

Utah Pandemic Influenza Response Plan Community Mitigation Plan

DRAFT

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NOTE: This is a draft plan intended to provide interim guidance to agencies, businesses, community and faith-based organizations, and other entities regarding measures that will be implemented in an influenza pandemic in order to limit transmission. It is also a request for suggestions from the community on ways to strengthen the plan and comments regarding the ability to use it to lessen the impact of an influenza pandemic in Utah. It is based on the *Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States*¹.

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Overview

Influenza is caused by a virus that is spread from person-to-person primarily through respiratory droplets generated from coughing or sneezing. It may also be spread to a lesser extent by direct or indirect contact with respiratory secretions. Transmission is most efficient among crowded populations in enclosed spaces. The influenza virus may persist in the environment for several hours, particularly in the cold and in low humidity.² Influenza spreads rapidly in a population because it has a short incubation period (period between infection and onset of symptoms) of 1-3 days and because persons are infectious (able to transmit it to others) during early illness or even before the onset of symptoms. Persons are most infectious during the first 1-2 days of illness.

An influenza pandemic occurs when a new, virulent strain of the influenza virus circulates globally. Because the virus is new, there is little to no immunity among the population, and the virus can be transmitted easily from person-to-person. Because the virus is virulent, it can cause serious disease and possibly death. Therefore, an influenza pandemic has the ability to make many people very sick in a relatively short period of time.

While an influenza pandemic probably cannot be prevented, measures can be taken to decrease its detrimental effect on society. The most effective tool to decrease the impact of pandemic influenza is vaccination. However, because the influenza virus will be new, no vaccine will be available, and the process to produce one will take several months. Therefore, other measures will need to be instituted if we are to limit transmission of the influenza virus.

Community mitigation measures are efforts designed to limit the impact of an influenza pandemic on the community at large by minimizing the transmission of influenza in order to:

1. Reduce morbidity (disease) and mortality (death).
2. Delay the outbreak peak (the point where the most cases will occur).
3. Decrease the number of cases occurring during the outbreak peak in order to lessen the impact on the health care system and other critical infrastructure.

This document:

- Defines and describes each of the recommended community mitigation measures.
- Describes the triggers for implementing each measure.
- Describes Utah plans for use of the measures in different pandemic scenarios based on predicted severity of the pandemic.
- Provides guidance for local health departments, schools, employers, day care centers and others to help prepare to implement these measures.

Planning Assumptions

- A pandemic can have varying severity, ranging from a moderate pandemic with <800 deaths to a severe pandemic with >16,000 deaths in Utah. Mitigation strategies should be proportionate to the projected severity of the pandemic.
- Mitigation strategies will not be able to stop spread of the novel influenza virus, but may be able to slow transmission.
- An effective vaccine will not be available at the start of a pandemic and supplies will be limited for at least the first year.
- Antiviral stockpiles will be insufficient to treat the majority of the population and their use will be limited to priority groups outlined in the *Antiviral Drug Distribution Plan*.
- Detection of a novel influenza virus in one jurisdiction in Utah will indicate that an outbreak is likely to be detected anywhere in Utah within the next 1-2 weeks.
- Consistent implementation of mitigation measures across Utah will increase public understanding and promote adherence to the recommendations.
- Regional planning should consider whether detection in a community in a neighboring state that is close to or has substantial interaction with a Utah community should prompt either earlier implementation in the Utah region nearest to that community (e.g., Grand Junction, Colorado; Las Vegas, Nevada; Evanston, Wyoming) or possibly earlier statewide Utah implementation.

Pandemic Response Periods, Stages, and Levels

The World Health Organization (WHO) has created **Pandemic Alert Phases** designed to reflect the *global* risk of a pandemic and to assist in *global* response strategies. The federal government has created **Response Stages** designed to reflect the risk of pandemic influenza to the *US*, in relation to pandemic influenza activities occurring throughout the world, and to assist in *federal* response strategies. Utah has created **Utah Pandemic Response Levels** to define the threat of pandemic influenza to *Utah*, in relation to pandemic influenza activities occurring outside of Utah, and to assist in *Utah* response measures. Appendix 1 shows how the global phases, the federal stages, and the state levels correlate.

Utah will use the WHO Periods and U.S. Federal Government Response Stages to guide response in Utah until the onset of the WHO Pandemic Period and U.S. Federal Government Response Stage 3. After that point, Utah will use the Utah Pandemic Response Levels described here to guide Utah-specific responses.

Level A: Widespread transmission in humans outside of North America.

Level B: Detection of human case(s) in North America, without detection in Utah.

Level C: Detection of human case(s) in Utah.

Level D: Established epidemic(s) in Utah.

Level E: Period after an initial wave in Utah.

Pandemic Severity Index

The federal government has created a **Pandemic Severity Index** designed to characterize the severity of an influenza pandemic on the US population. The key measurement in the Pandemic Severity Index is case fatality ratio (the percentage of persons ill who die); however multiple parameters will most likely be employed to determine the pandemic severity. The Pandemic Severity Index will be invoked during the federal government Response Stages 3 to 5 and will be used to determine how community mitigation measures are employed in Utah when we reach Utah Pandemic Response Level C.

Table 1: The Federal Government Pandemic Severity Index

Category	Case Fatality Ratio	Projected Number of Deaths – U.S.	Utah Projections*	20 th Century Comparison
1	<0.1%	<90,000	< 800	Seasonal flu
2	0.1% - <0.5%	90,000 - <450,000	< 4,000	1957, 1968
3	0.5% - <1.0%	450,000 - <900,000	< 8,000	None
4	1.0% - <2.0%	900,000 - <1,800,000	< 16,000	None
5	>2.0%	>1,800,000	> 16,000	1918

* Utah Projections are simple per capita projections that assume the same illness rate (30%) and case fatality rates for Utah’s 2007 population (2,642,042). Demographic differences such as Utah’s younger age distribution are not considered because of the inability to predict the age-specific impact of a future pandemic.

