

Post-Licensure Rapid Immunization Safety Monitoring (PRISM) Network: An Example of Linking Immunization Information Systems

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The New York Times

U.S. Declares Public Health Emergency
Over Swine Flu

By DONALD G. McNEIL Jr.
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Responding to what some health officials feared could be the leading edge of a global pandemic emerging from Mexico, American health officials declared a public health emergency on Sunday as 20 cases of swine flu were confirmed in this country, including eight in New York City.





Monitoring H1N1 Vaccine Safety

What is Needed?

- Identify adverse events following immunization and quickly evaluate if caused by vaccine
 - GBS in 1976
- Quickly address spurious associations
 - Pregnant women
- Ability to distinguish between the two

Challenge

- Linking exposure (receipt of vaccine) data and outcomes data (adverse health events)
- Vaccination outside of traditional medical settings and not billed to insurance companies

Post-Licensure Rapid Immunization Safety Monitoring (PRISM)

Assessment of Immunization Information Systems (IIS)

- Rapid survey of state immunization programs through Association of Immunization Managers (AIM)
 - Intention to use IIS for H1N1
 - % of public and privately delivered vaccine anticipated to be captured by IIS
 - Anticipated timeliness of IIS
 - History of linking to health plan databases on individual level (HEDIS reporting)

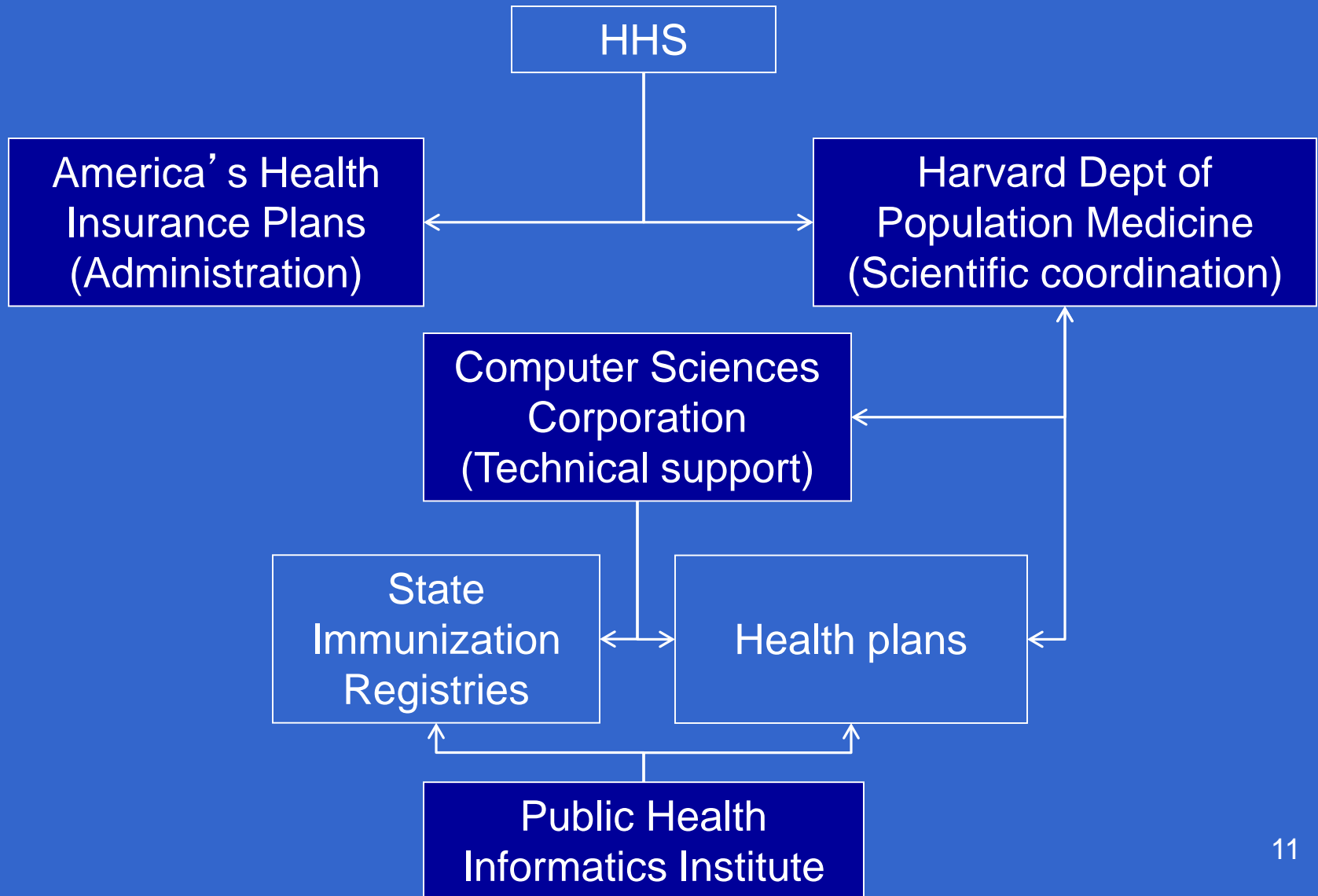
State immunization registries

- Selection criteria
 - Timely H1N1 vaccine data
 - Experience matching data with health plans
 - Size
- Participating states
 - MI, FL, GA, PA, AZ, WI, MN, NY, NYC
- Total ~14 million persons in the participating health

