Pandemic Planning and Preparedness Program

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Nutshell

• Review of Pandemic Planning and Preparedness Program
• Historical perspective to develop context
• Specific activities undertaken by each of the 5 project components
• Demonstrate the tremendous impact of these funded activities
Project Description

• The program consists of five distinct but highly collaborative and complementary projects.

• The series of five projects serves to provide emphases on (1) detection, (2) preparedness and (3) protection, response and recovery as primary elements of its research agenda.

• When viewed as a whole, the program provides an important advance in the protection of the human infrastructure essential to insure continuity of critical activities in communities during a pandemic event.

• Program findings and newly developed training materials will result in widespread dissemination and use among targeted groups and beyond, thereby contributing to the protection of the critical human infrastructure of the nation.
Historical Perspective

- Before 2000, work began to better understand current capabilities and gaps in preparedness and response programs across Kentucky and the influencing regions

- Specific areas of need and interest emerged

- Academic, governmental, community partners identified

- Background work was done to establish baselines, targeted groups, and long term opportunities

- Funding obtained for infrastructure and programmatic foundation from the CDC, then HRSA, then ASPR

- DHS and NIHS funded has enabled focused initiatives and model development that is unique, transparent, transferrable, sustainable, and built upon prior learning
Findings Important for Pandemic Preparedness

• Communities have difficulties using the many guidelines and recommendations currently available for planning and preparedness purposes
• Key personnel within businesses and communities lack basic prevention skills necessary to ensure resilience
• Healthcare facilities lack early recognition capabilities
• The ability for schools to recognize health reasons that cause absenteeism among students is virtually non-existent
• The impact of quarantine and isolation among adults and children and the ability to sustain such activities are unknown
The Five Projects

W. Paul McKinney MD- PI and Ruth Carrico PhD RN- Co-PI

1. Pandemic planning and preparedness
2. Pandemic planning for the sentinel healthcare workforce
3. Severe influenza pneumonia surveillance (SIPS) network
4. Developing a near-real-time syndromic surveillance system in Kentucky schools: a feasibility study
5. Best practices guidelines for pandemic disaster response: a social behavioral evaluation
Project 1: Pandemic Planning and Preparedness

DAVID SIMPSON, PhD, University of Louisville

**Key Goal:** Examine best practices and materials to craft a preparedness guide and playbook (step-by-step) of community-level pandemic preparedness planning to enhance community continuity of operations.

**Target:** Medium and smaller-size communities without established planning expertise.

**End Product:** Best practices based array of training, planning, and preparedness materials, refined through on-site delivery to five pilot communities.

The project includes three phases:
Phase 1: Creating Pandemic Planning and Preparedness Guides
Phase 2: (in parallel with Phase 1) Web site development and implementation
Phase 3: Training and Technical Assistance
Key Findings

Based on the analysis and review of numerous federal, state and local pandemic plans, several key points were extracted:

• A general gap in specific local level pandemic planning guidance exists.
  Heavy reliance on federal and state guidance
• Majority of local level plans written from point of view of local health department with minimal involvement from other community agencies
• Inconsistent community mitigation strategies exist for reducing the spread of illness
• Lack of inclusion of plans to deal with vulnerable, at-risk populations during a pandemic
• Too much focus on determining alternative care sites and not on alternative care systems
• Lack of clear role definitions and statutory authority
Project 2: Pandemic Preparation for the Sentinel Healthcare Workforce

RUTH CARRICO, PhD, RN, University of Louisville

**Key Goal:** Enhance Kentucky and national pandemic preparedness and response efforts by targeted education of nurses and other health care personnel directed at implementation of best practices in infectious disease prevention and containment.

**Target:** School Health Nurses, Occupational Health Nurses, Hospital-based Healthcare workers, and other healthcare personnel.

**End Product:** Comprehensive curricula of best practices in infectious disease prevention and containment and an educated healthcare workforce prepared to effectively respond to a pandemic event.