Community Mitigation Measures

The measures included below were developed based on knowledge of influenza transmission, historical studies of past influenza pandemics and results of mathematical models of simulated pandemics. Results of the historical studies and simulation models suggest that each measure can be partially effective in reducing transmission of the influenza virus; but also that they have greater effectiveness when combined. Those results also suggested that early institution and sufficiently long duration of the measures are important to their effectiveness. Therefore, this plan proposes instituting these measures early and together (also called targeted, layered implementation). Evidence suggests that using all of the following measures together will have a greater impact on reducing disease transmission than the sum of the individual measures applied alone. While the evidence described above suggests that use of community mitigation measures can significantly reduce disease transmission in the community, it is important to acknowledge that their effectiveness is not based on actual trials of their use and substantial uncertainty remains as to their effectiveness. In addition, they can have unintended adverse effects and difficulties in their implementation. Therefore, planning to address implementation difficulties and take steps to limit adverse effects will be essential.

Hygiene entails measures that limit the transmission of influenza by reducing contact with infectious materials. These measures include appropriate hand washing, cough etiquette, and the use of facemasks and respirators. Additional research is needed to characterize the effectiveness of facemasks and respirators in controlling the spread of

pandemic influenza in community settings. However the Centers for Disease Control and Prevention (CDC) has released interim recommendations on the use of facemasks and respirators. Those interim recommendations emphasize that masks and respirators should not be primary methods of reducing exposure – the primary methods should be reducing interpersonal contact. However, they recommend that facemasks be considered for use by persons who need to enter crowded settings, both to protect their nose and mouth from other people's coughs and to reduce the wearers' likelihood of coughing on others. The CDC also recommends the use of respirators for persons for whom close contact with an infectious person is unavoidable.³ This can include selected persons who must take care of a sick person (e.g., family member with a respiratory infection) at home. Additional guidance is expected to be released as new research is conducted, and this document will continue to be updated with the appropriate information. The success of this measure will be based on the public receiving and understanding messaging from public health regarding appropriate hygienic practices. Challenges to accomplishing this will include addressing language barriers, providing simple, clear information based on established knowledge about behavior change, and assuring that the messages reach all populations.

Voluntary isolation applies to ill persons who do not require hospitalization and is intended to limit the transmission of influenza from infectious persons to healthy persons. Isolation requires the individual to stay home and avoid contact with other persons for 7-10 days.

There are many challenges to implementing this measure. Identifying cases in a rapid manner is important in order to recommend isolation in a timely manner. It will be impossible to identify *all* cases because mild or asymptomatic infections will most likely occur. However, isolation will not be based solely on public health or healthcare's identification of cases. This measure will rely on persons self-identifying themselves as cases and taking action based on that recognition. It will be important to assure that employment and educational leave policies provide incentives and not barriers to people staying home when sick. Additionally, if the ill person(s) are not able to isolate themselves appropriately from other household members, household members may be placed at increased risk of disease. Another challenge will be people's acceptance of isolation recommendations. Isolation will require a substantial change in behavior among ill person(s) and their contacts, and financial, social and household resources could cause a person to return to work or go to a local grocery store before the infectious period is over. A high rate of absenteeism from work among healthy household members staying home to care for the ill could impact society's functioning. Requiring sick persons to isolate themselves will require mechanism to deliver antivirals to those who need them. Finally, there is a possibility for detrimental effects on those who may not receive needed clinical care (elderly and those living alone).

Voluntary quarantine of household contacts applies to exposed persons who are not ill and is intended to separate persons who may become infectious from those who are healthy. Household contacts of an ill person have a greater risk of becoming infectious themselves. Therefore, household contacts should quarantine themselves to prevent exposure to healthy persons during the pre-symptomatic period. Persons should remain in quarantine for 7 days after the onset of illness in the sick household member. In situations where multiple household members become ill, persons should remain quarantined until 7 days after the last onset of illness in a household member. Like voluntary isolation, this

measure will rely on persons self-identifying themselves as contacts of cases and taking action based on that recognition.

Many of the challenges for voluntary isolation will also be important for quarantine, including acceptance of recommendations, the change in behavior needed, the financial impacts, assuring appropriate workplace and school policies to support the intervention, social and household resources, and the effects of increased absenteeism. Because quarantine requires the separation of *healthy* persons, many may not understand the reason for quarantine because they are not sick, and may not be compliant. Additionally, quarantine time can last much longer than isolation time if additional household members develop symptoms. In order for the community to accept the measure, methods to supply essential services and provide compensation for absence from work will need to be developed.

Special Note:

In Toronto during the 2003 SARS epidemic, 99.9% of 23,103 contacts of patients with SARS complied voluntarily with household quarantine. Essential health care workers under quarantine were placed in a modified form, known as “work quarantine”, under which they were permitted to go to work (not via public transport), where they followed infection control practices required of all staff members. When not at work, they were quarantined at home. Unlike influenza, however, SARS has virtually no pre-symptomatic or asymptomatic transmission of virus, and infectivity is low early in illness (CDC, 2006).

As with voluntary isolation, effectively implementing voluntary household quarantine will require effective public communication, reinforced by appropriate policies, and support of those who are quarantined.

Community social distancing (outside of the workplace) is intended to decrease the frequency of contact between persons thereby limiting the possibility for susceptible individuals to be exposed to infectious ones. Public health may recommend cancelling large public gatherings (concerts, sporting events), worship services, and limiting the congregating of persons in public places (malls, parks). Reducing the public transportation density may be accomplished by either reducing the number of people who can use it at certain times or increasing off peak service to stagger shifts of people.

For this measure to be successful, it will require public support and political and business leadership in association with current public health information. Companies may be unwilling to close their businesses because of the loss of money that will likely ensue. The public may not be compliant, and even if they are, may suffer from decreased confidence and morale. With large gatherings cancelled, smaller gatherings may increase thereby increasing the risk of transmission. Additionally, which locations and events get closed will be dependent on the definition of what is considered a large public gathering or a public place, and may become very politically sensitive. Finally, consideration for funerals and management of the dead will and must occur throughout a pandemic, and methods to control transmission in this setting will be necessary.

