Requests from DHS & HHS Secretaries

Six Specific Pandemic Requests

1. Identify and define critical services to be maintained in a pandemic.
2. Establish criteria and principles for critical service prioritization.
3. Define critical services priority.
4. Identify critical employee groups in each priority critical service.
5. Build a structure for communication and dissemination of resources.
6. Identify principles for effective implementation by DHS and HHS.
Assumptions

- Susceptibility to pandemic influenza virus will be universal.
- The clinical disease attack rate will be 30% in the overall population during the pandemic. Among working adults, an average of 20% will become ill from the pandemic influenza.
- Absenteeism may be as high as 40% during peak pandemic periods.
- Some will become sick from the pandemic influenza but not develop clinically significant symptoms. These persons can transmit pandemic influenza and develop immunity.
- Multiple waves of illness are expected with each wave expected to last 2-3 months.
- Each wave during its peak will adversely impact infected communities for 6-8 weeks.
- Effectively half of all infected will seek medical care.

Identifying Critical Goods and Services and Establishing Prioritization Criteria

Critical Goods and Services Identified

- Essential elements of national security and homeland security
- Components of systems, assets, and industries upon which our economy depends
- Components of systems, assets, and industries upon which public health depends
- Fundamental to the 85% of the critical infrastructure owned and operated by the private sector
- Further defined by high rates of inter-dependency among critical infrastructure or single points of failure

Criteria and Principles for Critical Service Prioritization Established

- Critical goods/services required to maintain national or homeland security
  - For example: water, energy, food, banking & financial services, chemical, healthcare, Fire/EMS, communications, transportation, law enforcement, etc.
- Critical goods/services to ensure economic survival
  - For example: banking & financial services, communications, IT, transportation, electricity
- Critical goods/services to maintain public health and welfare
  - For example: water, energy, food and agriculture, healthcare, Fire/EMS, law enforcement, etc.
- Critical goods/services with significant number of inter-dependencies
  - For example: water, electricity, food and agriculture, etc.
Identifying Critical Employee Groups: All Sectors, All Tiers

Critical Employees: Tiers 1-3

Banking & Finance: 1,562,000
Chemical: 322,618
Commercial Facilities: 84,000
Communications: 796,194
Electricity: 375,000
Emergency Services: 1,997,583
Food and Agriculture: 750,000
Healthcare: 6,999,725
Information Technology: 2,359,800
Nuclear: 86,000
Oil and Natural Gas: 328,600
Postal and Shipping: 467,744
Transportation: 198,387
Water and Wastewater: 608,000

TOTAL: 16,935,651

Notes:

a. Numbers include Tier 1, Tier 2, and Tier 3 “essential” employees.
b. State and local government numbers removed from gross and priority workforce numbers.

Identifying Critical Employee Groups: All Sectors, Tier 1 Only

Employees: Tier 1 Only

Banking & Finance: 349,500
Chemical: 161,309
Commercial Facilities: 42,000
Communications: 396,097
Electricity: 50,000
Emergency Services: 1,997,583
Food and Agriculture: 500,000
Healthcare: 6,999,725
Information Technology: 692,800
Nuclear: 86,000
Oil and Natural Gas: 223,934
Postal and Shipping: 115,344
Transportation: 100,185
Water and Wastewater: 608,000

TOTAL: 12,322,477

Notes:

a. Numbers include Tier 1 “essential” employees only.
b. State and local government numbers removed from gross and priority workforce numbers.
NIAC Numbers: A Closer Look

- For good reason, the high percentage of Tier 1 Critical Workers identified from the Healthcare (HC) and Emergency Services (ES) sectors skews the overall data.
  - NIAC’s Tier 1 represents 14.5% of the entire 85 million U.S. CI workforce, and only 4.8% for all sectors other than HC and ES.
  - When all tiers are included, the NIAC figure represents 19.9% of the CI workforce and 11.4% excluding the HC and ES sectors.
  - The total for all critical workers in all CI/KR sectors, including HC and ES, equals only 0.5% of the total U.S. population.

- In 2005, the Advisory Committee on Immunization Practices (ACIP) and the National Vaccine Advisory Committee (NVAC) provided prioritization recommendations, which HHS detailed in its Pandemic Plan.
  - NVAC/ACIP identified 17,034,000 CI/KR workers in Tier 1 (all in HC) and Tier 2.
  - The HHS Plan did not include several key CI/KR sectors, including Banking & Finance, Chemical, Commercial Facilities, Food & Agriculture, and Postal & Shipping.
  - Adjusting NIAC’s figures to reflect only sectors included in the HHS studies reveals the NIAC Tier 1 is 39.5% less than the total allotment of workers in the HHS plan.

