



APTA SS-S-SEM-005-09, Rev. 1

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APTA Security Emergency
Management Working Group

Developing a Contagious Virus Response Plan

Abstract: This standard covers the creation and implementation of a contagious virus response plan by a transit agency.

Keywords: Contagious Virus Response Plan (CVRP) Continuity of Operations Plan (COOP), pandemic, response, transit, virus

Summary: Given the outbreak of a contagious virus, the Contagious Virus Response Plan might serve as a single reference guide. Once an outbreak reaches pandemic proportions, however, the CVRP will likely need to be used in conjunction with the Continuity of Operations Plan (COOP) to provide comprehensive response planning. This standard includes the basic elements of a CVRP for a contagious virus such as the avian influenza.

Scope and purpose: The purpose of this standard is to aid transit agencies in the development of a CVRP. It outlines elements that might be covered by the plan and provides implementation and format suggestions and examples. It does not provide background information on various contagious viruses. Ample background information and answers to frequently asked questions are readily available in a number of guidelines developed by public health departments, the Department of Homeland Security (see References) and APTA. This document assumes that the CVRP will not serve alone as a comprehensive response plan in the case of a pandemic viral outbreak. It is intended to cover extraordinary aspects specific to a contagious virus that are not normally covered in the all-hazards COOP. Consequently, if a contagious virus spreads to the degree that it limits or restricts a transit agency's availability of personnel or cripples its ability to deliver normal service, the COOP should be triggered and used in conjunction with the CVRP. Transit agencies should consider determining the applicability of the various elements in this standard with regard to the requirements, plans and policies of their local health departments. Once the CVRP is drafted, the transit agency should consider sharing it with the local health department for review and comment before issuing it as a final document.

This standard represents a common viewpoint of those parties concerned with its provisions, namely transit operating/planning agencies, manufacturers, consultants, engineers and general interest groups. The application of any recommended practices or guidelines contained herein is voluntary. In some cases, federal and/or state regulations govern portions of a transit system's operations. In those cases, the government regulations take precedence over this standard. APTA recognizes that for certain applications, the standards or practices as implemented by individual transit agencies may be either more or less restrictive than those given in this document, unless referenced in federal regulations.

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The American Public Transportation Association greatly appreciates the contributions of the **Security Emergency Management Working Group**, which provided the primary effort in the drafting of this document.

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Introduction

This introduction is not part of APTA SS-S-SEM-005-09, Rev. 1, "Developing a Contagious Virus Response Plan."

APTA recommends the use of this document by:

- individuals or organizations that operate transit systems;
- individuals or organizations that contract with others for the operation of transit systems; and
- individuals or organizations that influence how transit systems are operated (including but not limited to consultants, designers and contractors).

Note on alternate practices

Individual transit systems may modify the practices in this standard to accommodate their specific equipment and mode of operation. APTA recognizes that some transit systems may have unique operating environments that make strict compliance with every provision of this standard impossible. As a result, certain transit systems may need to implement the standards and practices herein in ways that are more or less restrictive than this document prescribes. A transit system may develop alternates to APTA standards so long as the alternates are based on a safe operating history and are described and documented in the system's safety program plan (or another document that is referenced in the system safety program plan).

Documentation of alternate practices shall:

- identify the specific APTA transit safety standard requirements that cannot be met;
- state why each of these requirements cannot be met;
- describe the alternate methods used; and
- describe and substantiate how the alternate methods do not compromise safety and provide a level of safety equivalent to the practices in the APTA safety standard (operating histories or hazard analysis findings may be used to substantiate this claim).

Developing a Contagious Virus Response Plan

1. Approval of a Contagious Virus Response Plan (CVRP)

The CEO or other pertinent executive manager of the transit agency shall define the process for approval of the initial CVRP, periodic reviews of the CVRP and revisions to the CVRP. People with authority to revise the CVRP shall be clearly identified.

