Ready or Not?

Leading Health and the Environment into the Future
Lessons of the Past
## The Nation’s Public Health Roots: Environment

- 1800’s infectious disease epidemics
- Population based, Primary prevention, environmental health solutions—*sanitation, food safety, drinking water*
- Where are we today in public health?
Ready or Not: Today’s Health Challenges

• New and emerging health threats on the rise

• Biological, chemical and radiological terrorism concerns

• Chronic Diseases and Conditions
<table>
<thead>
<tr>
<th>Icon</th>
<th>Modernizing Public Health for the 21st Century</th>
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<tbody>
<tr>
<td>![Icon]</td>
<td><strong>More and better trained health professionals with proactive, rapid response capabilities</strong></td>
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<tr>
<td>![Icon]</td>
<td><strong>Early-warning and communications systems for public’s right-to-know</strong></td>
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<tr>
<td>![Icon]</td>
<td><strong>Fully equipped laboratories</strong></td>
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<tr>
<td>![Icon]</td>
<td><strong>Nationwide health tracking for disease and environmental exposures</strong></td>
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At the Crossroads: Modernizing the Nation’s Labs

- Almost 1/3 of the Nation’s state public health directors gone, most labs facing shortages.
- More BSL-3 labs built but 25% of states still need more capacity.
- Health Tracking. Surveillance programs increased, more biomonitoring capacity needed.
- Most have LIMS in place (85%), but few are PHIN compatible.

More demand than ever, but cutbacks now occurring.
“The governmental public health infrastructure has suffered from political neglect and from the pressure of political agendas and public opinion that frequently override empirical evidence”
The Term “Public Health” Is Often Misunderstood

When you hear the term public health, which of the following do you think of?

- Programs that maintain healthy living conditions: 27%
- Govt provided hc system for all: 24%
- Hc for poor, like Medicaid/clinics: 23%
- Protecting population from disease: 16%
- Not sure: 10%

Americans Rank CDC on Top, EPA Last

Ratings of Government Agencies

How would you rate the job being done by...? Would you say it is doing an excellent, good, only fair, or poor job?

% saying "excellent" or "good"

- The Centers for Disease Control and Prevention, or the CDC: 66%
- The Federal Bureau of Investigation, or the FBI: 53%
- The Federal Reserve Board: 53%
- NASA - the U.S. Space Agency: 50%
- The Department of Homeland Security: 48%
- The Central Intelligence Agency, or the CIA: 45%
- The Internal Revenue Service, or the IRS: 44%
- The Environmental Protection Agency, or EPA: 39%
I'm going to list some health problems. After each, please tell me whether it is one of the things that concerns you most, whether it concerns you a great deal, some, not too much, or not at all.

% one of the most

- Cancer: 41%
- Chem terror like chem in H2O: 34%
- Heart disease: 33%
- AIDS: 30%
- Bio terrorism: 29%
- Diseases by enviro factors: 27%
- Chem terrorism: 27%
- Bio terror like anthrax: 26%
- Asthma: 18%
Public Believes that Environmental Factors are a Major Cause of Health Problems and Disease

Do you think environmental factors like pollution are...cause of diseases and health problems?

- 86% very important
- 13% not important
- 2% don't know

Do you think environmental factors like pollution are...cause of increased rates of diseases and health problems?

- 87% very important
- 11% not important
- 2% don't know

Public Health Is A Top Spending Priority

Is it more important to spend more on public health, or is it more important to...

<table>
<thead>
<tr>
<th>Issue</th>
<th>Public Health</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build roads/highways</td>
<td>80%</td>
<td>9%</td>
</tr>
<tr>
<td>Missile defense</td>
<td>73%</td>
<td>17%</td>
</tr>
<tr>
<td>Cut taxes</td>
<td>63%</td>
<td>27%</td>
</tr>
<tr>
<td>Fight crime</td>
<td>42%</td>
<td>34%</td>
</tr>
<tr>
<td>Improve education</td>
<td>24%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Is it more important to spend more on public health, that is protecting the public from disease, or is it more important to spend more on fighting terrorism.
Policymakers Know the Power of Health and the Environment

• Senator Clinton’s first out-of-state event

• Carol Browner: “EPA is the nation’s largest public health agency”

• President Bush’s budget first to introduce line item for environmental health tracking
“The Public Health Service, despite its mandate to protect health through prevention strategies, is disengaged from proactive environmental health activities, directly informing policy, rulemaking or standard setting, and inadequately supports the needs of states to protect health from environmental threats.”
Level of Involvement in Environmental Policymaking by Laboratories

- Low, 32%
- Medium-Low, 14%
- Medium, 14%
- Medium-High, 18%
- High, 9%
- None, 14%
How are we going to Save the Day?
How are we going to Save the Day?

