Host site: Ohio Department of Health Office of Management Information Systems, Bureau of Informatics

Assignment Location: Columbus, OH

Primary Mentor: Brian Fowler BA, MPH

Secondary Mentor: Kristen Dickerson, PhD Epi/Public Health; MSN in public health nursing; MPH; BS in Microbiology

Agency Description:

The Ohio Department of Health (ODH) is a cabinet-level state agency with a mission to advance the health and well-being of all Ohioans by transforming the state’s public health system through unique partnerships and funding streams; address community conditions and inequities that lead to disparities in health outcomes; and implement data-driven, evidence-based solutions. Our core public health responsibilities include:

- Prevention and control of infectious diseases
- Direct, support and coordinate response to public health threats
- Build strong communities to enable all Ohioans to live disease and injury-free
- Address health inequities and disparities
- Assess and monitor environmental factors that potentially impact public health including air, water, soil, food and physical and social environments
- Assure quality in health care facilities

Our organization chart can be viewed here: https://odh.ohio.gov/wps/portal/gov/odh/about-us/resources/table-of-organization

Our agency goals and priorities are found in our State Health Improvement Plan, which you can review here: https://odh.ohio.gov/static/SHIP/2020-2022/2020-2022-SHIP.pdf

Assignment Description:
The fellow is anticipated to be instrumental in helping ODH implement electronic case reporting (eCR) and work through the Data Modernization Initiative (DMI). The primary role of the individual will be working on eCR with some special projects related to the DMI. Although ODH is currently receiving eCR messages, we are not able to process them into Ohio’s disease reporting system. A technical project is expected to be underway soon to allow for messages to be processed into the system. In addition, ODH expects to hire an eCR coordinator to help ensure that facilities are on boarded and data flows into the disease reporting system. The fellow will be heavily involved in this work as well including:

- Acting as a technical resource for facilities submitting eCRs
- Ensuring data flows into the Ohio Disease Reporting System
- Working with staff in the Bureau of Infectious Diseases when new diseases are onboarded to ensure appropriate data is collected
- Troubleshooting with ODH IT, AIMS, and staff in the bureau of infectious diseases
- Tracking progress of implementation
- Special projects related to eCR that are beneficial for ODH’s progress in this area

Preferred Background & Skills:

The ideal candidate would have knowledge, experience or education in public health surveillance, public health informatics, HL7 messaging, electronic health records, and epidemiology.

What can the fellow expect to gain from 2 years at this host site?

The fellow would have significant expertise in eCR, experience with implementing an entirely new form of data collection, and a general understanding of how public health information systems work at a large state health department.

Potential Projects include:

Host sites have listed up to 5 projects

Project 1: eCR Messaging Integration
Deliverable 1: Create and modify Mirth channels, available from APHL (eCR Confluence), to consume eICR and RR HL7 CDA messages and transform into simplified XML code.

Deliverable 2: Work with ODH IT to build upon existing case XML schema to import new data fields into the Ohio Disease Reporting System (ODRS), while ensuring appropriate mapping of existing fields currently available.

Deliverable 3: Coordinate user acceptance testing (UAT) with product owners and program stakeholders to ensure implementation of eCR adoption is successful. The Ohio Department of Health (ODH) will continue its focus on improving and expanding the public health data science workforce, building new interoperable data systems or updating existing systems by enhancing the aging IT infrastructure, and participating in data modernization initiatives, specifically electronic case reporting (eCR). The CDC Fellow will be involved in each phase of the process to build a custom solution to consume, ingest, and meaningfully use electronic case reporting from healthcare organizations (HCOs) at both the state and local health department levels. This will enhance existing electronic laboratory report information with additional fields of public health importance (e.g., treatment, symptomology), and improve overall data quality from incomplete or missing data fields received by laboratories. Ohio will leverage existing shared data services available in the Reportable Condition Knowledge Management System (RCKMS) to streamline eCR onboarding with healthcare organizations that wish to submit electronic initial case reports (eICR) and reportability responses (RR) for reportable conditions in Ohio. While Ohio designs and develops its solution, the proposed CDC Fellow will collaborate with subject matter experts (SMEs) in the Bureau of Infectious Diseases to coordinate authoring of all available reporting specifications (n~144) to ensure appropriate filtering of messages by disease program. The CDC Fellow will help to coordinate unit acceptance testing (UAT) of the developed solution and implement a training and rollout plan for all program stakeholders and end-users of the system.

