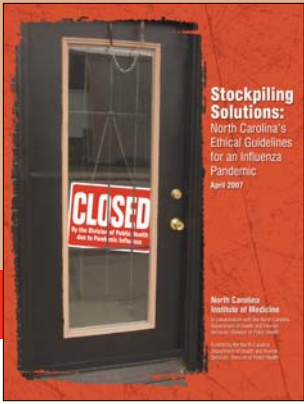


Stockpiling Solutions:

North Carolina's Ethical Guidelines for an Influenza Pandemic

April 2007



Public Health experts warn it is not a question of *if* but *when* the next flu pandemic will arrive. Historically, we experience three pandemics each century. Many experts suggest we are already overdue for another pandemic.

“Today, many influenza experts, including those at the CDC, consider the threat of a serious influenza pandemic to the US to be high. Although the timing and impact of an influenza pandemic is unpredictable, the occurrence is inevitable and potentially devastating.”

DR. JULIE GERBERDING, DIRECTOR, CDC

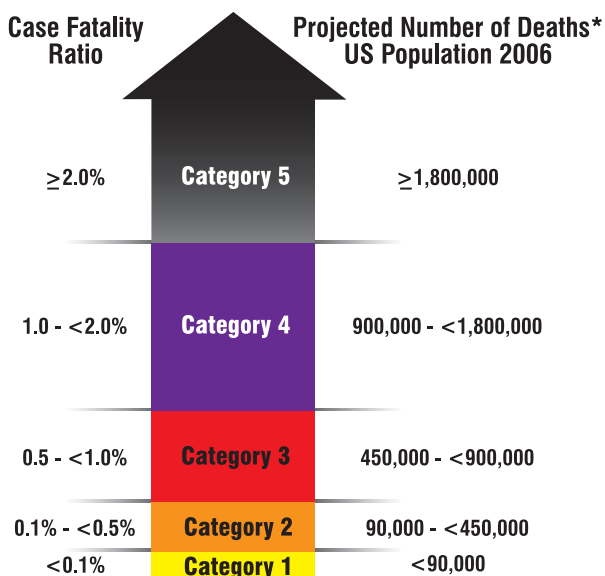
An influenza pandemic could consist of one or multiple waves with each wave lasting up to eight weeks. The Centers for Disease Control and Prevention predict between 90,000 to 1.8 million people nationally would die depending on the severity of the influenza virus.

In North Carolina alone, a *severe* pandemic may result in 1.6 million outpatient visits to healthcare providers, 290,000 hospitalizations, and 65,000 deaths over an eight-week period. Up to 40% of workers may be out of work due to their own illnesses or the need to care for a sick family member. This prediction is alarming particularly as it impacts the healthcare industry, which will be overwhelmed by demands for services to care for the ill. Additionally, other critical industries such as utilities, food, and transportation will require workers to provide goods and services needed to maintain the basic functioning of our society.

An influenza pandemic will present many ethical challenges. Questions will arise such as who should get first priority for limited healthcare resources, how to balance the rights of individuals versus the need to protect the public, and what responsibility people have to work when working could place them at heightened risk. We will not have enough time to engage in a public discussion of ethical tradeoffs inherent in these critical decisions when we are in the midst of a pandemic. Therefore, it is important to develop an ethical blueprint in advance of a pandemic which will help guide decision making. These efforts will help assure the public that decision makers are making reasoned responses to the crisis and will increase the likelihood that society maintains order during the emergency.

The North Carolina Department of Health and Human Services, Division of Public Health (DPH) asked the North Carolina Institute of Medicine (NC IOM) to convene a task force with broad stakeholder representation to develop an ethical framework to help guide public and private decision making during a pandemic. The Task Force weighed different ethical considerations in developing its framework including the need to ensure accountability, equitable treatment among similarly situated individuals, proportionality of actions, and inclusiveness and timeliness in decision making. Government must act as the public steward, operate in a transparent fashion, and make decisions that are reasonable and responsive in order to garner the public's trust. The Task Force recognized the importance of fostering cooperation and collaboration

Figure 1
Pandemic Severity Index



*Assumes 30% illness rate and unmitigated pandemic without interventions

Source: US Dept. of Health and Human Services.

