

# Texas implements electronic case reporting (eCR)



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CATEGORY: Epidemiology and Laboratory Capacity (ELC)

CATEGORY: Electronic Case Reporting

Texas implemented electronic case reporting (eCR) and benefited from savings in both time and money. ECR is an invaluable tool that reflects a new era in data automation and efficiency in ingesting key surveillance data for many programs both within and outside of infectious disease.

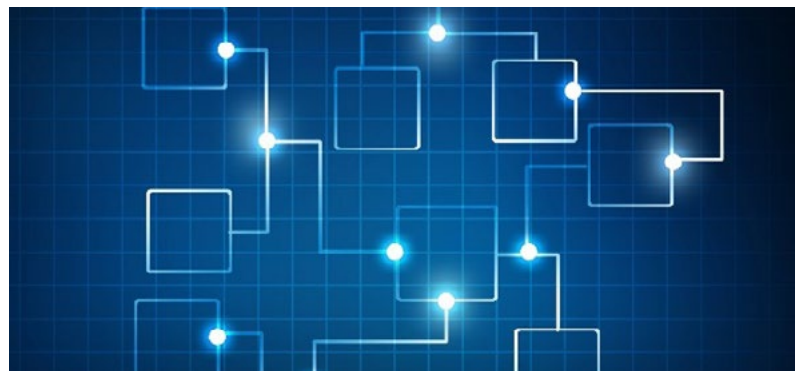
## The “What”

There have been great benefits of implementing Electronic Case Reporting (eCR) in Texas. There were three challenges that needed to be addressed. The first was that core infectious epidemiology and surveillance work required information on a patient's illness event to assess whether a disease event constitutes a case that meets CDC/CSTE case classification and definition in order to be officially counted. While investigators may be able to ascertain some information from patient interviews, if they are able to establish contact, there is also a need for a patient's medical record to be abstracted for specific information on that illness event or patient encounter. Public health staff from many programs across the Texas Department of State Health Services (DSHS) as well as local and regional health departments must conduct medical record abstractions to gather key data elements for their case investigations.

Medical record abstraction can be a time-consuming process. Depending on the health care organization, there are trainings that must be completed prior to being granted access. Some trainings are short while others are lengthier. Some healthcare organizations allow connection to an electronic portal to access records, while others only allow onsite review

that may be restricted by appointment only. Some healthcare organizations even charge public health for accessing medical records because it involves staff time to copy record pages one by one and transmit them. Adding to the cost of medical record abstraction is staff time required to travel, which can include rental car, lodging, and per diem to conduct abstraction from distant hospitals. Medical record abstraction is a vital component to arm public health with accurate data. Medical record abstraction also poses resource and time constraints on an already overwhelmed public health force.

The second challenge was that timeliness and completeness of notifiable disease conditions being reported to public health is an issue, with the burden placed on provider staff to report when needing to fax, phone, or mail notices to public health. The third challenge was that data entry of cases reported via fax has contributed to public health burden; this was painfully evident during the COVID-19 pandemic. Reviewing incoming faxes to determine how to triage can be extremely time intensive for public health staff.



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## The “So What”

### **The overall benefit of implementing eCR in Texas has numerous benefits to public health across the state including tremendous cost savings.**

Healthcare organizations and providers will also reap great rewards from this process. Long-term success includes observing measurable improvements in earlier detection of notifiable conditions and a marked reduction in prolonged demonstrated spread by outbreak linkage.

With newfound time allotted to conducting more analysis, Texas is building and expanding enhanced Tableau dashboards to monitor turnaround times from receipt of electronic initial case reports (eICR) to case investigation initiation and case investigation closing. Algorithms for monitoring will account for the method

of transmission and historical trends for conditions. Additional goals include enhanced integration of eICR key data elements into case investigations in The National Electronic Disease Surveillance System (NEDSS). Incorporation of automation is a goal, especially for larger volume conditions. Texas is awaiting page builder templates for foodborne conditions that are needed to implement more automation. Automated efficiency will be key in ensuring local and state epidemiologists are afforded more time to dedicate to data analysis rather than administrative tasks such as data entry.

Long-term success also includes providing eICR feeds for all sister programs across the agency and providing training for the successful incorporation of the data into their systems. Stronger public health programs ensure they are adequately prepared for the next pandemic.

## The “Now What”

Implementing eICRs has provided an immediate solution to infectious epi surveillance and staff, but it also provides invaluable data to other agency programs requiring medical records such as birth defects, cancer, and injury. This incredible solution funded by the Epidemiology and Laboratory Capacity for the Prevention and Control of Emerging Infectious Diseases (ELC) cooperative agreement provides Texas with an invaluable tool that reflects a new era in data automation and efficiency in ingesting key surveillance data for many programs outside of infectious disease.

The implementation of eICR for programs results in huge cost savings and time including earlier notification to public health on reportable disease conditions, increased accessibility and timeliness to valuable data, reduced burden to medical providers to report to public health, reduced need for manual

data entry for public health staff, and increased accuracy of data straight from eICR source. In addition, the agency will see a reduction in cost for staff required to travel and conduct medical record abstractions (rental car, flight, per diem, staff time spent conducting medical record abstractions on site).

Some programs fund positions whose sole functions are to perform medical record abstraction; those positions can be redirected to providing quality assurance reviews to ensure the best data quality and validity. Staff may no longer need to undergo various hospital trainings to gain access to medical records. The Public Health Informatics and Data Exchange Unit (PHID) is currently discussing eICR record processes for sending feeds to other program areas outside of the NEDSS. The excitement continues to grow among other programs as they prepare their own systems to handle eICR feeds.

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Key contributors to this effort include the DSHS Public Health Informatics and Data Unit as well as the many critical access hospitals and eligible hospitals across Texas working diligently on implementing electronic initial case reporting.