Occupational Health Surveillance

Putting the Right Tools in the Right Hands

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NIOSH – 1985-90
Surveillance Highlights

• SENSOR
• ABLES
• FACE
• Death Certificates
Sentinel Event Notification System for Occupational Risks (SENSOR)

• Targeted Health Conditions (Sentinel Events)
  – Case Definitions

• Sentinel Provider Network
  – Voluntary Reporting

• State Health Departments
  – Receive and Analyze Data

• Link to Action
SENSOR: Critical Success Factors

• State Agency Leadership and Innovation
  – Massachusetts
  – New Jersey

• NIOSH
  – Leadership
  – Support
  – Convening
Adult Blood Lead Surveillance- ABLES

- Lab reporting
- ABLES Model
  - Case Definition
  - Sentinel Providers
  - State Health Agency
  - Action oriented
Guiding Principles

• Use surveillance for:
  – Case identification
  – Trend Monitoring

• Focus on specific conditions

• Involve State Health Agencies

• Connect Surveillance with ACTION
The Future

• Major Drivers
  – Unprecedented Health Care System Change
  – Focus on Population Health
  – Electronic Health Records- Meaningful Use
  – ONC Interoperability Roadmap
The Future

• Changing Role of Public Health Agencies
  – Population Health Strategist
  – Connect with existing information systems
  – Avoid constructing stand alone systems which are not sustainable
Organizational Challenges

• Disconnect between Occupational Health and Public Health System
  – But there are important exceptions

• NIOSH: a part of CDC but apart from CDC
  • But bridge building has happened
Capacity Challenges

• Avalanche of data coming from EHRs but limited capacity to use it

• Limitations
  – Workforce
  – Out-dated systems with poor interoperability
  – Financing

• Lack of business case for system development
Future Opportunities

• Electronic Case Reporting
• Electronic Lab Reporting
• Electronic Death Records
• Syndromic Surveillance
**electronic Case/Condition Reporting (eCR)**

**Healthcare Provider**
- Record encounter in EHR

**Certified EHR Technology**
- Trigger Codes (Local Copy)
- Generate initial case message
  - Match?
    - Yes
    - No

**Healthcare Provider**
- Receive Notice of Reportability

**Intermediary Platform** (e.g., Public Health Community Platform)
- Determine Reportability
  - Rules
  - Trigger Codes
  - Route initial case message
- Reportable?
  - Yes
  - No/Maybe

**Intermediary Platform**
- Send Notice of Reportability “No/Yes/Maybe”
- Gather URL and pre-populated data

**Intermediary Platform**
- Route to Reporter

**Public Health**
- Jurisdiction Receives Initial Case Message
- Surveillance System
  - Case Notification to CDC
- Investigation and case classification
eICR Data Elements of Interest
MINIMUM ELEMENTS
Draft 9-14-15
Strategic Directions

- Can OH use systems that are current CDC priorities to enhance OH surveillance?
  - Electronic Case Reporting
  - ED reporting (syndromic surveillance systems)
  - Lab reports
  - Death records
Tactical Considerations

• Enhance State Capacity
  – Innovation Grants to State Health Agencies
    • Use of EMR data for OH surveillance
  – Technical Assistance

• Speak with one voice to EMR vendors
2011 IOM Report on EMR and OH Surveillance: Progress?

• Demonstration projects?
• Requirements definition?
• Standardization for Interoperability?
• Autocoding for occupation and industry?
• Meaningful Use metrics?
Could SENSOR model work today?

- Targeted Health Conditions (Sentinel Events)
  - EHR triggers?
- Sentinel Provider Network
  - Accountable Care Organizations?
- State Health Departments
  - Receive and Analyze Data
- Link to Action
Questions

• What is **impact** of existing OH surveillance systems?

• How can existing OH systems be modified in light of changes in health system and health IT?

• How can systems with low ROI be ended?
Further Questions

• How could electronic case reporting be used for OH surveillance?
• How could electronic lab reporting be used?
Even Further Questions

• How might electronic death record reporting change OH surveillance?

• Can syndromic surveillance systems be used to detect and report occupational injury and illness from Emergency departments?
Responses to Your Questions

• PH Systems and Services Research
  – Potential for studying surveillance systems

• Toward an integrated system
  – More than a sum of parts (the current reality)
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Back to the Future

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