Community strategy for pandemic influenza mitigation. Available at: <http://www.pandemicflu.gov/plan/community/commitigation.html#XVI>. Accessed February 14, 2007.

among different governmental agencies, the public and private sectors, and private citizens.

Taking these ethical principles into account, the Task Force developed an ethical framework for guiding decision making in the following four areas: (1) responsibilities of healthcare workers and reciprocal obligations to protect these workers; (2) responsibilities of other critical workers and reciprocal obligations to protect these workers; (3) balance between rights of individuals and protection of the public; and (4) prioritization and utilization of limited resources.

Responsibilities of Healthcare Workers to Work and Reciprocal Obligations to Workers

“Since HIV was introduced into the human population roughly 24 years ago, an estimated 23 million people have died from HIV disease worldwide. In the 1918 influenza pandemic, more than 50 million people died when the world population was only 28 percent of what it is today.”

JOHN BARRY, *THE GREAT INFLUENZA* (2004)

An influenza pandemic in North Carolina would place unprecedented strains on the healthcare system. Public health and the broader healthcare system will face tremendous challenges trying to prevent people from becoming ill and providing appropriate care for thousands of patients who become ill with acute and/or life-threatening infections. In addition to caring for people with the flu, the healthcare system will need to provide care to others who are ill or injured unrelated to the flu. Because we are likely to face severe shortages of staff and other healthcare resources, healthcare professionals may be called upon to assume responsibilities outside their normal scope of work. Healthcare personnel have an obligation to work during a pandemic, but government and healthcare organizations have reciprocal obligations to these workers to keep them as safe as possible and to provide them with legal protection in the event of adverse health outcomes.

Ethical Guidelines:

- Healthcare personnel have a duty to provide care during an influenza pandemic because of their professional and employment obligations and a general human responsibility to care for others. In return, government and healthcare organizations have a responsibility to provide these workers with available protections and support. Frontline healthcare workers who are at increased risk of infection should have priority in receiving personal protective equipment, vaccinations, antiviral medications, and other nonmedical control measures.

- Healthcare organizations should develop contingency plans to address a pandemic including staffing needs and prepandemic training.
- Healthcare professionals and organizations should be provided qualified immunity from liability if they act in good faith to provide needed healthcare services during the emergency.
- North Carolina licensure boards should develop formal guidelines on the ethical duty to provide care during emergencies.

Responsibilities of Other Critical Workers to Work and Reciprocal Obligations to Workers

Healthcare is not the only sector that will be critical to the basic functioning of society during a pandemic. The federal government has already identified certain governmental and business sectors as part of the national critical infrastructure. These sectors, such as government, banking, utilities, transportation, agriculture and food, telecommunications, and information technology, will need to provide society's essential goods and services during a pandemic. North Carolina's critical industries have experience maintaining essential functions during natural disasters such as hurricanes and ice storms. However, an influenza pandemic would place unprecedented stresses on the ability of an industry to function due to its duration, the likelihood of limited outside support, lack of workers, and risk of secondary infection. Natural disasters often impact only a limited area, allowing other communities to provide support to the impacted area. In contrast, a pandemic likely will impact most, if not all, of the state and country, limiting the availability of outside support. Despite these difficulties, critical industries will need to continue providing their essential goods and services during a flu pandemic.

Ethical Guidelines:

- Workers in critical industries have an ethical responsibility to work during an influenza pandemic so that essential goods and services are provided to maintain the functioning of society. However, government and employers have a reciprocal obligation to protect and support these workers to the extent possible.
- Industries should develop business continuity plans, identify which positions are critical to the continued operation of the industry, and provide prepandemic training.
- All businesses and organizations have a duty to follow the recommendations, guidelines, and restrictions that public health and other governmental leaders provide.