The project includes three distinct phases: planning, delivery, and evaluation.

Phase 1: Develop curricula using established healthcare workforce competencies.
Phase 2: Deliver training via in-person courses, videoconferencing, and web-based modules.
Phase 3: Assess program efficacy through pre- and post-tests and virtual exercises emphasizing skill assessment and performance.
www.prepareky.com

Events Calendar

Latest News

- Dr. Carrico participates in television panel regarding nH1N1
- Governor’s Pandemic Influenza Summit

The Pandemic Planning and Preparedness Program

The University of Louisville Center for Health Hazards Preparedness was awarded a $2.3 million contract in March 2009 to help communities across the state prepare for future pandemic events as part of the Kentucky Critical Infrastructure Protection Program, managed by The National Institute of Hometown Security for the US Department of Homeland Security.

[Read more...](#)
Project 3: Severe Influenza Pneumonia Surveillance (SIPS) Network

JULIO RAMIREZ, MD, UNIVERSITY OF LOUISVILLE

Key Goal: Develop and implement a comprehensive surveillance plan for pandemic influenza that incorporates two components: 1) clinical case-based surveillance and 2) laboratory-based surveillance. An early awareness and appropriate response to pandemic influenza could save many lives and potentially stop or slow the spread of Influenza A disease.

Target: Hospital-based Healthcare Workers

End Product: Comprehensive Surveillance Plan for Influenza A

The project includes three phases:

Phase 1: Creation of a Severe Influenza Pneumonia Multidisciplinary Multi-hospital Task Force.

Phase 2: Development of a surveillance data collection form and instruction manual.

Phase 3: Development of a web-based program with the capability to enter surveillance data via the Internet.
Severe Influenza Pneumonia Surveillance Network

Cases of Severe Community-acquired Pneumonia in Kentucky
December, 2008 - October 17, 2009

SIPS News
- Influenza A H1N1 "Swine Flu" Resources
- SIPS is now open to all critical care facilities in Kentucky
- Swine Influenza Updates from CDC
- SIPS Web-based data entry is online
- Project begins March 9, 2009

SIPS
An essential component of pandemic preparedness is "early recognition" of new strains of influenza viruses. There are two new influenza viruses that pose a threat of a pandemic.

- Avian Influenza A (H5N1)
- Swine Influenza A (H1N1)

The SIPS project can help local hospitals with rapid identification of severe influenza pneumonia.

BECOME A SITE MEMBER
Project 4: Developing a Near-Real-Time Syndromic Surveillance System for Kentucky and US Schools: A Feasibility Study

ROBERT ESTERHAY, MD, University of Louisville

**Key Goal:** Develop a system for early detection of various communicable diseases.

**Target:** Kentucky and other School Systems in the US

**End Product:** Near-real-time US school-based syndromic surveillance system for detecting pandemic flu and other communicable diseases.

**Key Deliverables:**
- Feasibility Study 1: *Inventory of methods, technology options and preliminary design.*
- Feasibility Study 2: *Focus group results, legal/regulatory assessment, modified system design*
- Feasibility Study 3: *Final technology assessment, collaboration plan and pilot site selection.*
- Pilot Project
KYSSS – Pilot Design (v9)

School/District/State Attendance Technology

School/Attendance Office

Parent/Guardian

cc: Parent

KYSSS IVR / Web Form

KYSSS Database/Messaging

eMail Notice (immediate)

SHPS Dashboards

Parent View

School View

District View

Public Health View

eMail Alerts

Sent if possible health issues identified. Link to appropriate dashboard included.
District:
Slight increase of Gastro-Intestinal absences reported Thu May 14 2009 (request update)
Public Health Alerts:
No school closings requested as of Wed May 13 2009 (request update)

Illness

Absences as of today (May 14 2009)