Social distancing within the non-healthcare workplace is intended to limit exposure to influenza while maintaining infrastructure for essential services and promoting confidence in the workplace. It may take the form of excluding ill employees,

telecommuting, teleconferencing, staggered shifts, and cancelling large meetings and conferences.

Social distancing measures may be difficult to implement because of the financial difficulties that may occur. Employers may see decreased productivity, and employees may worry about not being paid. It is important that employer's show a commitment to provide the necessary resources for employees to telecommute and make changes within the current environment (staggered shifts, etc.) in order for employees to feel confidence in adhering to the changes. However, work situations are significantly different, and many companies will face differing issues. For example, leave policies may be more difficult for smaller employers than large ones, policy implementation may be difficult in work places with high social contact; some employers may have to increase their services during a pandemic (food delivery, etc.), etc. Additionally, the general telecommunication infrastructure is limited at this time. Also, employees may become complacent as the pandemic prolongs.

Dismissal of students from school: Children play a critical role in the transmission of influenza, especially in school settings where high contact rates and close proximity coupled with limited hygiene contribute to effective transmission. Preventing them from congregating will reduce transmission among children, their household contacts, and the community at large. Studies suggest that early closures may reduce the peak attack rate and the cumulative attack rate.^{4,5} Additionally, dismissing students from school will allow school resources (buildings, kitchens, buses, staff, etc.) to be used in other ways.

However, the burden on the community of having school-age children no longer in school will be great. Without school, students may become bored from unproductive behavior. Additionally, students may simply re-congregate elsewhere. Also, students with special education requirements may be difficult to care for. Students' education and mental health may be affected if schools are closed for a prolonged duration. A disruption in schooling may detrimentally affect future schooling and careers of older students. Preventing transmission in dormitories and other congregate settings will be difficult. Community and parental involvement will be necessary to help supervise students if both parents either work or are sick. Parents will need work-leave policies that will allow them to care for their children, and may have financial difficulties if they are required to stay home for long period of time. Contract and legal issues such as pay and job security for teachers and other employees, will need to be addressed. Additionally, programs offered at all educational levels within schools may feel impact (meals, low income children, etc.).

Special Note:

In 1918, school absenteeism rates in Chicago were high (30-45%) at the peak of the epidemic, even though schools were not closed. It is not known what percent of absenteeism was due to illness or parent's keeping child home to prevent exposure. In most US communities today, schools would close if absenteeism rates were this high. This information suggests that high absenteeism will occur and schools may close once the epidemic is well established in the community.⁶

Matrix of Measures by Severity Level

These mitigation measures can reduce spread of the influenza virus, but they also have social costs of their own against which those benefits must be balanced. Thus, this plan recommends implementing fewer of the mitigation measures in a mild pandemic and more measures in more severe pandemics. The severity of a pandemic will be graded using the Pandemic Severity Index based on attack rates and case-fatality rates in areas affected prior to the pandemic arriving in Utah. The planned uses of mitigation measures in pandemics of different severities are outlined in Table 1.

Table 1. Recommended mitigation measures according to pandemic severity index.

Measure	Pandemic Severity Index		
	1	2/3	4/5
Hygiene	Recommend	Recommend	Recommend
Voluntary isolation	Recommend	Recommend	Recommend
Voluntary quarantine of household contacts	Not recommend	Consider	Recommend
Community social distancing (non-workplace)	Not recommend	Consider	Recommend
Workplace social distancing	Not recommend	Consider	Recommend
Dismissal of students	Not recommend	Consider	Recommend

Implementation and Cessation of Mitigation Measures

In order for community mitigation measures to be effectively and quickly implemented, a method to prepare and warn partner agencies associated with community mitigation measures and the public who will be affected by them of their impending activation is necessary. Utah will use the three-tier terminology of *Alert*, *Standby*, and *Activate* proposed by CDC to reflect the steps associated with response action.

Alert – Partner agencies involved in community mitigation measures will be informed of their approaching activation.

Standby – Decision-making processes will be initiated, and resources and personnel mobilized.

Activate – The specified mitigation measures will be implemented.

Table 2. Recommended sequence of activating the mitigation plan according to Utah Pandemic Response Levels.

Pandemic Severity Index	Utah Level A	Utah Level B	Utah Level C	Utah Level D	Utah Level E
1	Alert	Standby	Activate	Activate	Activate
2/3	Alert	Standby/Activate	Activate	Activate	Activate
4/5	Alert/Standby	Standby/Activate	Activate	Activate	Activate

Decision-Making Structure

A Unified Area Command consisting of state and local public health representatives will decide which measures will be implemented on a state-wide basis. The state representative for the Unified Area Command will be the State Epidemiologist or designee. Local health department representatives will be the local health officers or designees. The Unified Area Command will most likely begin meeting when the world enters WHO Phase 6, US Stage 3, Utah Level A. This will allow for decisions to be made in advance so that the implementation system can be promptly executed once a trigger is reached.

Implementation Triggers

For planning purposes, one case of laboratory confirmed pandemic influenza in Utah will be the trigger for the initiation of community mitigation measures. However, the Unified Area Command holds the right to modify triggers in the future if epidemiological evidence suggests an alternative approach (ie implementation prior to the arrival of pandemic influenza in Utah) may be more beneficial.

While community mitigation measures are expected to occur on a state-wide basis, pandemic influenza activity in a community in a neighboring state that is close to or has substantial interaction with a Utah community should prompt either earlier implementation in the Utah region nearest to that community.

Areas where substantial community mixing occurs include:

- Washington County, Utah and Las Vegas, Nevada
- Summit County, Utah and Evanston, Wyoming
- Grand County, Utah and Grand Junction, Colorado

Planning to communicate regional activity with surrounding states will be essential in determining if regional implementation may be necessary in Utah. Regional implementation decisions will need to be made at the time cases or clusters are identified.

Cessation Triggers

CDC states that “mathematical models suggest that cessation of community mitigation measures are most effective when new cases are not occurring or occur very infrequently.” The Unified Area Command will routinely review laboratory, surveillance, and healthcare capacity data as detailed in the [Influenza Enhanced Surveillance Plan](#) to determine when all or some community mitigation measures can be repealed.

