

National Infrastructure Advisory Council (NIAC)

NIAC Pandemic Working Group

Initial Findings
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Questions from DHS/HHS

- Six specific pandemic questions
 - Identify and define critical services that must be maintained in a pandemic;
 - Establish criteria and principles for critical service prioritization;
 - Define critical services priority;
 - Identify critical employee groups in each priority critical service;
 - Build a structure for communication and dissemination of resources; and
 - 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.
 - Absenteeism will include those who are ill or “think” they are ill with pandemic influenza
 - Absenteeism will include those who stay at home for care of family members
 - Well parents opting to remain at home to care for sick child/spouse are considered absent
 - Those who stay at home to telework are not considered absent
- ❑ Some persons 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 two to three months in duration.
- ❑ Each wave during its peak will adversely impact infected communities for six to eight weeks.
- ❑ Effectively half of all infected will seek medical care.

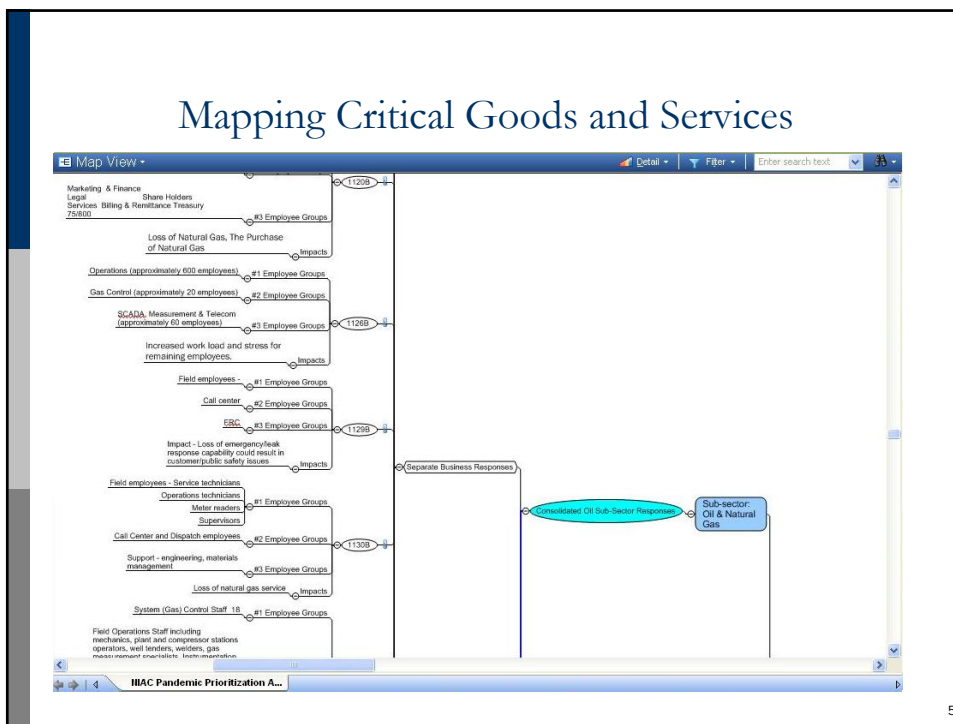
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Identifying Critical Goods and Services and Establishing Prioritization Criteria

- ❑ **Critical goods and services are:**
 - 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 amongst critical infrastructure or single points of failure
- Establishing criteria and principles for critical service prioritization***
- ❑ **Critical goods/services required to *maintain national or homeland security***
 - For example: Water, energy, food, banking & finance, chemical, healthcare, Fire/EMS, communications, transportation, law enforcement, etc.
- ❑ **Critical goods/services to *ensure economic survival***
 - For example: Banking & Finance, 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.

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Mapping Critical Goods and Services



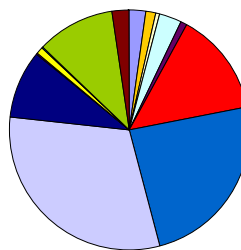
Identifying Critical Employee Groups Sector Detail: All Sectors, All Tiers

Critical Employees: Tiers 1-3

- Banking & Finance: 554,000*
- Chemical: 373,000
- Commercial Facilities: 179,600
- Communications: 796,1940
- Electricity: 225,000
- Emergency Services: 3,708,592
- Food and Agriculture: 6,314,000
- Healthcare: 8,048,059
- Information Technology: 2,359,000
- Nuclear: 86,000
- Oil and Natural Gas: 240,000
- Postal and Shipping: 71,000
- Transportation: 2,786,000
- Water and Wastewater: 607,000

TOTAL: 26,497,445

Consolidated Sector View



- Banking & Finance:
- Chemical:
- Commercial Facilities:
- Communications:
- Electricity:
- Emergency Services:
- Food and Agriculture:
- Healthcare:
- Information Technology:
- Nuclear:
- Oil and Natural Gas:
- Postal and Shipping:
- Transportation:
- Water and Wastewater:

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.
- c. Does not include numbers of critical workers from the Wholesale Clearing and Settlement Services sub-sector. The Department of Treasury will provide DHS with these proprietary numbers.

