

### Electronic Case Reporting for Public Health

A patient presents to a healthcare provider for a clinical examination. The healthcare provider performs the clinical examination and may record a differential clinical diagnosis or order a laboratory test consistent with the findings. Additionally, a laboratory test result may be returned for that patient's clinical encounter. This patient encounter is evaluated against a national set of trigger codes (including ICD-9 CM, ICD-10, and LOINC) that are locally implemented within the EHR system. The trigger codes are designed as non-specific codes to identify potentially reportable conditions. A diagnosis, lab order, or lab test code is matched with the trigger codes, and an electronic initial case report is sent to Public Health.

The electronic initial case report contains the data elements necessary to initiate a public health investigation.

The electronic initial case report is received by the appropriate Public Health Authority (or its proxy) with jurisdiction over the reporting facility. The electronic initial case report is evaluated using public health decision support and a notice of reportability is returned to the sending EHR system, inclusive of the public health decision support results (this includes the determination of reportability, the public health jurisdiction, and a URL to a static or dynamic form).

Alternative:

Triggering event- The clinical provider may initiate the sending of the electronic initial case report if the provider suspects that the patient has a condition of public health interest.

Narrative with example:

Patient A visits her doctor at Facility C after weeks of a low-grade fever and a worsening cough. Patient A presents to Dr. B, practicing at Facility C, with symptoms consistent with pertussis infection. After completing the clinical examination, Dr. B records a differential diagnosis of pertussis and orders a confirmatory laboratory test. This patient encounter is evaluated against a set of national trigger codes for public health reportable conditions that have been implemented within the EHR system at Facility C. Upon matching the differential diagnosis of pertussis to the trigger codes an electronic initial case report is generated and sent to the public health agency with authority over Facility C (or the public health agency's proxy). An electronic initial case report may also be generated when the laboratory order for a confirmatory test is recorded.

Since the trigger codes are intentionally non-specific, the public health agency employs a public health decision support tool to help determine the reportability of the case referred by the EHR system at Facility C. The decision support tool identifies that suspicion of pertussis is reportable in the public health jurisdiction, a notice of reportability is sent back to the EHR system at Facility C. The electronic initial case report is integrated into the public health agency's surveillance system for follow-up by a

public health investigator. The investigator may contact Patient A to identify close contacts and verify immunity. The public health investigator may also contact Dr B to follow-up on clinical findings.

Proxy: The Public Health Agency may employ a proxy or intermediary to receive the initial electronic case report and determine the reportability using a shared public health reporting decision support tool. This intermediary would determine reportability based on the facility and/or patient's location and the correct public health agency to route the initial electronic case report to. Pertinent information includes patient address and facility location to determine the jurisdiction with authority to receive this information.