Environmental and Public Health Laboratories in Public Partnership are the Key to the Future
How are we going to Save the Day?

Environmental and Public Health Laboratories in Public Partnership are the Key to the Future

ACTION
ACCOUNTABILITY
ADVOCACY
ACTION:
The Lessons from Lead

Lead used in gasoline (thousands of tons)

Predicted blood levels

Gasoline lead

Observed blood lead

Blood lead levels (µg/dL)
Linking Public Health with Regulations: EPA’s Innovative Air Toxics Program

- targets 33 air toxics that greatest threat in urban areas
- state-of-the-art goals to reduce cancer and other health risks and disproportionate risk areas
- Part of strategy for nationwide ambient air monitoring system
- Need to link the public health science with environmental regulations

Pew Environmental Health Commission
CDC’s Biomonitoring Capacity for Air Toxics

Pew Environmental Health Commission
Health Goals without Direct Health Measures

• Learning from the lead lesson, need to link direct quantitative human measures
• CDC currently has biomonitoring capacity for many of EPA targeted air toxics. States are expanding capability
• Need to link the public health with environmental: science, policymaking and protective actions
APHL conducts routine surveys of its membership lab capacity and capabilities, including preparedness, workforce, and other critical issues. For example, conducted a survey on laboratory readiness for a chemical terrorism event, including details on specific agents. Fifty percent of state laboratory directors rated their lab’s capacity to respond to a chemical terrorism event as “poor.”
The nation's public health laboratories are woefully unprepared to handle chemical weapons agents such as sarin or mustard gas that could be used in a terrorist attack, according to a 50-state survey released yesterday.

On a scale of 1 to 10, 37 state labs rated their chemical response capability at or below a 4, while nine others gave themselves scores of 5 or 6, according to the Association of Public Health Laboratories, which conducted the survey last month.
### Table I: Laboratory Capacity to Test for Potential Chemical Agents: Summary of Five State Laboratory Directors’ Responses

<table>
<thead>
<tr>
<th>Chemical Agents</th>
<th>Lab Capability To Test</th>
<th>Lab Capability to Send Sample to CDC</th>
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</thead>
<tbody>
<tr>
<td><strong>Environmental Sample</strong></td>
<td><strong>Clinical Sample</strong></td>
<td></td>
</tr>
<tr>
<td>Biotoxins (e.g. ricin)</td>
<td>2 of 5</td>
<td>2 of 5</td>
</tr>
<tr>
<td>Blister Agents/ Vesicants</td>
<td>0 of 5</td>
<td>0 of 5</td>
</tr>
<tr>
<td>(e.g. mustard gas)</td>
<td></td>
<td>4 of 5 and 1 possible</td>
</tr>
<tr>
<td>Blood Agents (e.g. arsine)</td>
<td>1 of 5</td>
<td>1 of 5</td>
</tr>
<tr>
<td>Caustics (acids)</td>
<td>2 of 5</td>
<td>1 of 5</td>
</tr>
<tr>
<td>Choking/ Lung/ Pulmonary Agents</td>
<td>3 of 5</td>
<td>1 of 5</td>
</tr>
<tr>
<td>(e.g. chlorine and cyanide)</td>
<td></td>
<td>4 of 5</td>
</tr>
<tr>
<td>Incapacitating (e.g. phenothiazines)</td>
<td>0 of 5</td>
<td>0 of 5</td>
</tr>
<tr>
<td>Metals (e.g. arsenic and mercury)</td>
<td>4 of 5</td>
<td>1 of 5 and 1 possible</td>
</tr>
<tr>
<td>Nerve Agents (e.g. VX, Sarin)</td>
<td>0 of 5</td>
<td>0 of 5</td>
</tr>
<tr>
<td>Riot Control/ Tear Agents</td>
<td>1 of 5</td>
<td>0 of 5</td>
</tr>
<tr>
<td>Vomiting (e.g. DM, DA, DC)</td>
<td>1 possible</td>
<td>0 of 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 of 5</td>
</tr>
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Bird Flu Preparations

As the threat of avian influenza looms, federal and state officials are preparing for a possible pandemic. Here’s what they’re doing:

- Removing all flagpoles, streetlights, power lines, branches, and anything else that could be used as a perch
- Warning nation’s children to stay away from any and all flu pandemics
- If roasted chicken becomes infected, instructing families to build mashed-potato wall to prevent contamination of peas
- Distributing Tamiflu to Fortune 500 CEOs and their families
- Checking range of free-range chickens to ensure they haven’t been roaming freely into certain parts of Asia
- Reminding Americans that threat of flu outbreak provides perfect excuse to cancel on loved ones for Thanksgiving
- Working hard to generate plausible deniability for when the shit hits the fan
Laboratories Leading Public Health

- Action
- Alliances
- Accountability
- Advocacy
Public Health at the Crossroads:

Ready or Not?