Health plans

- Selection criteria
 - Ability to rapidly assemble data
 - Ability to update data every 1-2 weeks
- Participating health plans
 - Aetna, CIGNA, Humana, HealthCore (WellPoint plans in CA, NY, CO; BCBS in MI)
- Total ~26 million persons

Organizations in PRISM



Collaborators – Partial List

- **National Vaccine Program Office**
 - Daniel Salmon
 - Kirsten Vannice
- Centers for Disease Control and Prevention
 - Frank deStefano
- Food and Drug Administration
 - Robert Ball
- **America's Health Insurance Plans**
 - Kevin Fahey
 - Barbara Lardy
 - Victor Rhee
- **Public Health Informatics Institute**
 - Ellen Wild
 - Bill Brand
 - Elaine Lowery
 - Therese Hoyle
 - Alan Hinman
 - David Ross
- **Harvard Pilgrim Health Care Institute**
 - Richard Platt
 - Tracy Lieu
 - Grace Lee
 - Jeff Brown
 - Melisa Rett
 - Charlene Gay
 - Katherine Yih
 - Yury Vilk
- **Health Information Systems Consulting**
 - Robert Rosofsky
- **EpiPatterns**
 - Yinong Young-Xu
- **Computer Sciences Corporation**
 - Daniel Foltz
 - Jim Van Dyke
 - Aurelia Ford
 - Jim Roddy
 - John Manson
 - Vic Tandon
- **Cigna**
 - Therese Conner
 - Anthony Sumner
 - Daniel Carmody
 - Ha Nguyen
 - Mark Regine
- **Aetna**
 - Claire Spettell
 - Cheryl Walraven
 - Joaquim Fernandes
 - Yihai Liu
- **Healthcore (Wellpoint, BC/BS)**
 - Peter Wahl
 - Alex Cannon
 - Lori Meyers
 - Greg Daniel
 - Chris Hetrick
- **Humana**
 - David Nau
 - Yihau Xu
 - Amy Ball
- **Arizona State Immunization Information System**
 - Lisa Rasmussen
 - Roger Volp
 - Richard Bradley
- **Florida Shots**
 - Susan Lincicome
 - Pete Garner
- **Georgia Registry of Immunization Transactions and Services**
 - Tracy Culbreath
 - Elizabeth Sullivan
 - Michelle Conner
 - Archie Banks
 - Andre Wilson
- **Michigan Care Improvement Registry**
 - Therese Hoyle
 - Ian Hancke
- **Minnesota Immunization Information Connection**
 - Emily Peterson
 - Diana Jaeger
- **New York State Immunization Information System**
 - Loretta Santilli
- **New York City, Citywide Immunization Registry**
 - Vikki Papadouka
 - Rezaul Kabir
 - Luiz Homem de Mello
- **Pennsylvania Statewide Immunization Information System**
 - Frank Caniglia
 - Mike Jamula
- **Wisconsin Immunization Registry**
 - Dan Hopfensperger

PRISM aims

- Link health plan data and state immunization registry data in new H1N1 vaccine safety surveillance network
- Conduct continuous active surveillance for pre-specified outcomes
- Provide timely information on *unanticipated* potential adverse events

Outcomes being monitored

- Guillain-Barré Syndrome (GBS)
- Demyelinating disease
- Neuropathies
- Seizures
- Encephalitis
- Bell's palsy
- Other cranial nerve disorders
- Myocarditis
- Ataxia
- Anaphylaxis
- Other allergic reactions
- Spontaneous abortion
- Stillbirth
- Pre-eclampsia

Data Sharing and Confidentiality

- Classified as not research
- Health plans and states encouraged to use the HIPAA public health exemption for exchange of Protected Health Information
- All person-level data remains at the health plans after transformation to standard format
- Distributed programs create counts that are shared with scientific coordinating center

PRISM 2009 H1N1 Results

- All outcomes aside from GBS not associated with vaccine
- Chart review done for GBS contributed to US meta-analysis and international study
- PRISM picked up by FDA as vaccine component of mini-sentinel project

Considerations for use of IIS to Increase HPV Vaccine Coverage

- Tremendous variability between and sometimes within states
- Purpose defines functional capacity needs
 - Reminder/Recall
 - Identifying pockets of low coverage to target and measure impact of interventions
 - Measure changes in coverage over time
- Linkage to other data sources potentially valuable but not simple