performance audit report was conducted under Generally Accepted Government Auditing Standards. For more information regarding Purpose, Scope, and Methodology please see **Appendix A**.
[2] This audit did not examine ODH or LHD staffing, state funding, or death certificate reconciliation processes.

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ODH lags the majority of other states in the reporting of individual negative test result data as required by the federal government. See **R1**. Additionally, ODH is unable to report on two of the three means of displaying percent positivity due to incomplete negative test results data. This prevents the Ohio Department of Health from providing a selection of meaningful data points on rates of positivity in the community. See **R3**.

While ODH has improved the selection of metrics tracked and reported on its dashboard, the department should give a more accurate indication of active cases, hospitalizations, and test positivity rates. Additionally, the terminology used on the dashboard is inconsistent and unclear. The lack of refinement in the dashboard makes it difficult for the general public to make educated decisions. See **R3**. Further, the frequency of data updates may cause confusion when attempting to interpret information. See **R2**.

When counting the total number of hospitalizations and deaths, ODH does not differentiate between hospitalizations and deaths **by** COVID-19 and **with** COVID-19. While ODH counts deaths in accordance with CDC guidance, some medical professionals may complete death certificates in a manner that allows for inclusion of some individuals who did not die due to COVID-19 but rather of other causes while also testing positive for COVID-19. Additionally, in the case of deaths, there is conflicting guidance among federal and global public health organizations that should be studied by the Department. The conflicting guidance and definitions raise questions with the public and, as a result, eight other states have chosen to break out deaths into two metrics-deaths due to COVID-19 and deaths with COVID-19. See **R5**.

The data system and processes in use at the Ohio Department of Health, local health departments, and laboratories, are outdated and have not been able to scale for the volume of cases in the pandemic. Manual data entry, personnel intensive processes, and manual reconciliations all slow the departments of health response to outbreaks. See **R6**.

As cases spiked, overwhelming local health departments' capabilities to follow up with new positive cases, contact tracing became inconsistent across the state. See **R7**.

Last, AOS established a hotline for Ohioans to report inaccurate test results and other concerns related to COVID-19. We received 15 completed entries through the hotline. In several cases, these were found to be the result of clerical errors. However, our ability to investigate these complaints was restricted by ODH's assertion that HIPAA prevented us from matching these complaints with data in ODRS.

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RECOMMENDATIONS

Recommendation 1: ODH should examine its current framework for data collection for COVID-19 and work to ensure testing data is complete, accurate, and includes all tests administered in Ohio. In particular, the collection of negative test is critical for the accurate calculation of percent positivity, which is a metric that is used by policy makers to make decisions regarding mitigation efforts such as opening schools.

Recommendation 2: Though significant information is available to the public, the usability and clarity of this information could be improved to better guide policy decisions and individual actions. ODH should consider alternatives to daily updates to ensure data completeness and accuracy prior to reporting, as well as leverage trend data to improve public understanding of new case rates.

Recommendation 3: ODH should proactively explain, in a detailed manner, its rationale for the selection of data elements that it elects to share with the public. While the state dashboard was created in haste, subsequent refinements are needed to recalibrate some of its reporting elements, such as active infections versus recovered individuals. ODH should improve its dashboard reporting and terminology to ensure clear, concise communications to the public. Improvements include consistent data definitions, a better indication of active cases, and improved organization and navigation of the Dashboard.

Recommendation 4: ODH should work with LHDs to better align data reporting on daily county-level updates, thereby reducing skepticism generated by differing data. This could include better timing and coordination of data updates to increase consistency among LHDs and ODH, as well as clear explanations of jurisdictional authority.

Recommendation 5: ODH includes all deaths where COVID-19 is present in its total deaths calculation for Ohio. This may lead to confusion for the layperson as to whether an individual died *by* COVID-19 or died *with* COVID-19. To improve this data and enhance clarity in its reporting, ODH should:

- Examine the National Center for Health Statistics (NCHS), Centers for Disease Control (CDC), and World Health Organization (WHO) guidance, seeking clarification where necessary, and determine which of the deaths included in the calculation are deaths directly **caused by** COVID-19 versus those **with** COVID-19,
- Improve and update its guidance to medical professions on how to complete death certificates,
- Review current best practices regarding how to report COVID-19 deaths, and

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- Study COVID-19 death reporting methods used in other states that account for the variation between deaths which are deemed to be caused by COVID-19 and those cases where COVID-19 was present, but not a contributing factor to death.

Once this is complete, ODH should update its dashboard accordingly.

Recommendation 6: The Ohio Disease Reporting System (ODRS), the state's 20 year old infectious disease system, collects a significant amount of data on COVID-19 but the age of the system contributes to limitations in and problems with data collection. ODH should proceed with existing plans to replace ODRS, targeting implementation within 24 to 36 months.

Recommendation 7: Current law permits ODH only a coordinating function among the independent LHDs in relation to case investigation, limiting its ability to intervene when staffing constraints make timely contact tracing impossible, Therefore, ODH should pursue options to ensure consistent efforts related to contact tracing and case investigation by LHDs during a pandemic or other widespread infectious event.

LIMITATIONS ON AUDIT WORK PERFORMED

We were unable to conduct major portions of our data analysis based on ODH's interpretation of federal health data privacy laws. For the data we were able to review, our analysis showed that data errors were present in less than 1 percent of the cases.

We found that, generally, the COVID-19 testing data collected by ODH and the LHDs was received in a timely manner, but it was not always acted upon in a timely fashion by LHDs due to backlogs of manual data entry for email and fax test results. Backlogs in laboratory onboarding for electronic reporting still exist and contribute to the manual data entry and some data limitations, and we were unable to ascertain from ODH when this activity would be completed.

Finally, because negative test results were not compiled early in the pandemic and are reliant on electronic laboratory reporting for individual-specific results, ODH is unable to provide reasonable assurance that it's percent positivity figures contain accurate and complete data, nor is it able to internally or externally report other methods of reporting percent positivity.