Challenges and Opportunities: National Vital Statistics System and the National Death Index

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NVSS Challenges and Opportunities

- #1: Continual improvements in timeliness of the records to NCHS, especially mortality
  - Transition the NVSS to a near-real time surveillance system which can detect emerging public health issues
  - Mortality---Goal is 80% of deaths being reported to NCHS within 10 days of the date of the event. (*Currently at 55%, up from 7% in 2010*)
    - Targeted interventions with the worst or underperforming states
    - Improve the capabilities of the medical examiners and coroners
  - Improving the performance of jurisdictions
    - Underperforming jurisdictions need to be targeted.

NVSS Challenges and Opportunities

- #2: Quality of vital statistics data
  - Medical information on birth certificates
    - Birth e-learning training for clinical & non-clinical hospital staff
    - Re-design of birth facility guidebooks
    - New State/federal workgroup on evaluation of modifications/additions of health items for birth reporting
    - Interoperability with electronic health records and electronic registration systems
  - Quality & specificity of reporting of causes of death
    - Incentivizing medical providers to provide quality information
    - Increasing the value of the data to physicians
    - Real-time products from vital records to providers to validate their practices
    - Interoperability with electronic health records and electronic death registration systems
    - ***Must prevent the urge to develop drop down lists for identifying the causes of deaths !!!***
  - Develop metrics and benchmarks to measure quality/success

NVSS Challenges and Opportunities

#3: Interoperability of vital and health/medical systems

- Establish & expand use of national standards on births and deaths in the public and private sector to support interoperability
  - HL7 standards
    - Draft standards for births
    - Draft standards for deaths
    - Draft standards for fetal deaths
  - FHIR standards
- Linkage of electronic health records with electronic vital systems
  - Pilot projects in California and University of California at Davis
  - Pilot project with Utah
- Electronic linkage of the medical examiner/coroner systems and electronic death registration systems

NVSS Challenges and Opportunities

- #4: Leveraging technology for better information
  - Quality checking of cause of death at the source of the data.
    - Implement VIEWS (Validation Interactive Edits Web Service) with electronic death registration systems *(currently 12 states)*
  - Decision-support tool to aid physicians in completing the causes of death *(machine learning project at Georgia Tech University*)
  - Modernization of the Medical Mortality Data System
    - Code more records electronically *(Currently 79%. The goal is 90%) .*
    - Use of Natural language processing and machine learning techniques with our automated coding system to:
      - » Data mine all literals on the death certificates and
      - » Add that information in a useable format to the NVSS Mortality Statistics and the NDI databases
  - On-line and other educational programs on completing the birth certificate and on the cause of death
  - Geo-coding of records at the source

