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
#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
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.
Three NDI Strategic Alternatives for the Future

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• **#2. Implement a new economic and operational model for NDI that:**
  – 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
  – May ease some of the restrictions on access and use of NDI
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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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