General Use of Mitigation Measures

Pandemic Severity 1

The more restrictive and intrusive community mitigation measures will not be invoked. The focus will be on hygiene messages and on encouraging ill persons to stay home and limit their contact with others while they are sick.

Pandemic Severity 2/3

Messages encouraging hygiene will begin to be distributed when pandemic influenza is recognized anywhere in the world. Messages will be enhanced once transmission has been documented in North America. Depending on the level of cooperation from

persons and organizations, legal authority may be necessary to enforce social distancing. The Unified Area Command will decide how long these measures should be in place by evaluating the current surveillance data. Measures may be initiated again with a second wave of disease.

Pandemic Severity 4/5

For a pandemic with a high severity, the Unified Area Command will most likely already have been convened once transmission has been documented somewhere in the world. Hygiene messages will begin to be produced at that time, and will be enhanced as transmission extends. Legal authority may be used to enforce social distancing. The Unified Area Command will decide when measures should be lifted by evaluating surveillance data. Measures may be initiated again with a second wave of disease.

Legal Authority

The Unified Area Command will make a recommendation to the appropriate legal authority when surveillance data indicate that a legal closure or enforcement is necessary. Title [26-1-5](#) of the Utah Code allows UDOH the “power to adopt, amend, or rescind rules” in order to “affect the security of health or the preservation and improvement of public health in the state.” Title [26-6-3](#) allows UDOH to “to investigate and control the causes of epidemic infections and communicable disease, and shall provide for the detection, reporting, prevention, and control of communicable diseases and epidemic infections.”

Title [26a-1-114](#) of the Utah Code allows local health departments to “investigate infectious and other diseases of public health importance and implement measures to control the causes of epidemic and communicable diseases and other conditions significantly affecting the public health” and “enforce state laws, local ordinances, department rules, and local health department standards and regulations relating to public health.” Please refer to Attachment 8 of the Utah Pandemic Influenza Response Plan for full legal references.

Hygiene

No legal authority necessary.

Isolation and Quarantine

Title [26-6-4](#) and [26-6b-2](#) of the Utah Code allows UDOH to examine, treat, quarantine, or isolate a person under a verbal or written department order of restriction who:

- “is infected or suspected to be infected with a communicable disease that poses a threat to the public health and who does not take action as required by the department or the local health department to prevent spread of the disease”
- “is contaminated or suspected to be contaminated with an infectious agent that poses a threat to the public health and that could be spread to others if remedial action is not taken”
- “is in a condition or suspected condition which, if exposed to others, poses a threat to public health, or is in a condition which if treatment is not completed will pose a threat to public health”

Title [26-6b-6](#) allows UDOH and local health departments have the power to “order involuntary examination, treatment, quarantine, or isolation of the individual and may petition the district court to order involuntary examination, treatment, quarantine, or isolation” in order to enforce isolation and quarantine requirements.

Title [26a-1-114](#) of the Utah Code allows local health departments to “establish, maintain, and enforce isolation and quarantine, and exercise physical control over property and over individuals as the local health department finds necessary for the protection of the public health.”

Non-workplace social distancing (large public gathering, airport, and public transportation closure)

Title [26a-1-114](#) of the Utah Code allows local health departments to “close theaters, schools, and other public places and prohibit gatherings of people when necessary to protect the public health.”

An influenza pandemic may necessitate the quarantine of flights, the restriction of flights, or the closure of airports. The Federal Aviation Administration (FAA), UDOH, the local health department within which the airport resides, and the airport administration will decide when these measures are appropriate.

Workplace social distancing (business closure)

During a pandemic, businesses should continue to operate to provide the critical infrastructure and economic support that the community needs. The closure of businesses to reduce *workplace* transmission will not be recommended. However, some businesses also serve as places for large public gatherings (arenas, malls, theaters, etc.). Closures may be recommended for businesses that deal substantially with the community in order to reduce *community* transmission. Title [26a-1-114](#) of the Utah Code allows local health departments to “close theaters, schools, and other public places and prohibit gatherings of people when necessary to protect the public health.”

Student dismissal and childcare closure

Title [26a-1-114](#) of the Utah Code allows local health departments to “enforce all ordinances, standards, and regulations pertaining to the public health of persons attending public and private schools” which may include closing schools “when necessary to protect the public health.”

Title [53a-3-413](#) of the Utah Code specifies that “all public school buildings and grounds are civic centers and may be used by district residents for supervised recreational activities and meetings.”

Title [26-39-301](#) of the Utah Code allows the Utah Department of Health to “make and enforce rules to implement this chapter and, as necessary to protect qualifying children's common needs for a safe and healthy environment.”

Rule [R430-3-10](#) of the Utah Code specifies that the Utah Department of Health may “order the immediate closure of a facility if conditions create a clear and present danger to children in care and which require immediate action to protect their health or safety.”

Hygiene

Pre-pandemic planning:

1. Education campaign.
 - **Media campaign.** Several media campaigns have already been produced and are being used in Utah. These messages are general and focused on altering individual behavior now in advance of a pandemic.
 - **School and childcare education.** Educate school administrators, teachers, and childcare workers on recommended hygiene measures to implement in schools and childcare centers prior to student dismissal and closure.
2. Develop materials for workplaces.
 - Local health departments will identify “public places” within their jurisdiction based on the risk of disease transmission within those settings. Public places may include: malls, stores, parks, movie theaters, public transportation, etc. Local health departments will ensure that the identified “public places” receive appropriate education and materials either through Be Ready Utah or communications with the local health department.
 - UDOH will work with local health departments and Be Ready Utah to develop materials that can be distributed to businesses that deal substantially with the public.
3. Develop materials for schools.
 - The [Utah Pandemic Influenza School Kit](#) contains hygiene posters in Spanish and English, basic pandemic influenza education materials, and family preparedness documents designed for schools to use with students, staff and parents.
4. Guidelines for hygiene in the healthcare setting are being developed and will be addressed in detail elsewhere.