NVSS Challenges and Opportunities

#5: Enhancing the "value" of vital statistics

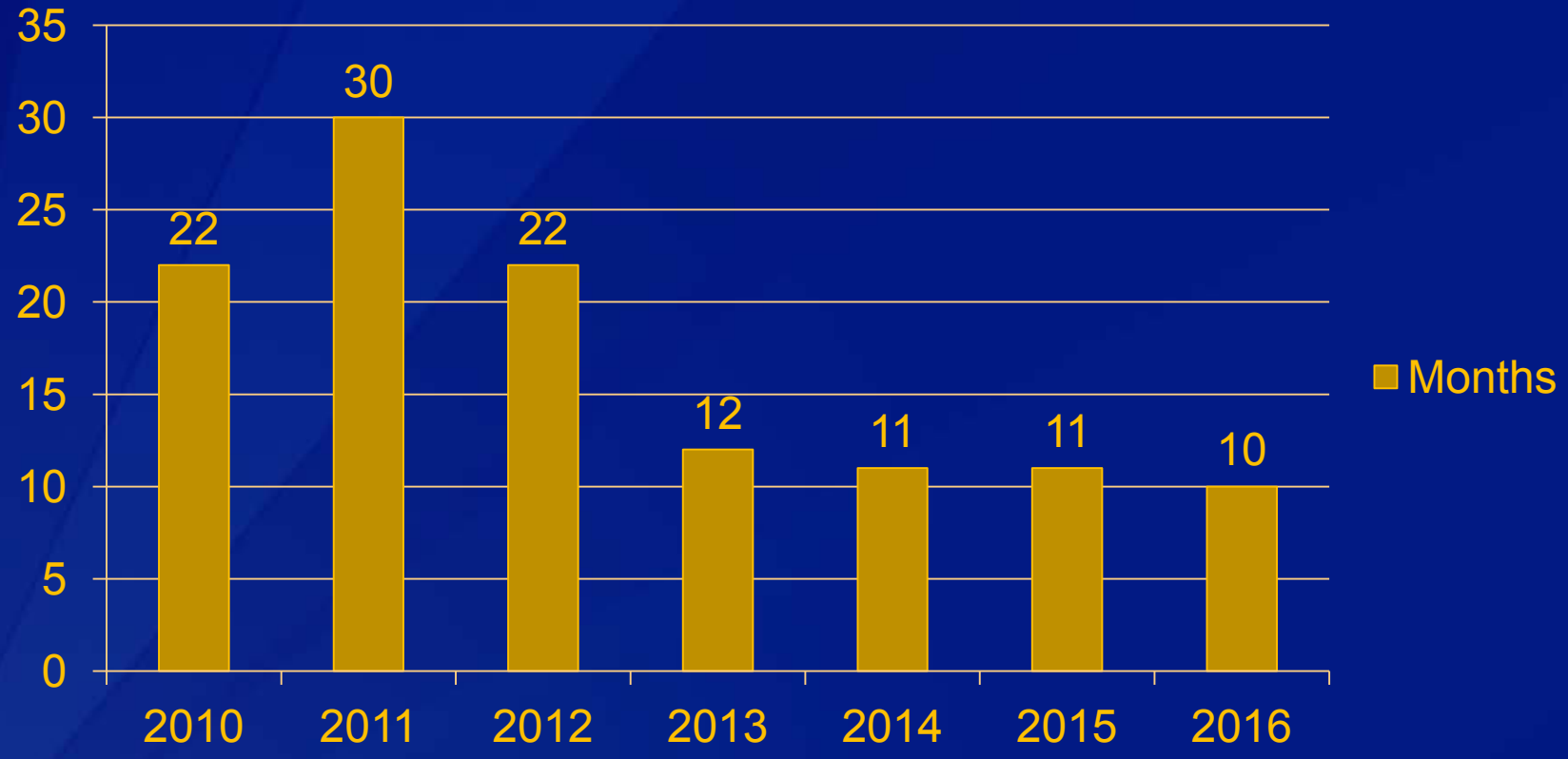
- Expand & diversify resources of vital records and vital statistics
  - Ongoing financial participation of others beyond NCHS and SSA
  - Federal grants/corporative agreements including vital records/statistics as priority. Example--Public Health Preparedness & Response Cooperative
- Narrow the performance gap between jurisdictions
  - Modernizing the vital statistics laws.
  - Adoption of national vital statistics and processes (e.g., Accreditation of state vital records/statistics programs)
  - Targeted assistance to poor performing jurisdictions
- Improve performance-based feedback to data providers
- Faster State & National reporting of statistics (monthly/quarterly)

NDI Challenges and Opportunities

- Goals:
  - High quality but inexpensive system for data matching services for longitudinal and patient-outcomes research
  - Reduced costs to researchers while maintaining state payments for use of records
  - Improved access to NDI while adhering to states laws and statutes
  - Improved processing of NDI applications

Release of the Final National Death Index File

Months after the close of data year before release



Released the preliminary 2016 NDI data file in January 2017.

NDI Challenges and Opportunities

- Making NDI a national resource?
  - Demanding vs. valuing NDI
  - Valuing of NDI
    - Importance to the facilitation of research
    - Respecting the governance laws and statutes
    - Support of this nation's vital statistics and vital record system
    - Not just a way to make money.
- New Economic Model for NDI *(e.g., MITRE Economic Modeling Project)*
- Evaluation of the non-economic barriers to using and accessing NDI
  - PCOR funding for NDI assessment and Strategic Plan development
  - Issue of note is the lack of PII information by some researchers
- NDI Strategic Plan *(target is April 2018)*

Three NDI Strategic Alternatives for the Future

- #1. Continue NDI as is:
  - Using the same pricing structure
  - Improving the processing of research applications for data matching services,
  - With state approval, hopefully ease some restrictions on types of proposals to be approved.

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  - Reduces the cost to researchers but maintains or improves the payments to states for use of their mortality records
  - Seek SOLID funding for NDI in order to reduce cost to researchers but still provide funding to states to support the vital registration systems
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- #3. End NDI as a national dataset at the Federal level within NCHS
  - Researchers could go to the individual states directly as they did before the advent of the NDI and directly to DOD for military deaths overseas, OR
  - Excluding the DOD files, NDI could be supported by states through a third party of their choosing but not NCHS.

Thank You!

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