digital bridge

A Novel Public-Private Collaborative to Advance Public Health Reporting: Lessons Learned, Guiding Model for Success

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I.   **Purpose and future**

Digital Bridge was born from the desire to have health care, public health, and health IT (industry partners) working together to connect health care and public health to solve information exchange challenges. Key members of what would become the Collaborative Body came together to convene a large group of multi-sector partners which led to a formalized volunteer organization known as Digital Bridge. Recognizing the power of aligning the government's directive of protecting the health of all people with private sector technologic innovation, Digital Bridge achieved success in framing the first electronic case report (eCR) construct. Essential components of this success required participation from insurance, EMR/EHR vendors, health care organizations, additional health-oriented companies, and various national public health agencies and partners.

As its first project, Digital Bridge partners designed a nationally scalable, multi-jurisdictional approach to electronic case reporting (eCR). The foundation for the eCR architecture was prior investments by CDC in the Council of State and Territorial Epidemiologist (CSTE) Reportable Condition Knowledge Management System (RCKMS) and the Association of Public Health Laboratories (APHL) AIMS platform. eCR is the automated generation and transmission of case reports from electronic health record (EHR) systems used in healthcare to federal, state, and local public health agencies for review and action. Stakeholders developed this approach to address siloed, labor-intensive data exchange processes that created barriers to providers reporting infectious disease cases in compliance with state and local laws.

In 2019, after the success in the pilot sites, eCR was turned over to APHL, CSTE, and CDC to go into full production. Capable of addressing the 93-95 conditions at a granular level. In January, the flexibility of this new system was demonstrated when at the January 2020 annual meeting at DB discussion focused on the novel Coronavirus was discovered in China. By the end of that week, COVID was added as a reportable condition in eCR. Which accelerated adoption of eCR for nationally and locally notifiable conditions.

II.   **Model for Private-Public Partnership**
   a. The DB collaborative demonstrated the power of a public-private partnership, encompassing key stakeholders in public health, health care, and industry

partners. Significant progress was made in establishing collaborative approaches to monitoring and controlling major threats to the public's health. We have recommendations for future work which we think could be enhanced for future public-private partnerships engaging all of the stakeholders for these achievements.

III. **Recommendations for future work**
a. ***Continue building and utilizing partnerships between the public and private sectors, and non-profit agencies***
The healthcare industry is adept at managing health information exchanges, and whether through partnership, resource alignment, or knowledge transfer, healthcare can help public health. *Digital Bridge encourages healthcare systems to work toward meeting eCR standards with a focus on providing quality data to public health. Where possible, Digital Bridge recommends healthcare systems and public health agencies form collaboratives to set jurisdictional standards for reporting, share best practices, identify priorities for reporting, and target opportunities for advancing eCR.*

b. ***Implement sustainable, expandable, agile infrastructure at all levels of government***
The U.S. healthcare industry began its migration from paper to electronic medical records over 40 years ago. While national standards and certification requirements pressed adoption and digital data capture forward rapidly, public health lagged stuck with antiquated systems and paper-based reporting mechanisms, creating, in effect, a digital divide.. Many agencies still use programs like Excel and Access to manage surveillance programs with full knowledge there is incredible risk for data loss and lack of integrity by using these programs. In public health there has never been an alternative until the COVID-19 pandemic. The U.S. went from just over 3 million cases of reportable conditions per year to almost 20 million. In response to the remarkable volume of cases, many agencies used federal funds to procure extensive surveillance systems created by private sector consulting. Yet these systems are not sustainable in terms of cost or a public health agency's ability to maintain them. Federal funding for public health infrastructure investments is substantial, but time limited. *Digital Bridge recommends agencies focus infrastructure investments on data storage, ingestion, and analytic software flexible in allowing different systems, analytic languages, and user types to interact with data.*

c. ***Secure long-term funding for public health infrastructure and workforce development specific to data exchange technologies***
The Digital Bridge believes sustained funding is required to modernize public health data infrastructure. eCR cannot be expanded to new conditions or to

collect and extract new case information without better data storage capabilities, software for extracting valuable information, and subject matter experts to manage these processes. Current [CDC Infrastructure Grant](#) funds are split to promote workforce advancement and support for improved infrastructure. However, these funds will last only four more years. *Digital Bridge strongly encourages CDC, non-profit public health organizations, and state, tribal, local, and territorial agencies to educate and advocate, when appropriate, to secure federal funds.*

The case must also be made for local ownership of public health. The majority of public health agencies rely on federal funding to deliver critical services. It is time for local and state governments to acknowledge responsibility for the role of public health in keeping their residents healthy. *Digital Bridge recommends local and state advocacy for general fund allocation to strengthen the sustainability of public health programs.*

d. ***Leverage national standardization to ensure more complete data and better data quality***
In December 2023, [ONC issued a rule](#) to implement the EMR/EHR provisions of the 21st Century Cures Act by establishing new conditions and maintenance certification requirements for health IT developers under the ONC Health IT Certification Program. These new standards include definitions for the functional requirements of eCR including the case report transmission, response, reporting trigger codes, etc. This rule moves away from an "edition"–based structure allowing more consistent, incremental updates that recognize standards advancement, allow voluntary advancement in between certification standard updates, no longer require the entire certification of the Health IT Module, and provides predictable timelines for standards development cycles. *The Digital Bridge supports this rule change and encourages EMR vendors to take advantage of expedited approval processes facilitated by CDC.*

e. ***Continue advancement of eCR to include additional reportable conditions and expand the amount of information extracted from electronic initial case reports***
The COVID-19 pandemic furthered eCR with a requirement for agencies to reach a minimum standard of being able to accept, ingest, and extract electronic initial case reports. SARS-Cov2 remains the only reportable condition actively submitted from healthcare providers to public health, though eCR expansion is underway. In addition, the eCR architecture should be considered for use in transmitting other information of public health importance (e.g., non-communicable diseases, chronic disease, social needs). *Digital Bridge encourages the expansion of eCR-reportable conditions to those requiring the least effort such as conditions where a positive lab test is the only requirement for case*

reporting. Digital Bridge also encourages the continued expansion in the use of the eCR Now functionality developed by CDC, an FHIR-based API application that simplifies and improves the accuracy, efficiency and effectiveness of public health case reports. eCR Now has the potential to be applied for other public health reporting beyond case reports.