Balancing the Rights of the Individual with Protection of the Public

Public health and other governmental leaders are charged with promoting and protecting the overall health and well-being of the population during emergencies. In a pandemic, public health officials may need to implement measures to reduce contact with potentially infected individuals to limit the spread of disease. These community mitigation efforts—including isolation, quarantine, or other social distancing measures such as dismissing students from schools or limiting public gatherings—may interfere with personal liberties and individual privacy.

Restrictions on personal liberties can pose significant difficulties for the individuals and families involved including loss of income and social support. Businesses may be affected by the reduction in workers or revenues. Thus, it is important to limit these community mitigation efforts to the least restrictive alternatives reasonably necessary to protect the public and to ensure that the restrictions are equitably applied. The public should be educated about the need to impose these community mitigation measures in advance of a pandemic.

Depending on the length and severity of the pandemic, there may be an unprecedented demand on government

Figure 2
Summary of Community Mitigation Strategy by Pandemic Severity

Interventions [*] by Setting	Pandemic Severity Index		
	1	2 and 3	4 and 5
Home			
Voluntary isolation of ill at home (adults and children); combine with use of antiviral treatment as available and indicated	Recommend ^{†§}	Recommend ^{†§}	Recommend ^{†§}
Voluntary quarantine of household members in homes with ill persons (adult and children); consider combining with antiviral prophylaxis if effective, feasible, and quantities sufficient [¶]	Generally not recommended	Consider ^{**}	Recommend ^{**}
School			
Child social distancing			
Dismissal of students from schools and school-based activities and closure of child care programs	Generally not recommended	Consider ≤ 4 weeks ^{††}	Recommend ≤ 12 weeks ^{§§}
Reduce out-of-school social contacts and community mixing	Generally not recommended	Consider ≤ 4 weeks ^{††}	Recommend ≤ 12 weeks ^{§§}
Workplace/Community			
Adult social distancing			
Decrease number of social contacts (eg, encourage teleconferences, alternatives to face-to-face meetings)	Generally not recommended	Consider	Recommend
Increase distance between persons (eg, reduce density in public transit, workplace)	Generally not recommended	Consider	Recommend
Modify, postpone, or cancel selected public gatherings to promote social distancing (eg, stadium events, theater performances)	Generally not recommended	Consider	Recommend
Modify workplace schedules and practices (eg, telework, staggered shifts)	Generally not recommended	Consider	Recommend

Source: US Dept. of Health and Human Services. Community strategy for pandemic influenza mitigation. Available at: <http://www.pandemicflu.gov/plan/community/commitigation.html#XVI>. Accessed February 14, 2007.

* All these interventions should be used in combination with other infection-control measures, including hand hygiene, cough etiquette, and personal protective equipment such as face masks. Additional information on infection control measures is available at www.pandemicflu.gov.

† This intervention may be combined with treatment of sick individuals using antiviral medications and with vaccine campaigns, if supplies are available.

§ Many sick individuals who are not critically ill may be managed safely at home.

¶ The contribution made by contact with asymptotically infected individuals to disease transmission is unclear. Household members in homes with ill persons may be at increased risk of contracting pandemic disease from an ill household member. These household members may have asymptomatic illness and may be able to shed influenza virus that promotes community disease transmission. Therefore, household members of homes with sick individuals would be advised to stay home.

** To facilitate compliance and decrease risk of household transmission, this intervention may be combined with provision of antiviral medications to household contacts, depending on drug availability, feasibility of distribution, and effectiveness.

†† Consider short-term implementation of this measure—that is, less than 4 weeks.