2. Elements of a CVRP

The CVRP should cover only elements specific to a contagious virus that are outside the scope of any other agency all-hazards response plans. These specific elements include the following:

- identification of alert phases that trigger specific action
- information and education program
- disinfection program
- sanitary aids to limit spread
- vaccine/antiviral medications
- service reduction, shutdown and restoration

2.1 Identification of alert phases that trigger specific action

Planning and response to a contagious virus will depend on the risk involved. Unlike a catastrophic event such as an earthquake, a contagious virus likely will have various phases in the life cycle of its spread. Each phase will likely need a different response strategy. For example, one phase might be the presence of unfounded fears and concern regarding a certain virus, and the response might call for education and public awareness regarding the low risk involved. Another phase, however, may be the onset of a full pandemic, which calls for extreme measures to limit its spread.

The CVRP shall be applicable to all contagious viruses; however, it is based on the phases and subphases of a pandemic influenza as defined by the World Health Organization (WHO). The tables in the appendixes will be beneficial to identify the phases and subphases.

WHO has identified six pandemic influenza alert phases. These WHO phases have been universally accepted by most health departments and other government and private organizations and shall be adopted by the transit agency. An example of a table listing phases and subphases is shown as Appendix A.

2.2 Information and education program

Informational and educational communications must be a major part of any CVRP. Communications shall be divided into three distinct areas: communications with emergency management, communications to employees (internal) and communications to the riding public (external).

Communications need to be coordinated with local and state emergency management so the message stays consistent. Transit asset availability also needs to be communicated to emergency management, as the availability changes will affect their response plans.

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Response tasks shall be identified as a function of the various subphases discussed in Section 2.1. As a subphase of the virus is reached, the agency shall perform identified tasks. Responsibility for each task to be performed shall be clearly identified in the plan.

Information and educational training shall be consistent with that recommended by local and state health departments, and transit agency staff shall partner with those agencies to ensure that accurate and appropriate information is being released. An example listing internal information and education responses to different alert phases is shown as Appendix B, and an example listing external information and education responses is shown as Appendix C.

2.3 Disinfection program

Various contagious viruses can survive on surface materials for several days or longer. Consequently, a transit agency shall work with local health authorities to determine a practical response.

Responsibility for each task to be performed shall be clearly identified in the plan, and consideration given to the resources required. An example of a table listing possible disinfection responses to different alert phases is shown as Appendix D.

2.4 Sanitary aid to limit spread

Sanitary aids can assist significantly in limiting the spread of a virus. Additionally, sanitary aids can reassure transit employees and provide them with an added layer of protection in performing their daily functions.

Specific tasks shall be identified to implement the acquisition and distribution of sanitary aids as a function of the various virus-spread subphases as determined by the needs of the transit agency. An example of a table listing sanitary aid responses to different alert phases is shown as Appendix E.

2.5 Vaccine/antiviral medications

Given the spread of a contagious virus, transit agencies shall work with local health authorities to make vaccinations and/or antiviral medications available for essential transit agency employees. An example of a table listing vaccines and antiviral medications is shown as Appendix F.

2.6 Service reduction, shutdown and restoration

Throughout the life cycle of a large-scale viral response, a transit agency may need to reduce service due to employee availability to maintain and operate transit vehicles or to comply with public health department recommendations and directives.

Transit agencies shall identify tasks related to developing service reduction, system shutdown and system restoration plans. Service reduction planning shall identify indicators that will be monitored with regard to ridership and employee availability and include strategies for service reduction.

An example of an outline for service reduction, shutdown and restoration is shown as Appendix G.

References

Department of Homeland Security, Pandemic Influenza Preparedness, Response, and Recovery: Guide for Critical Infrastructure and Key Resources, 2006. flu.gov/professional/pdf/cikrpandemicinfluenzaguide.pdf

Abbreviations and acronyms

AGM	assistant general manager
CEO	chief executive officer
COOP	Continuity of Operation Plan
CVRP	Contagious Virus Response Plan
IIPP	Injury and Illness Program Plan
NATSA	North American Transportation Services Association
RS&S	rolling stock and shops
WHO	World Health Organization
HR	Human Resources

Summary of document changes

- None

Document history

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First published	—	—	—	—	Dec. 31, 2009
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Appendix A: Example of phases and subphases table

NOTE: The relevance of the table contents may vary from agency to agency and may change over time as knowledge progresses and information expands.

