

The Paul Coverdell National Acute Stroke Registry:

Measuring, Tracking and Improving Quality of
Acute Stroke Care

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Registry

A registry is defined as a system of data collection and retrieval concerned with the characteristics, diagnosis, treatment, and follow-up of patients in a particular disease category.

CDC Registries

- Agency for Toxic Substances and Disease Registry
- Birth Defects
- Traumatic Brain Injury
- Cancer
- Lupus
- Stroke

Paul Coverdell National Acute Stroke Registry

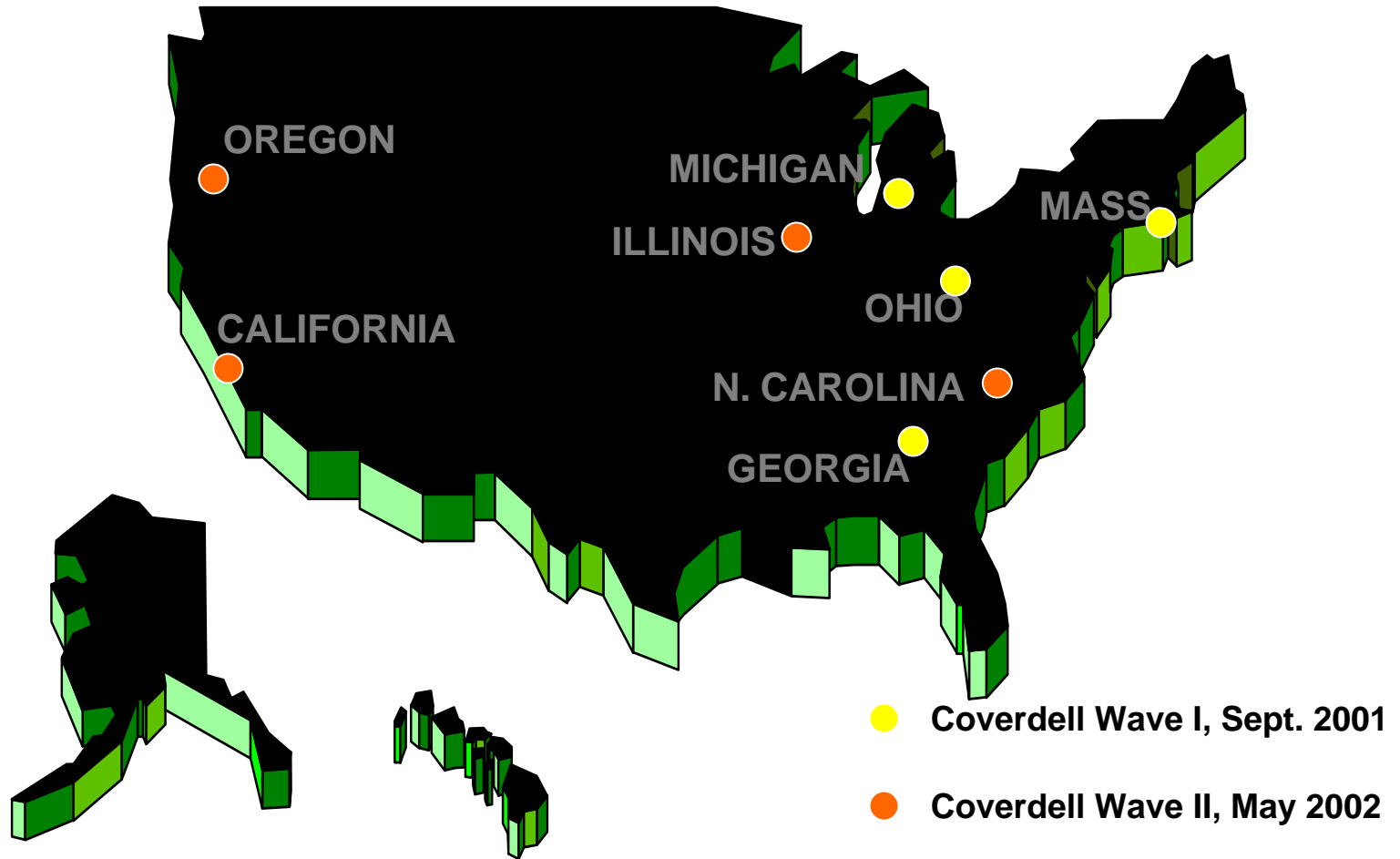


- Named in honor of Sen. Paul Coverdell, R-Georgia who died at age 61 in July, 2000 of a cerebral hemorrhage.
- Congress awarded \$4.5 million in FY 2001 for CDC to:
 - Consult with stroke organizations in developing specific data elements for stroke registry collection.
 - Design and pilot test registry prototypes.