Alert:

- The Unified Area Command will ensure that consistent and appropriate messages regarding hygiene are available and distributed to the appropriate public health officials.
- Increased personal hygiene messages will be distributed through various media forms detailed in the [Public and Risk Communication Plan](#).

Standby:

- NA

Activate:

- Schools will be notified by local health departments to begin increased hygiene efforts.
- Public places will be notified by local health departments to begin increased hygiene efforts.

Voluntary isolation

Pre-pandemic planning:

1. Education campaign.
 - **Media campaign.** An amendment to the pandemic influenza media campaign is currently being developed to allow for more specific messages once the probability that a pandemic will occur soon escalates. The specific messages regarding student dismissal that will be disseminated at this point have already been created to provide for a timely response.
 - **School and childcare education.** Local health departments are responsible for educating school administrators, teachers, and childcare workers on recommended isolation measures to implement in schools and childcare centers prior to student dismissal and closure.
 - **Employer/workplace education.** Local health departments and Be Ready Utah are responsible for educating business owners and employers on the importance of flexible work-leave policies that will allow employees to follow isolation recommendations.
2. Develop materials for schools.
 - [Utah School Pandemic Influenza Guidelines](#) contains information on infection control within the school setting, including establishing the capability for isolating students that become ill at school.
3. Regional Community Call Center.
 - UDOH is currently working with several community partners to develop a comprehensive Regional Community Call Center (RCCC) model to provide unified information and education to the public, augment on-ground triage capabilities, and collect auxiliary surveillance data as to the implementation of mitigation measures and the communities' acceptance.
4. Assistance Coordination Center.
 - UDOH and local health departments have included VOAD's in the ICS structure through an Assistance Coordination Center (ACC) being organized by the Red Cross.
 - The ACC will serve as a coordinating location where requests for assistance can be tracked and monitored, and assigned to participating agencies with resources to assist with requests.
 - Requests will be submitted to the ACC via the RCCC.
 - The local health departments will serve as participating agencies, and are responsible for the distribution of antivirals to treatment facilities or other designated distribution centers, and should work with the state to ensure that mechanisms are established to deliver treatment to isolated persons.
 - Local health departments will develop ways to isolate ill persons living within their jurisdiction that can't stay at home because of substantial risk to a household member.
5. Healthcare education.
 - Healthcare facilities and healthcare workers will receive guidance on how to diagnose probable pandemic influenza illness and advise non-admitted patients about appropriate isolation procedures through communication methods detailed in the [Operational Communications and Coordination Plan](#).

Alert:

- The Unified Area Command will ensure that consistent and appropriate messages regarding isolation are available and distributed to the appropriate public health officials.
- Persons designated to staff the public health hotline will be trained, scripts and messages will be approved for use, and systems will be tested.
- The ACC representative will be contacted.

Standby:

- Local health departments will assist schools in stocking isolation rooms, if assistance is needed.

Activate:

- The public health hotline will begin operations.
- The ACC will begin operations.
- Local health departments will notify schools to begin isolation procedures.
- Local health departments, UDOH, and Be Ready Utah will notify businesses to begin altered absenteeism policies.

Voluntary quarantine of household contacts**Pre-pandemic planning:**

1. Education campaign.
 - **Media campaign.** An amendment to the pandemic influenza media campaign is currently being developed to allow for more specific messages once the probability that a pandemic will occur soon escalates. The specific messages regarding student dismissal that will be disseminated at this point have already been created to provide for a timely response.
 - **School and childcare education.** Local health departments are responsible for educating school administrators, teachers, and childcare workers on public health recommendations for quarantine.
 - **Employer/workplace education.** Local health departments and Be Ready Utah are responsible for educating business owners and employers on the importance of flexible work-leave policies that will allow employees to follow quarantine recommendations.
2. Regional Community Call Center.
 - UDOH is currently working with several community partners to develop a comprehensive Regional Community Call Center (RCCC) model to provide unified information and education to the public, augment on-ground triage capabilities, and collect auxiliary surveillance data as to the implementation of mitigation measures and the communities' acceptance.
3. Assistance Coordination Center.
 - UDOH and local health departments have included VOAD's in the ICS structure through an Assistance Coordination Center (ACC) being organized by the Red Cross.

- The ACC will serve as a coordinating location where requests for assistance can be tracked and monitored, and assigned to participating agencies with resources to assist with requests.
- Requests will be submitted to the ACC via the RCCC.

Alert:

- The Unified Area Command will ensure that consistent and appropriate messages regarding quarantine are available and distributed to the appropriate public health officials.
- Persons designated to staff the public health hotline will be trained, scripts and messages will be approved for use, and systems will be tested.
- The ACC representative will be contacted.

Standby:

- NA

Activate:

- The public health hotline will begin operations.
- The ACC will begin operations.
- Local health departments, UDOH, and Be Ready Utah will notify businesses to begin altered absenteeism policies.

Community social distancing (non-workplace)

Pre-pandemic planning:

1. Education campaign.
 - **Media campaign.** An amendment to the pandemic influenza media campaign is currently being developed to allow for more specific messages once the probability that a pandemic will occur soon escalates. The specific messages regarding community social distancing that will be disseminated at this point have already been created to provide for a timely response.
 - **“Public places” education.** Local health departments will ensure that the identified “public places” receive appropriate education and materials either through Be Ready Utah or communications with the local health department.
2. Identification of public places.
 - Local health departments will identify “public places” within their jurisdiction based on the risk of disease transmission within those settings. Public places may include: malls, stores, parks, movie theaters, public transportation, etc.
 - Local health departments will identify organizations that conduct regular meetings that could be cancelled without major economical consequences.
3. Develop education materials for public places.
 - UDOH will work with local health departments and Be Ready Utah to develop materials that can be distributed to businesses that deal substantially with the public.
4. Altered faith-based organization practices

- Local health departments will work with faith-based organizations to develop alternative ways for them to meet their mission during a pandemic while cancelling or reducing gatherings.

Closure/Re-opening Process:

UDOH and local health departments will issue closure and cancellation orders to public places and public events that are likely to be a significant source of transmission. Legal authority to close or cancel events will only be used when necessary.