Recommendations
Building a Structure for Communication and Dissemination of Resources

Communications

- Pre-define, to the greatest extent possible, a consistent pandemic communications plan covering the entire pandemic episode; tailor public communications to specific target audiences.
- Develop and pre-position, to the greatest extent possible, public communications in all distribution channels, including radio, television, telephone, print, and online media.
- Engage the private sector to augment the distribution of public communications to the critical workforce; rehearse communication.
- Refine public communications plans, processes, and success metrics through series of response exercises.
Recommendations
Building a Structure for Communication and Dissemination of Resources

Dissemination

- Continue developing a clearly defined vaccine/anti-viral distribution strategy.
  - Consider alternative distribution strategies and guidance that allows the private sector to distribute vaccine and anti-viral medications to in-scope critical workforce.
- Clearly define response and containment roles and responsibilities.
  - Better define response timelines and milestones.
- Continue to educate all stakeholders on plans, process, and priorities.
- Develop mechanism to clearly identify priority workforce groups.
- Engage appropriate resources to ensure adherence to distribution strategy and the economical use of limited vaccine and anti-viral resources.
  - Identify, collect and report success metrics.

Recommendations
Identifying Principles for Effective Implementation by DHS and HHS

Pillar #1: Preparedness and Communication

- Clearly align preparedness and response plans, communications, exercises, investments, and support activities around sustaining critical workforce during pandemic influenza event.
  - Continue data gathering, analysis, reporting, and open review.
  - More clearly define roles and responsibilities across all stakeholders in both the public and private sectors.
  - Continue to develop and refine preparedness and response plans.
  - Continue to engage private sector in public sector planning and responses exercises.
Recommendations
Identifying Principles for Effective Implementation by DHS and HHS

Pillar #2: Surveillance and Detection

- Better engage key elements of the private sector in proactive surveillance and monitoring activities, including:
  - Extend surveillance to include occupational health professionals;
  - Engage international components of US corporations in global bio-data collection efforts;
  - Supplement surveillance technology investments, acquisition, monitoring and response, to increase threat visibility and geographic coverage; and
  - Engage non-traditional data acquisition and management resources within the commercial workforce in surveillance, collection, and analysis.

Pillar #3: Response and Containment

- Develop clearly-defined vaccine and anti-viral distribution strategy to ensure deployment as planned.
  - Consider alternative distribution methods that engage private sector directly distribute to in-scope critical workforce.
- Clearly define response and containment roles and responsibilities.
  - Better define response timelines and milestones.
- Educate all stakeholders on plans, process, and priorities.
- Develop mechanism to clearly identify priority workforce groups.
- Engage appropriate resources to ensure adherence to distribution strategy and the economical use of limited vaccine and anti-viral resources.
  - Identify, collect and report success metrics.

NOTE: Recommendations parallel Question #5, part-2, “Dissemination of Resources.”
Additional Items, Possible Further Study

- Study impact of foreign workers on Critical Infrastructure (CI) operations.
- Explore the government’s willingness to underwrite key components of financial infrastructure and provide temporary regulatory relief.
- Address competing prioritization strategies (e.g., key metro areas vs. CI, and at-risk populations vs. critical good/service producers).
- Study the impact of contract resources and FTEs on CI.
- Continue to investigate family member care, containment impact on the CI worker, and best use of limited vaccine/anti-viral supplies.
- Review possible double-counted workers (e.g., public/private/volunteer EMS; non-practicing MDs; and Federal/State/local and contract law enforcement).
- Study impact from potential containment strategies (e.g., border closures).

Final Thoughts

- Existing Federal and State plan priorities include:
  - Vaccine and anti-viral manufacturers
  - High-risk persons
  - Public health emergency workers
  - Key government leaders
  - Young and elderly individuals

- NIAC prioritization focus differs from existing plans. Focus on:
  - Maintaining national/homeland security, economic livelihood, and public health and welfare; and
  - Identifying and addressing critical inter-dependencies and single points of failure.

- Suggest that resolution method be developed to determine:
  - Federal/state prioritization method priority vs. NIAC recommended priority
  - Distribution methods: direct to private sector vs. direct to public sector
  - Further refinement of critical worker definitions, priorities, and numbers, including a possible forum to identify, quantify, and qualify ultimate prioritization and distribution methods.