§§ Plan for prolonged implementation of this measure—that is, 1 to 3 months; actual duration may vary depending on transmission in the community as the pandemic wave is expected to last 6-8 weeks.

and other community agencies to help families meet their basic subsistence needs. Without some support, families may be unable to comply with isolation, quarantine, or other efforts needed to reduce interpersonal contact.

Ethical Guidelines:

- Government leaders should use community mitigation efforts to reduce the spread of disease, but should limit these measures to the least restrictive alternatives reasonably necessary to protect the public.
- Prior to and during the pandemic, state and local government and public health leaders should partner with community groups to develop a broad-based public education campaign to foster awareness and understanding of the influenza pandemic.
- Government, social relief agencies, and other community groups should work together to address the basic subsistence needs of individuals who have been adversely affected by the influenza pandemic.

Prioritization of Limited Resources

During a pandemic, demand for certain healthcare resources will exceed supply. Deciding who should have priority to receive limited resources during an influenza pandemic will be among the most difficult ethical dilemmas facing government officials, policy makers, and healthcare providers. These difficult allocation decisions should be based on widely-accepted and reasoned criteria and should be applied equitably. Specific information about the most susceptible populations and the most effective treatments will not be available until the event occurs and actual experience is collected.

In general, priority for the allocation of preventive resources (such as personal protective equipment and vaccines) should be given to those critical workers who are at increased risk of contracting the disease and who are necessary to assure the functioning of society. These critical workers include healthcare personnel providing direct patient care to flu patients or critical workers in other sectors, such as public safety officers who are working with infected people. The use of these limited resources also should be made with

the goal of minimizing the spread of disease. In contrast, the primary goal in allocating treatment resources (eg, antiviral medications, hospital beds, and ventilators) should be to reduce illness, hospitalization, and death.

The Task Force recognized it is just as important to articulate the criteria that should not be used in making allocation decisions. Medical decisions should be based on clinical and epidemiological factors only. Government and healthcare professionals should not make allocation decisions based on socioeconomic, political, or other factors unrelated to controlling the spread of disease or reducing the impact of disease.

Ethical Guidelines:

- Allocation of preventive services (eg, vaccines or personal protective equipment) should be made with the goal of assuring the functioning of society and minimizing the spread of disease.
- Allocation of treatment resources (eg, antiviral medications or ventilators) should be made with the goal of reducing illness, hospitalization, and death.
- During an influenza pandemic, disease control and medical decisions should be based on clinical factors, the epidemiology of the spread of disease, and the need to assure the functioning of society. Decisions about which people to treat and what services to provide during an influenza pandemic should not be made based on socioeconomic or other factors unrelated to these criteria.
- Healthcare organizations need to create mechanisms in advance of a pandemic to ensure that clinical decisions are made according to the ethical principles set out in these guidelines.

“Pan flu will raise many expected and unexpected questions. We want to anticipate as many of these questions as we can and develop strong plans to protect health. The Task Force provided us with a great framework that will be helpful to decision makers in all walks of life.”

LEAH DEVLIN, STATE HEALTH DIRECTOR

The North Carolina Institute of Medicine and North Carolina Division of Public Health would like to thank the chairs of the Task Force on Ethics and Pandemic Influenza Preparedness for their leadership of the Task Force’s work: Leah Devlin, DDS, MPH, State Health Director, North Carolina Division of Public Health, and Rosemarie Tong, PhD, Director, Center for Professional and Applied Ethics, Department of Philosophy, University of North Carolina at Charlotte. The NC IOM also wants to thank the 37 members of the Task Force and Steering Committee who gave freely of their time and expertise over the past 12 months to develop this ethical framework.

For more information about North Carolina’s Ethical Guidelines for an Influenza Pandemic visit www.nciom.org/projects/flu_pandemic/ethics.html. Phone: 919-401-6599 ext. 22. Email: flu@nciom.org. For more information about the North Carolina Pandemic Flu Plan visit <http://www.epi.state.nc.us/epi/gcdc/pandemic.html>.