Alert:

- The Unified Area Command will discuss the extent of community social distancing measures to be enacted at the activate stage.

Standby:

- The Unified Area Command will ensure that social distancing messages are distributed to the appropriate public health officials.
- The public health officials designated for communicating with public places will describe what is expected to happen at the activate stage to public places.

Activate:

- Local health departments will issue social distancing orders within their jurisdiction.
- Local health departments will issue closure and cancellation orders within their jurisdiction.

Workplace social distancing

Pre-pandemic planning:

1. Education campaign.
 - **Media campaign.** An amendment to the pandemic influenza media campaign is currently being developed to allow for more specific messages once the probability that a pandemic will occur soon escalates. The specific messages regarding workplace social distancing that will be disseminated at this point have already been created to provide for a timely response.
 - **Employee/employer education.** Local health departments and Be Ready Utah are responsible for educating business owners and employers on the importance of altered working conditions.
2. Develop materials for business education.
 - UDOH created [Small Business Planning for Pandemics](#), a document designed to specifically assist small businesses in pandemic planning.
3. Needs-based assessment of Utah businesses.
 - A needs-based assessment will be conducted by the Utah Division of Homeland Security to determine the level of businesses' preparedness in Utah.

Alert:

- The Unified Area Command will discuss the extent of workplace social distancing measures to be enacted at the activate stage.

Standby:

- The Unified Area Command will ensure that social distancing messages are distributed to the appropriate government and public health officials.

Activate:

- Local health departments will issue social distancing orders within their jurisdiction.

Dismissal of students

Pre-pandemic planning:

1. Education campaign.
 - **Media campaign.** An amendment to the pandemic influenza media campaign is currently being developed to allow for more specific messages once the probability that a pandemic will occur soon escalates. The specific messages regarding student dismissal that will be disseminated at this point have already been created to provide for a timely response.
 - **Parent and student education.** UDOH will work with local health departments and the Utah State Office of Education to educate students and parents on plans for student dismissal and provide students and parents with guidelines for preparing to care for themselves and/or their children. Schools will be encouraged to hold open meetings with students and parents to discuss the school's plans for dealing with an influenza pandemic and what the school expects students and parents to do to prepare themselves and/or their children.
 - **Childcare facility education.** UDOH Bureau of Epidemiology will work with the UDOH Bureau of Childcare Licensing to educate childcare workers and facilities on plans for childcare closures and provide parents with guidelines for preparing to care for themselves and/or their children.
2. Develop materials for schools.
 - [Utah School Pandemic Influenza Recommendations](#) describes how public health will communicate with schools regarding childcare closures.
 - UDOH and local health departments will work with schools to create materials specifically for schools to educate students and parents.
3. Assist education agencies in developing their influenza plans.
 - [Utah School Pandemic Influenza Guidelines](#) describes what schools should be doing now to prepare for a pandemic.
 - UDOH will ensure that all pandemic influenza documents relating to student dismissal are available on all appropriate websites.
 - Local health departments will work with the schools within their jurisdiction to determine how communications will occur prior to and during a pandemic.
4. Plan to minimize student dismissal and childcare closure consequences.

- Utah State Office of Education will develop guidelines for local education agencies to assist in preparing for continuing education and essential programs.
 - Local health departments will work with local government, education agencies and the communities within their jurisdiction to develop programs and methods for keeping students occupied when dismissed from school and preventing them from congregating elsewhere.
5. Develop a plan for the closure of childcare facilities.
 - UDOH Bureau of Epidemiology and UDOH Bureau of Childcare Licensing will collaborate to identify means to communicate with all childcare providers.
 - UDOH Bureau of Epidemiology and UDOH Bureau of Childcare Licensing will collaborate to determine the best way to communicate to childcare workers and facilities, and develop a plan that can be effectively executed to close childcare centers.
 6. Develop materials for childcare facilities.
 - UDOH Bureau of Epidemiology will develop materials that can be distributed to childcare workers and facilities throughout the state.

Closure/Re-opening Process:

Closure orders for public and private elementary, intermediate, secondary, and post-secondary schools will be issued by local health departments, but will be coordinated through UDOH for state-wide consistency. UDOH will be responsible for issuing closure orders for childcare facilities through the Bureau of Childcare Licensing. The reopening of schools and childcare facilities will follow the same communication model as closings.

Alert:

- The Unified Area Command will discuss the extent of student dismissal and childcare closure to be enacted at the activate stage.
- The decision will be communicated to public health officials at UDOH and the local health departments responsible for communicating with schools and childcare facilities.

Standby:

- The public health officials designated for school and childcare facility communication will describe what is expected to happen at the activate stage to schools and childcare facilities.
- Schools and childcare facilities will communicate with students, parents, and staff what is expected to happen at the activate stage.

Activate:

- Local health departments will issue student dismissal orders within their jurisdiction.
- UDOH will issue childcare closure orders throughout the state.
- Students, parents, and staff will be notified when a dismissal of students or childcare facility closure is expected by means previously determined by the school or childcare facility.
- Public health will issue weekly messages to schools and childcare facilities detailing the status of the pandemic and school/childcare closures. Schools and

childcare facilities will communicate these messages to their students, parents, and staff.

Communication

The Unified Area Command will decide when to issue an *Alert*, *Standby*, or *Activate* response. Local health departments will be primarily responsible for notifying the partner agencies and key audiences within their jurisdictions; however, some notifications may be done through UDOH. Each partner agency is expected to have a plan for how they will notify their employees. Below the partner agencies required for the success of each community mitigation measure are listed.