Prototype Goals

- Design prototypes to measure delivery of care to patients with acute stroke in order to provide “real-time” data and analysis to reduce death and disability from stroke.
- Test in a state-wide sample of hospitals that represent a diversity of facilities.
- Establish a registry model that can be adopted by states as a data collection and analysis tool to guide hospital interventions to improve care and reduce death/disability.

Coverdell Prototypes



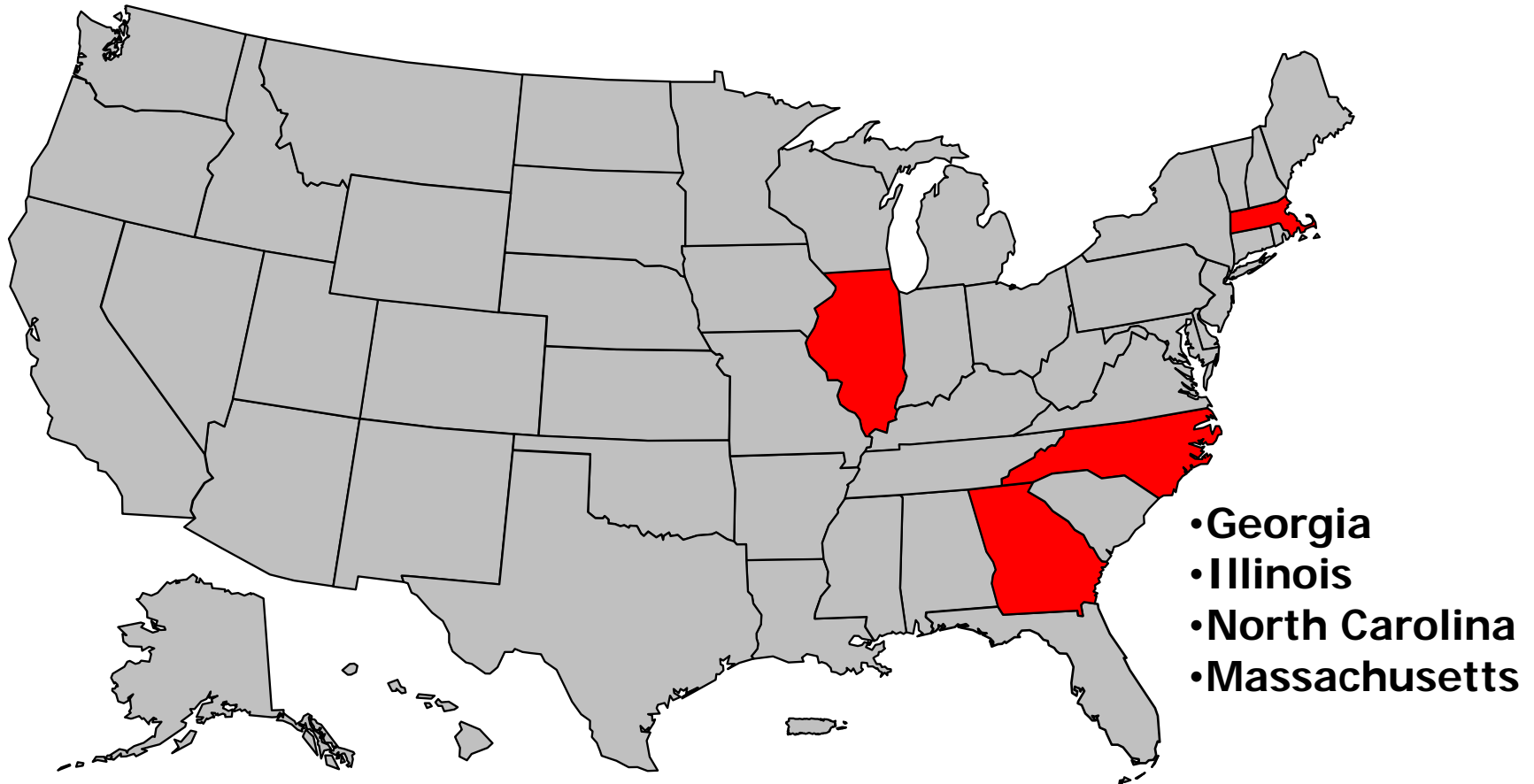
Prototype Results

- Data showed that large gaps existed between treatment guidelines and actual hospital practices.
- Quality improvement interventions were needed to improve emergency room diagnosis, in-patient management, and secondary stroke prevention.

State Coverdell Registries

- Supplemental RFA released January 2004 to implement state-wide registries.
- Only state health departments funded under the CDC Heart Disease and Stroke Prevention Program eligible to apply.
- Focus on monitoring quality of care not on prevalence or incidence of disease.

Coverdell Registry States



Coverdell Registry Mission

- To provide states with resources and tools to measure quality of acute stroke care.
- To enable states to implement effective quality assurance interventions in acute care settings.
- To standardize methodologies and practices to enable national benchmarking, comparison, and evaluation of acute stroke care and quality improvement efforts.

Scope of Data Collection

- Pre-Hospital
 - Arrival mode
 - Date and time call received by EMS
 - Where patient was received

Scope of Data Collection

- Emergency Department evaluation and treatment.
 - Age/gender/race
 - Date and time of arrival to hospital
 - Ambulation status
 - Time of symptom onset
 - Date and time of initial brain imaging/findings
 - Whether thrombolytic therapy was provided

Scope of Data Collection

- In-hospital evaluation and treatment.
 - Date of admission
 - Neurologist/stroke team involvement
 - Atrial fibrillation present
 - Documentation of screenings/therapeutic treatments
 - Ambulation status after 48 hours

Scope of Data Collection

- Discharge information:
 - Date of discharge
 - ICD-9 discharge diagnosis
 - Smoking cessation counseling