ODH will leverage its existing Mirth platform for message ingestion to reduce number of available fail and communication points and to align with agency messaging best practices. Full implementation of electronic case reporting will enhance existing data quality of available case notification information which can inform public health action using key public health data fields (e.g., race, ethnicity, severity of illness). Ohio will begin to prioritize and onboard healthcare organizations (HCOs) to complete validation testing so that the HCOs may stop traditional case reporting through manual, paper-based methods, relieving them of potentially extreme burden for some reportable conditions.

Project 2: Develop training for ODH and local epidemiologists on eCR workflow and leveraging added data value

Deliverable 1: Work with ODH IT to create a roll-out and GO LIVE plan upon successful completion of UAT. Deliverable 2: Develop a testing plan, in coordination with the ODRS Coordinator, to train program stakeholders at both the state and local levels on new workflows that will exist as part of eCR implementation. This may involve offering regional trainings for local health department jurisdictions. Deliverable 3: Archive recorded trainings and make available for state and local health department
stakeholders as an available resource for future trainings. The Ohio Department of Health (ODH) will continue its focus on improving and expanding the public health data science workforce, building new interoperable data systems or updating existing systems by enhancing the aging IT infrastructure, and participating in data modernization initiatives, specifically electronic case reporting (eCR). The CDC Fellow will be involved in each phase of the process to build a custom solution to consume, ingest, and meaningfully use electronic case reporting from healthcare organizations at both the state and local health department levels. This will enhance existing electronic laboratory report information with additional fields of public health importance (e.g., treatment, symptomology), and improve overall data quality from incomplete or missing data fields received by laboratories. Ohio will leverage existing shared data services available in the Reportable Condition Knowledge Management System (RCKMS) to streamline eCR onboarding with healthcare organizations that wish to submit electronic initial case reports (eICR) and reportability responses (RR) for reportable conditions in Ohio. While Ohio designs and develops its solution, the proposed CDC Fellow will collaborate with subject matter experts in the Bureau of Infectious Diseases to coordinate authoring of all available reporting specifications (n~144) to ensure appropriate filtering of messages by disease program. The CDC Fellow will help to coordinate unit acceptance testing (UAT) of the developed solution and implement a training and rollout plan for all program stakeholders and end-users of the system.

Training the public health data science workforce will ensure a smooth transition for new system functionality available to its end users.

Project 3: Authoring of reportable diseases

Deliverable 1: Coordinate meetings with various disease program subject matter experts (SMEs) to ensure that Ohio’s disease reporting requirements are met from selecting criteria to author for all available reporting specifications (n~144).

Deliverable 2: Publish all available reporting specifications to TEST and coordinate end-user UAT with use-case examples provided by APHL.

Deliverable 3: Publish all available reporting specifications to PRODUCTION once UAT is signed off by product owner(s) and ODH IT roll out plan is scheduled. The Ohio Department of Health (ODH) will continue its focus on improving and expanding the public health data science workforce, building new interoperable data systems or updating existing systems by enhancing the aging IT infrastructure, and participating in data modernization initiatives, specifically electronic case reporting (eCR). The CDC Fellow will be involved in each phase of the process to build a custom solution to consume, ingest, and meaningfully use electronic case reporting from healthcare organizations at both the state and local health department levels. This will enhance existing electronic laboratory report information with additional fields of public health importance (e.g., treatment, symptomology), and improve overall data quality from incomplete or missing data fields received by laboratories. Ohio will leverage existing shared data services available in the Reportable Condition Knowledge Management System (RCKMS) to streamline eCR onboarding with healthcare organizations that wish to submit electronic initial case reports (eICR) and reportability responses (RR) for reportable conditions in Ohio. While Ohio designs and
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The use of shared services will ensure a standardized approach at onboarding HCOs using common trigger codes within the HCOs electronic health record system. This will allow for efficient adoption of eCR from HCOs and more timely completion of validation testing so that traditional, manual reporting of case reports can stop.

Additional information about the placement:

In addition to the specific projects, the fellow will likely have the opportunity to participate in other parts of the data modernization initiative as interests and expertise align.