Hygiene

Partner agencies and key audiences:

- Infection control practitioners
- Utah Hospital Association
- Long-term care facilities

Isolation and Quarantine

Partner agencies and key audiences:

- Infection control practitioners
- Utah Hospital Association
- Long-term care facilities
- Emergency medical services
- Urgent care facilities
- Utah Medical Association

Non-workplace social distancing

Partner agencies and key audiences:

- Business owners
- Utah Transportation Authority
- Faith-based organizations
- Voluntary organizations active in disasters (VOADs)

Workplace social distancing

Partner agencies and key audiences:

- Employers
- Employees

Student dismissal

Partner agencies and key audiences:

- Utah Office of Education
- School districts
- Parents
- Students

In order for notifications to occur in a timely manner, the appropriate infrastructure for communication within and between partner agencies should be developed. Below is a list of preparations that should occur:

- Dialogue should be initiated to determine whether UDOH or local health departments are the appropriate contact for each partner agency.
- Partner agencies should be contacted and told of their expected participation.
- Contact information should be gathered for the appropriate person/department responsible for pandemic influenza communications in each partner agency.
- Messages should be created for each response (*Alert, Standby, Activate*).
- The communication tools that will be used for each notification should be developed and tested.
- Partner agencies should be encouraged to plan the appropriate infrastructure for the notification of their employees.

Additional communication information can be found in the [Operational Communications and Coordination Plan](#).

Minimizing Consequences of Community Mitigation Measures

Individuals, families, employers, and communities will all experience difficulties dealing with community mitigation measures. Most problems will come from having children dismissed from school and childcare programs. There are 546,000 children less than 18 years old currently in school in Utah, which makes up 21.8% of the population. Additionally, 205,000 Utah residents (8.2%) are currently in college or graduate school. Dismissing students from school would directly disrupt the schedule of 30% of the population. Secondary disruptions would occur for parents who would need to balance working with tending for their children. 412,000 working adults 16 years of age and older (33%) have children less than 18 years of age with both parents working. Tertiary disruptions would occur for employers with absent employees that must stay home to care for their children and could potentially result in workplaces closing or reducing operations and limiting the availability of essential services. Additionally, 156,000 Utah residents live alone (17.9% of all households); 30.1% are 65 years of age and older. Persons who live alone may be unable to follow isolation requirements if they need to acquire medications or go grocery shopping.

*The above statistics were calculated from the 2005 American Community Survey conducted by the U.S. Census Bureau.

Planning Guidance for Other Entities

In order to prevent or cope with the above difficulties, CDC has developed several resources for the community to assist in individual and organizational preparation for an influenza pandemic. These resources include advice and recommendations for:

- [Businesses and Other Employers](#)
- [School and Childcare Facilities](#)
- [Faith-Based and Community Organizations](#)
- [Individuals and Families](#)
- [Healthcare Entities](#)

Utah strongly suggests that all persons familiarize themselves with the appropriate documents and begin discussions and preparations for how they can assist in reducing transmission while ensuring that essential services are not disrupted and reducing personal hardships.

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Appendix 1: WHO Pandemic Periods and Phases, U.S. Federal Response Stages, and Utah Pandemic Response Levels

WHO Phases & Descriptions	U.S. Federal Stages and Description		Utah Pandemic Response Levels and Description	
Inter-Pandemic Period				
Phase 1 – No new influenza viruses in humans	0		Use WHO Periods	
Phase 2 – Circulating animal virus poses human risk				
Pandemic Alert Period				
Phase 3 – Human disease, no or limited human-to-human transmission	0	New domestic animal outbreak in at-risk country	Use Federal Response Stages	
Phase 4 – Increased human-to-human transmission	1	Suspected human outbreak overseas		
Phase 5 – Significant human-to-human transmission	2	Confirmed human outbreak overseas		
Pandemic Period				
Phase 6 – Increased and sustained transmission in general population	3	Widespread human outbreaks, multiple locations overseas	A	Widespread transmission in humans outside North America
	4	First human case in N. America	B	Detection of human case(s) in North America, without detection in Utah
	5	Spread throughout U.S.	C	Detection of human case(s) in Utah
			D	Established epidemic(s) in Utah
	6	Recovery/preparation for subsequent waves	E	Period after initial wave in Utah (prior to end of pandemic or a subsequent wave)

Appendix 2: Sequence of Mitigation Actions that will occur During a Pandemic

	Alert	Standby	Activate
Hygiene			
Website posting and media messaging	Pre-pandemic messaging	Pre-pandemic messaging	Begin
Posters	Print and distribute		Post
Stockpiled school supplies		Distribute	Utilize
Hygiene efforts in schools			Begin
Hygiene efforts in public places			Begin
Voluntary isolation			
Website posting and media messaging	Pre-pandemic messaging	Pre-pandemic messaging	Begin
Posters	Print and distribute		Post
Hotline	Train staff		Open
Physician materials	Print and distribute		
Isolation procedures in schools		Stockpile isolation room	Implement
Liberal policies in businesses			Implement
Stockpiled subsistence items	Prepare for transport	Transport	Distribute
Voluntary quarantine			
Website posting and media messaging	Pre-pandemic messaging	Pre-pandemic messaging	Begin
Posters	Print and distribute		Post
Hotline	Train staff		Open
Liberal policies in businesses			Implement
Stockpiled subsistence items	Prepare for transport	Transport	Distribute
Non-workplace social distancing			
Website posting and media messaging	Pre-pandemic messaging	Pre-pandemic messaging	Begin
Posters	Print and distribute		Post
Social distancing orders	Public health will discuss	Public health will announce	Issue
Closure and cancellation orders	Public health will discuss	Public health will announce	Issue
Workplace social distancing			
Website posting and media messaging	Pre-pandemic messaging	Pre-pandemic messaging	Begin
Posters	Print and distribute		Post
Listserve		Implement	Continue
Business plans and policies		Review with employees	Implement
Social distancing orders	Public health will discuss	Public health will announce	Issue
Student dismissal from school			
Website posting and media messaging	Pre-pandemic messaging	Pre-pandemic messaging	Begin
Hotline	Train staff		Open
Home mailings		Begin	Continue
Weekly messages			Begin
Student dismissal and childcare closure orders	Public health will discuss	Public health will announce	Issue

Appendix 3: Protocol for Case-based Isolation and Quarantine

Background:

A pandemic is caused by a novel strain of influenza A to which most or all of the population has no effective immunity. During the early phases of a pandemic, it is highly likely that no vaccine will be available. The most effective way to prevent transmission is to prevent contact between infected and uninfected (susceptible) persons through community mitigation measures.