TABLE 1
 Avian Influenza Pandemic Alert Phases

World Health Organization Phases		Subphases	
1	Virus may be present in animals, but the risk of human infection or disease is considered low.	1.a	No human nor animal cases within the U.S.
		1.b	No human cases, but evidence of animal cases in some areas of the U.S.
		1.c	Rare animal-close-contact human transmission in the U.S., but outside of state
		1.d	Rare animal-close-contact human transmission within the state, but outside the local area
		1.e	Rare animal-close-contact human transmission in the local area
2	No new influenza virus subtypes have been detected in humans. Animal virus subtype poses a substantial risk to humans.	2.a	Reports of increased animal-to-human transmissions outside the U.S.
		2.b	Reports of increased animal-to-human transmission within the U.S.
3	Human infection(s) with a new subtype, but no human-to-human spread, except for rare close-contact instances.	3.a	Report of human infections with a new virus subtype, but no human-to-human spread, except for rare animal-close-contact instances outside the U.S.
		3.b	Report of human infections with a new virus subtype, but no human-to-human spread, except for rare animal-close-contact instances within the U.S.
4	Small cluster(s) of highly localized human-to-human transmission.	4.a	Report of small clusters of highly localized human-to-human transmission outside the U.S.
		4.b	Report of small clusters of highly localized human-to-human transmission within the U.S.
5	Larger cluster(s) of human-to-human spread, but still localized.	5.a	Larger cluster(s) of human-to-human spread, but still localized, outside the U.S.
		5.b	Larger cluster(s) of human-to-human spread, but still localized, within the U.S.
6	Increased and sustained transmission in general population.	6.a	Increased and sustained transmission in general populations outside the U.S.
		6.b	Increased and sustained transmission in general population within the U.S.
7		7.a	Post-pandemic phase

Appendix B: Example of an internal information and education table

NOTE: The relevance of the table contents may vary from agency to agency and may change over time as knowledge progresses and information expands.

TABLE 2
Internal Communications

Alert Phase	Actions	Responsibility
1.a	<ul style="list-style-type: none"> • Update the district's Injury and Illness Program Plan (IIPP) with a section on precautions against contagious viruses. • Distribute personal hygiene information through the Safety Reminders Program. 	Safety Department
1.b	<ul style="list-style-type: none"> • Develop articles on employee personal hygiene and precautions against contagious viruses. • Publish articles in various district publications. 	Media and Public Affairs and Marketing departments
1.c	<ul style="list-style-type: none"> • Disseminate articles developed in 1.b through emails, the district website and other forms of outreach. • Partner with public health departments, especially their Risk Communication Message and Education sections, to acquire timely information and to coordinate appropriate news releases to employees and riding public. 	Media and Public Affairs Department
1.d	<ul style="list-style-type: none"> • Develop a training video and poster(s) on hygiene and precautionary measures against viruses both at work and in the home. • Commence disseminating the video and poster(s) to district departments. • Place pertinent information on the district website. 	Media and Public Affairs Department, with support from Safety Department as needed
1.e, 2.b, 3.a and beyond	<ul style="list-style-type: none"> • Develop and deliver a more formal awareness program that includes personal visits to employee work locations to disseminate facts and to address concerns. This will commence with briefings to managers and unions to solicit their support. • Continue to update employees with status reports of the virus condition, using all appropriate means of distribution. 	Safety Department, Media and Public Affairs Department, select executive and department managers

Appendix C: Example of an external information and education table

NOTE: The relevance of the table contents may vary from agency to agency and may change over time as knowledge progresses and information expands.