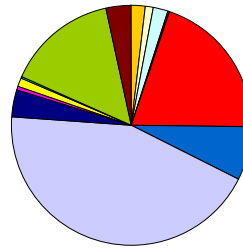
Identifying Critical Employee Groups: All Sectors, Tier 1 Only

Critical Employees: Tier 1 Only

- Banking & Finance: *Proprietary*
- Chemical: 373,000
- Commercial Facilities: 179,600
- Communications: 396,097
- Emergency Services: 3,708,592
- Electricity: 5,000
- Food and Agriculture: 1,363,000
- Healthcare: 8,048,059
- Information Technology: 692,800
- Nuclear: 86,000
- Oil and Natural Gas: 208,000
- Postal and Shipping: 71,000
- Transportation: 2,786,000
- Water and Wastewater: 607,000

TOTAL: 18,526,148

Consolidated Sector View



- Banking & Finance:
- Chemical:
- Commercial Facilities:
- Communications:
- Electricity:
- Emergency Services:
- Food and Agriculture:
- Healthcare:
- Information Technology:
- Nuclear:
- Oil and Natural Gas:
- Postal and Shipping:
- Transportation:
- Water and Wastewater:

Notes:

- a. Numbers include Tier 1 "essential" employees only.
- b. Does not include numbers of critical workers from the Wholesale Clearing and Settlement Services sub-sector. The Treasury Department will provide DHS with these proprietary numbers.
- c. State and local government numbers removed from gross and priority workforce numbers.

Initial 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 communications to specific target audiences.
- Develop and pre-position, to the greatest extent possible, communications in all distribution channels, including radio, television, telephone, print, and online media.
- Engage the private sector to augment the distribution of communications to the critical workforce; rehearse communication.
- Refine communications plans, processes, and success metrics through series of response exercises.

Initial 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-virals 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.

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Initial 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 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.

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Initial 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.

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Initial Recommendations

Identifying Principles for Effective Implementation by DHS and HHS

❑ 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 in directly distributing 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."

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Additional Questions to Consider

- ❑ Foreign workers and the U.S Critical Infrastructure (CI):
 - Study to what extent do we address international foreign workers who are central to U.S. CI operations
- ❑ Government willingness to underwrite key components of financial infrastructure:
 - Research and report on the potential impact on gross numbers in critical priority groups across multiple sectors when government underwrites some transactions
- ❑ Competing strategies on priorities:
 - Address key metropolitan areas versus key components of critical infrastructure
 - Address at-risk populations versus critical good/service producers
- ❑ Contract resources and FTE's:
 - Recognize that significant numbers of contract resources identified as critical to sustained operations (e.g. ATM provisioning, Nuclear temp labor, etc.) not accounted for in current study

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Additional Questions to Consider (cont.)

- ❑ Regulatory relief:
 - Study potential for relief from some regulatory burdens and potential decrease number of workers identified in Tier-1
- ❑ Family member impact:
 - Continue to investigate family member care, containment impact on the critical worker and economical/efficient use of limited vaccine/anti-viral supplies
- ❑ High potential that some resources are double-counted, for example public/private/volunteer EMS; non-practicing MDs; and Federal, State, county, city, and contract law enforcement, etc.
- ❑ Impact of potential containment strategies (e.g. closing of U.S. borders or closing of state borders) on organizations and their operations?
 - Workforce management, transportation, etc.

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Final Thoughts

- ❑ Existing Federal and State plan priorities include:
 - Vaccine and anti-viral manufacturing
 - High-risk persons
 - ❑ Over 65 with 1 or more high risk conditions
 - ❑ 6 months to 65 years with 2 or more high risk conditions
 - ❑ Persons 6 months and older with history of hospitalization for flu
 - ❑ Pregnant women
 - ❑ Household contacts with severely immuno-depressed persons without vaccination
 - ❑ Household contact with children younger than 6 months
 - Public health emergency workers
 - Key government leaders
 - Healthy people over 65 years
 - 6 months to 65 years with 1 high risk condition

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Final Thoughts (cont.)

- ❑ NIAC prioritization focus differs from existing plans. Focus on:
 - Maintain national and homeland security
 - Ensure economic survival
 - Maintain public health and welfare
 - Identify and address 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
- ❑ Forum be developed to identify, quantify, and qualify potential prioritization and distribution methods and channels

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