The Utah community mitigation plan assumes that in most circumstances during a pandemic, it will be impractical to implement traditional public health directed disease intervention measures, such as identifying and isolating individual cases and using contact tracing to identify and quarantine their contacts. However, there are circumstances where such measures might be practical and useful. These circumstances include:

1. The first detection of a novel influenza virus in Utah that has substantial pandemic potential, but which has not yet started a pandemic.
2. The detection in a Utah community of a pandemic virus before it had spread sufficiently to make individual isolation and quarantine measures impractical. In this case, it is possible that experience with attempts to contain the virus elsewhere would inform actions in Utah.

Objectives

1. Prevent transmission from ill (infectious) persons to susceptible (uninfected) persons.
2. Prevent infected or exposed persons from becoming ill and/or infectious.
3. Prevent uninfected persons from becoming infected.

Strategies:

1. Isolation of cases (ill persons).
2. Monitoring and/or quarantine of contacts (persons exposed to cases).
3. Antiviral treatment of cases.
4. Antiviral prophylaxis of contacts.

Concept of Operations:

When the decision to apply case-based containment measures upon detection of a novel influenza virus is made, several decisions about the approach to containment must be made.

1. Determine specific case definitions (for surveillance and for interventions) and definitions to be used to identify contacts for purposes of interventions.
2. Determine if involuntary (based on public health legal authority) isolation and quarantine orders will be used as part of the containment strategy and indications for their use.
3. Modify investigation forms to support purposes of the investigation and containment strategy.
4. Determine whether and how antiviral medications will be utilized in containment, including their use for treatment of cases, post-exposure prophylaxis of contacts, prophylaxis of contacts or secondary contacts of cases.

Decision-Making:

Upon detection of a novel virus, a general decision as to the value of using involuntary isolation or quarantine for purposes of containment should be made by the Local Health Officer in consultation with the State Epidemiologist. It is anticipated that consultation will be sought from Centers for Disease Control and Prevention (CDC) unless guidelines specific to the detected novel virus have already been issued. If a general decision to use involuntary measures as part of the containment strategy has been

made, the decision to use involuntary restriction authority for an individual person should be made by the Local Health Officer or designee.

Case Definition:

The case definition to trigger implementation of these measures would be identification of at least one case of novel influenza virus infection using the CSTE/CDC case definition for [Novel Influenza A Virus Infections](#) will be used to determine the case status of ill persons. An outbreak specific case definition will be developed based on the clinical characteristics of ill persons with the identified virus, epidemiologic characteristics (risk factors for infection) of that virus, and available laboratory capacity. For example, if the novel virus were H5N1, part of the case definition might be exposure to sick poultry. It is likely that the case definition will include a probable category which would be used to implement containment measures pending laboratory confirmation and procedures for removing the measures if laboratory testing failed to confirm the infection was caused by the novel virus.

Isolation – Confirmed, Probable, and Suspected Cases

Isolation:

The patient should be isolated for 10 days after symptom onset. Non-hospitalized patients should remain in their home and limit contact with others, including other household members, as much as possible. If hospitalized or otherwise institutionalized, standard, contact, droplet, and airborne precautions should be followed. In the event that the patient is non-hospitalized but in a living situation where substantial transmission may still occur and appropriate isolation may be difficult (ie college dormitory, shelter, etc) the local health department and UDOH will work together to try and identify an alternative location for isolation.

Case Investigation:

The purposes of case investigation may vary according to the specific situation, but a general purpose will be to collect risk factor and epidemiologic information about the case and to identify exposed contacts. The local health department will fill out a case investigation form and submit it to UDOH. Currently, two case investigation forms have been created by UDOH. One form is used for [influenza-associated hospitalizations](#), a current component of seasonal influenza surveillance in Utah. The other form is to be used if a suspected [influenza A H5N1](#) case were to appear in Utah. Both of these forms are currently available for local health department use, and can be easily modified in the event of a pandemic influenza virus that may require additional or different case investigation questions.

Monitoring:

Active contact with the patient, a family member or guardian, or hospital staff (if in the hospital) should be made on a daily basis for 10 days after the first symptoms appeared. The method for contact (phone calls, visits, etc.) should be determined by the individual local health department. However, all efforts should be made to make daily contact, and may require multiple contact methods to be tried. UDOH suggests that local health departments work with the designated contact person to establish a daily time and contact method to assist in daily updates.

Contact Management:

Contacts of cases should be notified and managed as detailed in the following document.

Treatment:

Antiviral treatment of cases prior to community transmission will be dependent upon the effectiveness and availability of antivirals as well as the potential benefit to the individual case.

UDOH Notification:

The local health department should notify UDOH once a case is initially identified, and any time additional information is available (ie confirmatory testing, death of the patient, etc.) as well as submit the surveillance log at the end of the isolation period.

CDC Notification:

UDOH is responsible for notifying CDC of a case when it is initially identified, and any time additional information is available (ie confirmatory testing, death of the patient, etc.) or otherwise requested by CDC.

Quarantine – Household Contacts, Close Contacts, and Healthcare Workers**Definition:**

A household contact is anyone who resides at the same location as the case. Close contacts are defined as persons who have been within 6 feet of the case for a prolonged period of time. Only healthcare workers that have not followed the suggested infection control guidelines for all contact with the case during the infectious period need to be monitored.

Quarantine:

Contacts should be quarantined for 10 days after symptom onset in their last contact. Contacts should remain in their home and limit contact with others as much as possible.

Monitoring:

Active contact with the contact or a family member or guardian should be made on a daily basis for 10 days after the first symptoms appeared. The method for contact (phone calls, visits, etc.) should be determined by the individual local health department. However, all efforts should be made to make daily contact, and may require multiple contact methods to be tried. UDOH suggests that local health departments work with the designated contact person to establish a daily time and contact method to assist in daily updates.

Prophylaxis:

Antiviral prophylaxis of contacts prior to community transmission will be dependent upon the effectiveness and availability of antivirals as well as the potential benefit to the individual contact.

UDOH Notification:

Local health departments should submit the surveillance log to UDOH at the end of the quarantine period.