 - Discharge medications (e.g. lipid altering, antihypertensive, anti-thrombotic)
 - Discharge destination
 - Rehabilitation services

CDC Registry Model

- Set up an advisory committee to assist in building consensus, cooperation, and planning for the statewide stroke registry.
- Plan, implement, and support the operation of a hospital-based, statewide stroke registry.
- Develop a sampling strategy and recruit a representative sample of hospitals providing acute stroke care.

CDC Registry Model (cont.)

- Develop and maintain a data system that collects information for a minimum of 6 months each year.
- Ensure all required data elements are collected, undergo quality assurance, and transmitted to CDC on a regular basis.
- Based on the registry data collected, implement interventions that support quality improvement using policy and environmental approaches.

Alternative Registry Model

- Collaborate with other organizations interested in heart disease or stroke care quality improvement (e.g. AHA, QIO)
- Inventory hospitals in state that collect quality of care data and available data collection systems.
- Provide assistance to willing hospitals to collect and analyze data.
- Provide technical support to implement quality improvement interventions.

Registry Evaluation

- Process:
 - Hospital participation
 - Training
 - Sampling schemes
 - Data collection
 - Data quality assurance
 - Utilization of data for quality of care improvement

Registry Evaluation

- Quality care indicators:
 - EMS related
 - Thrombolysis
 - Complication management
 - Quality of life measurement
 - Secondary prevention
 - Education
 - Rehabilitation

Registry Evaluation

- Clinical outcomes:
 - Short-term and long- term mortality
 - Morbidity
 - Quality of life
 - Recurrence of stroke complications
 - Cost effectiveness of programs

Future Plans

- Analysis and publication of national dataset.
- Development of best practices for stroke quality improvement interventions.
- Improved guidelines for stroke quality of care.
- Competitive Coverdell Stroke Registry RFA announcement 2007.
- Additional cardiovascular registries.

Thank You

- For more information on the Paul Coverdell National Acute Stroke Registry, please contact Ahmed Liban at:
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