TABLE 3
 External Communications

Alert Phase	Actions	Responsibility
1.b	<ul style="list-style-type: none"> • In accordance with information provided by Health Services Risk Communication Message and Education Group, put out passenger bulletins in the form of a fact sheet on the risks involved. 	Media and Public Affairs Department
1.c	<ul style="list-style-type: none"> • Prepare outreach/education materials in the form of news releases, passenger bulletins and website articles that provide guidance on personal hygiene, and keep patrons informed on the risks involved. • Commence disseminating information prepared. 	Media and Public Affairs and Marketing departments
1.d	<ul style="list-style-type: none"> • Develop a video and poster(s) on personal hygiene and precautionary measures to take while riding on the system. Disseminate the video (including placing it on the website) and poster(s) and continue to disseminate information prepared in 1.b. • Partner with public health departments, especially the Health Department's Risk Communication Message and Education Group, to acquire timely information, and to coordinate appropriate news releases to employees and riding public. • Prepare letters to public officials regarding what the transit agency is doing. • Develop partnerships with private corporations to promote cleaner trains/buses/stations (trade advertising for services). 	Media and Public Affairs and Marketing departments Government and Community Relations, Marketing
1.e, 2.b, 3.a and beyond	<ul style="list-style-type: none"> • Continue to disseminate timely information to patrons. Start using station signage and on-vehicle posters to further the promotion of information. • Issue letters to public officials. 	Media and Public Affairs and Marketing Government and Community Relations

Appendix D: Example of a disinfection program table

NOTE: The relevance of the table contents may vary from agency to agency and may change over time as knowledge progresses and information expands.

TABLE 4
Disinfection Program

Alert Phase	Actions	Responsibility
1.b	Commence planning for enhanced cleanliness of the system's buses, trains and stations, particularly hand-contact surfaces. The plan should assess in-house resources and explore contract services that are geared to the different alert phases. An estimate of the costs involved should be part of the planning process.	Transportation and RS&S
1.c	Commence the initiative to provide cleaner buses, trains and stations so patrons perceive the transit agency to be a safe environment.	Transportation and RS&S
1.e, 2.b, 3.a and beyond	Commence program of disinfecting hand-contact surfaces in stations and on trains and buses several times throughout each day.	Transportation and RS&S

Appendix E: Example of a sanitary aids table

NOTE: The relevance of the table contents may vary from agency to agency and may change over time as knowledge progresses and information expands.

TABLE 5
Sanitary Aids

Alert Phase	Actions	Responsibility
1.b	<ul style="list-style-type: none"> • Establish funding authorization for pending sanitary aid expenses related to the pandemic. • Procure a supply of face masks and disinfectant gel in district stores in reserve for use by district employees. • Work with suppliers to ensure a steady flow of these aids for employees, given a progression of the virus to higher alert levels. Estimate supplies needed for each alert phase. • With reference to alert phase 4.b (below) estimate disinfectant gel needed for patrons, and work with suppliers to ensure a steady flow of this item when the time arrives. 	Procurement Procurement, supported by user departments Procurement Procurement
1.e, 2.b, 3a, and beyond	<ul style="list-style-type: none"> • Disseminate disinfectant gels throughout the district for employee use, including transportation reporting locations, stations, shops and office building. 	Affected departments
4.b	<ul style="list-style-type: none"> • Require employees who work in patron high-density environments (including train and bus operators and station agents) to wear protective masks. • Provide disinfectant gels for use by patrons at each station. 	Operations Transportation
5.b	<ul style="list-style-type: none"> • Provide protective masks to office employees for use within office environments. • Promote social distancing (avoid face contact meetings, explore telecommuting). 	Affected departments

Appendix F: Example of a vaccine/antiviral medications table

NOTE: The relevance of the table contents may vary from agency to agency and may change over time as knowledge progresses and information expands.

TABLE 6
 Vaccines and Antiviral Medications

Alert Phase	Actions	Responsibility
1.c	<ul style="list-style-type: none"> • Work with state and local health departments to track the U.S. government development of guidelines for the allocation of contagious virus vaccine and antiviral medications. • Partner with agencies such as APTA and the California Transit Association to lobby for prioritizing transit employees to receive vaccines and antiviral medications. 	Safety Department
1.e, 3.b	<ul style="list-style-type: none"> • Determine the availability and costs of purchasing vaccines and antiviral medications on the open market. • Commence contracting process to engage appropriate medical assistance for administering these precautionary treatments to employees. 	Purchasing Department HR, System Safety
4.b	<ul style="list-style-type: none"> • Assuming that vaccines and/or antiviral medications were acquired either through state/local health departments or purchased on the open market, commence administering these precautionary treatments to employees. Priority should be given to those employees with the greatest exposure to high-density patron environments. 	HR to oversee process, affected departments to assist

Appendix G: Service reduction, shutdown and restoration outline

NOTE: The relevance of the outline may vary from agency to agency and may change over time as knowledge progresses and information expands.