<table>
<thead>
<tr>
<th>Syndrome</th>
<th>Absent</th>
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<tbody>
<tr>
<td>Gastro-Intestinal</td>
<td>23</td>
</tr>
<tr>
<td>Respiratory with fever</td>
<td>13</td>
</tr>
<tr>
<td>Respiratory no fever</td>
<td>5</td>
</tr>
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</table>

Absentee Trending

7 day overview

<table>
<thead>
<tr>
<th></th>
<th>Fr</th>
<th>Mo</th>
<th>Tu</th>
<th>We</th>
<th>Th</th>
<th>Fr</th>
<th>Total</th>
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<tbody>
<tr>
<td>Gastro-Int</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>13</td>
<td>23</td>
<td>-</td>
<td>56</td>
</tr>
<tr>
<td>Resp w/ fever</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>13</td>
<td>-</td>
<td>31</td>
</tr>
<tr>
<td>Resp no fever</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>-</td>
<td>23</td>
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<tr>
<td>Truancy A</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>-</td>
<td>10</td>
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<tr>
<td>Truancy B</td>
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<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>-</td>
<td>20</td>
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Actionable absences

Truancy - A     1
Truancy - B     5

Daily Attendance

Attendance Overview Today (May 14 2009)

<table>
<thead>
<tr>
<th>Highschool</th>
<th>Students</th>
<th>Absent</th>
<th>%</th>
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<tbody>
<tr>
<td>Center High</td>
<td>890</td>
<td>40</td>
<td>4.5</td>
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<table>
<thead>
<tr>
<th>Grade</th>
<th>Students</th>
<th>Absent</th>
<th>%</th>
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<tbody>
<tr>
<td>9th</td>
<td>240</td>
<td>1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>10th</td>
<td>230</td>
<td>4</td>
<td>&lt;2</td>
</tr>
<tr>
<td>11th</td>
<td>220</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>12th</td>
<td>200</td>
<td>20</td>
<td>10</td>
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Download attendance report for past 1 Day, 7 Days, 30 Days

Truancy

Current Week

<table>
<thead>
<tr>
<th>Issue</th>
<th>Mo</th>
<th>Tu</th>
<th>We</th>
<th>Th</th>
<th>Fr</th>
<th>NEW</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Cap $ loss</td>
<td>-5</td>
<td>-3</td>
<td>-2</td>
<td>-6</td>
<td>-</td>
<td>x 7.50</td>
</tr>
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</table>
**Project 5: Best Practices Guidelines for Pandemic Disaster Response: A Social Behavioral Evaluation**

**VIRGINIA SPRANG, PhD, University of Kentucky**

**Key Goal:** Systematically investigate the biopsychosocial effects of quarantine and isolation as a means of developing best practice approaches to understanding and managing the needs of those affected by pandemic disease containment strategies.

**Target:** Public and Behavioral Health Professionals

**End Product:** Best Practice (cBP) guidelines to successfully manage the biopsychosocial effects of disease containment.

The project consists of two phases:

Phase 1: Literature Review, Toolkit Construction, Data Collection through surveys, Focus groups/interviews, content analysis

Phase 2: Development and articulation of cBP guidelines.
Comprehensive Analysis of Pandemic and Quarantine Responses for Families and Children

Prepared for:
The National Institute for Hometown Security
368 N. Highway 27, Suite 1
Somerset, KY 42503
http://www.thenihs.org/
NIHS KCI#15-07-UL Subcontract Milestone #5a
Key Respondent Toolkit: Children’s Quarantine Evaluation Toolkit

Prepared for:
The National Institute for Hometown Security
368 N. Highway 27, Suite 1
Somerset, KY  42503
http://www.thenihs.org/
NIHS KCI # 15-07-UL Subcontract Milestone #5b
Impact

• Every one of the predicted issues have been identified during the 2009 H1N1 pandemic
• All 5 projects have utilized the skills of the academic community across Kentucky (and beyond) to assist organizational, business, and governmental communities
• DHS support has enabled an improved situational awareness and response process for those involved in these five projects