

California Stroke Registry: Linking EMS and Hospital Information to Improve Population Health

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Overview

- Overview of California Stroke Registry and Coverdell program
- Data collection infrastructure - planned
- Future vision
- Next steps

Paul Coverdell National Acute Stroke Program

- Established by Congress in 2001
- Directed Centers for Disease Control and Prevention (CDC) to implement state-based registries to measure and track acute stroke care to improve the quality of that care.
- Named in memory of Senator Paul Coverdell of Georgia, who died of a stroke in 2000 while serving in the U.S. Congress.
- Only state health departments are eligible to apply for these funds



Paul Coverdell National Acute Stroke Program

- Supports statewide, data-driven quality improvement activities across the stroke care continuum
- Long-term-goals
 - Better quality care for acute stroke patients
 - Reduce mortality and disability
 - Prevent recurrent stroke

California Stroke Registry

- Initiated in 2007 in the California Department of Public Health (CDPH) with CDC funding to collect data on hospital care of stroke patients
- 2012 – 2015: CDPH received Coverdell funds to work in hospital and pre-hospital settings
- 2015-2020: CDPH awarded Coverdell funds for five-year cycle— funding level has increased greatly (more than double prior cycle) → more resources for California to improve quality of care for stroke

Paul Coverdell National Acute Stroke Program States

Fiscal Year 2015



Centers for Disease
Control and Prevention
National Center for Chronic
Disease Prevention and
Health Promotion

Data-Driven Quality Improvement

CDC requires Coverdell states to establish a data system infrastructure to measure, track, and assess quality of care that:

- includes the entire care continuum (pre-, in-, and post-hospital)
- is capable of linking patient-level data collected in each care setting to create a continuous record of care

Pre-Hospital



In-Hospital



Post-Hospital



Establish data collection infrastructure: partnership with EMSA

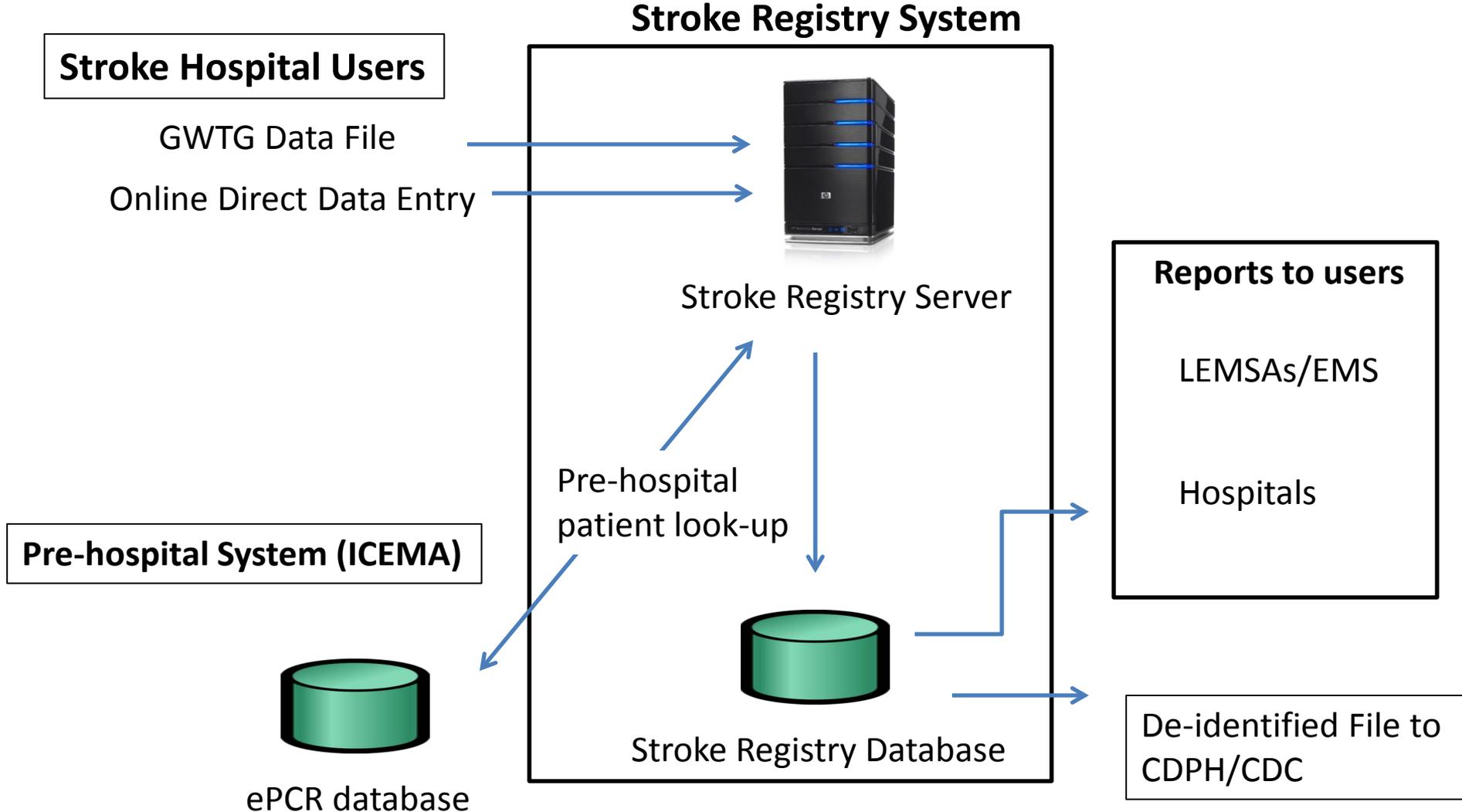
California Stroke Registry is partnering with EMSA to integrate a stroke registry data module into the EMSA state data repository

- Follows trauma registry model

- Uses same contractor - Inland Counties Emergency Medical Systems Agency (ICEMA)

Goal is to integrate and build upon systems and relationships that are already in place or being planned by EMSA and LEMSAs

Draft Stroke Registry System Workflow Diagram



Challenges

- Participation in registry is voluntary – no state mandate
- Many barriers that may restrict or limit willingness to participate include:
 - Manual data entry and review required that may be labor intensive
 - Competing priorities (multiple registries and reporting requirements)
 - Wide variation in capacity, resources, existing systems/software, political environments of hospitals and EMS agencies

Challenges

- Need for a reporting standard
 - NEMESIS 3 for pre-hospital data
 - Get With the Guidelines (GWTG) commonly used in hospitals, but not all use it
- Data collection concepts for the post-hospital setting and transition of care are not yet defined

Future Vision: Addressing Challenges with HIE

Reduce manual processes

- Hospital data could be retrieved from EHR – reduce or eliminate manual data entry into registry
- Hospital and ePCR data could be linked automatically using established algorithms (file function)
- More efficient, more accurate

Future Vision: Addressing Challenges with HIE

Expanding final care record data, uses, and access

- Final care record incorporating EMS and Hospital data (reconcile function) could be used to populate the stroke registry
- Final care record can include data from multiple facilities within and beyond a LEMSA's network
- Final care record could be available to care providers post-discharge to improve transition of care

Next steps

- Contract with ICEMA executed in March 2016 and work has begun to build the stroke registry
- Begin to onboard LEMSAs and hospitals late 2016/early 2017
- Ongoing communication/update with EMSA and LEMSAs

Summary

- Funding from CDC provides California with an opportunity to build a stroke registry infrastructure that will support performance monitoring
- Shared leadership with EMSA and close communication/partnership with LEMSAs will provide opportunities to integrate this project into the developing HIE infrastructure in California

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