Service reduction

The following indicators will be monitored by Operations as potential service reduction triggers:

- Ridership
- Employee attendance
- Asset availability

Service levels will be adjusted as necessary, with the following anticipated progression:

- Shorten trains
- Drop certain train/bus runs from the schedule.
- Adopt Saturday service schedule.
- Adopt Sunday service schedule.
- Shut down the system.

Service reduction issues are anticipated to include the following:

- Labor contract language
- Employee welfare
- Development of work rules/guidelines regarding hygiene practices in the work environment

Service shutdown

Given the need to shut down service, the primary objective will be to execute an orderly, safe conclusion of service, which preserves district assets in a condition that will facilitate later service restoration.

Major tasks involved in the shutdown of the system consist of the following:

- Complete operations (complete final service runs and store all trains).
- Close stations/bus terminals.
- Secure shop/yard buildings.
- Recover all types of maintenance equipment.
- Complete revenue pickup and processing.
- Deploy property protection.
- Establish communications and logistics plan for administrative work (possible coordination from home, individual office or other location as needed).

Initial shutdown of rail/bus operations

- Transportation will arrange for qualified personnel to complete service, including staffing of the Control Center.
- All revenue vehicles will be appropriately positioned in the yards at close of operations for the night.
- Notifications will be provided to the dispatch centers of other transit providers in the area.

Initial shutdown of train/bus maintenance

- Rail/bus operations will secure trains/buses in yards.
- Train/bus maintenance will inspect and key off fleet.
- Property protection will be provided by transit police, supported by other transit agency departments as necessary.

Initial shutdown of stations and shops

- Transportation will post personnel at stations/bus terminals and yard towers.
- Maintenance and Engineering will post personnel at maintenance shops and provide personnel for train control, power and mechanical, and computer support.
- Rail/bus maintenance will post personnel at each of the train/bus yards.
- Revenue collections will commence after station closing.
- Ongoing property protection will be provided by transit police.

Initial shutdown of transit agency training center and district offices

- The training center will be closed and secured upon receipt of a shutdown order.
- Managers of other district offices will evaluate their essential functions and either suspend work or develop contingency work plans as needed.
- Ongoing security will be provided by transit police.
- Special security provisions will be implemented at the transit agency main offices.

Property/assets protection

After the shutdown phase, Operations will run circulation trains to keep the system exercised. Operations staff will be assigned as follows:

- Personnel for Control Center
- Personnel for three circulation trains
- Personnel for yard towers
- Personnel for end-of-line storage locations
- Personnel for shared-stations (i.e., with other transit agencies that are still operating)
- Personnel for non-shared stations
- Personnel for rail/bus maintenance support of circulation trains
- Personnel for Maintenance and Engineering support of train control, power and mechanical, revenue collection and computer systems
- Personnel for the Logistics Center

Property protection will be provided by the transit police department with the following support:

- Roving patrols by transit agency personnel to augment station/yard/shop checks
- Transportation to supply yard fire watch
- Rail/bus maintenance to supply shop fire watch

Restoration of service

In anticipation of service restoration, the following actions will be performed:

- Conduct complete system inspection before startup. This will include track, train control, power, communications and ventilation systems.
- Inspect stations/bus terminals, including power and operational checks of all equipment and supplies (cash, tickets, schedules and brochures).

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- Complete any repairs or maintenance identified during the startup inspections.
- Inspect revenue vehicle fleet.

Service will commence after the aforementioned actions have been accomplished, and contingent upon approvals by the AGM of operations, chief of transit police and the chief safety officer.