

**Performance Audit
Pandemic Flu Preparedness**

October 2007

City Auditor's Office

City of Kansas City, Missouri

October 24, 2007

Honorable Mayor and Members of the City Council:

This report provides a summary of what we learned from interviews with city staff about what the city is doing to prepare for a pandemic flu outbreak. We asked questions posed by the U.S. Government Accountability Office (GAO). The questions were about the city's preparedness efforts, partnerships with other entities, what lessons have been learned, what challenges have been identified, and whether the federal government could help address any of those challenges. We did not confirm the statements made by staff in the interviews. Additional audit work will be necessary to confirm the city's specific level of pandemic flu preparedness.

We found that the city has been preparing for a pandemic flu outbreak. The city's Health Department plays a key role in local and regional pandemic flu planning and has developed partnerships with a number of entities including area planning agencies, neighboring local and state health departments, local research institutes, faith-based organizations, and institutions of higher education. Through planning efforts, the Health Department has learned that the community will rely heavily on the government during a pandemic flu. However, support will be limited because governments will also be impacted. As such, the Health Department's planning efforts have become focused on personal preparedness and business continuity support.

While planning is being done, challenges remain for the city. Regional consensus about the timing of measures to limit disease transmission is needed. Local citizen preparedness is not at the level it should be. Some people do not know how to create and properly maintain an emergency supply of food. Moreover, some people do not have the financial resources to stockpile a food supply. Over 95 percent of students in the Kansas City, Missouri, School District rely on school nutrition programs which are unlikely to operate in the event of a pandemic because schools would close. City officials must provide enough information to motivate people to prepare for a pandemic flu event; but not so much information that people are discouraged and do nothing to prepare.

The federal government and its agencies can help address local and regional concerns. The director of health believes vaccine and antiviral medication production for the nation should be expanded, and that the federal government should further encourage seasonal vaccination campaigns and public education about the safety of vaccines. Other staff in the Health Department believe the federal government should clarify guidance on social distancing measures, such as school closings, and the criteria that will trigger these measures.

Some experts estimate that at the peak of a severe pandemic, worker absenteeism could reach 40 percent due to personal illness, the need to care for ill family members, and the fear of infection. High rates of worker absenteeism could significantly reduce the city's ability to provide fire protection and law enforcement, operate water treatment plants, collect trash, and continue other basic city services.

We provided draft reports to the city manager and director of health on September 27, 2007 for review and comment. Management's response is appended. We would like to thank Health Department and Office of Emergency Management staff for their assistance. The audit team for this project was Sharon Kingsbury and Deborah Jenkins.

Gary White
City Auditor

Pandemic Flu Preparedness

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Introduction

Objectives

We conducted this audit of pandemic influenza preparedness under the authority of Article II, Section 216 of the Charter of Kansas City, Missouri, which establishes the Office of the City Auditor and outlines the city auditor's primary duties.

A performance audit systematically examines evidence to independently assess the performance and management of a program against objective criteria. Performance audits provide information to improve program operations and facilitate decision-making.¹

During 2006, the U.S. Government Accountability Office (GAO), the investigative arm of Congress, began to assess the nation's preparedness for a pandemic flu. GAO asked some government audit offices, including ours, to participate on the Domestic Working Group for Pandemic Influenza Preparedness, to assess state and local efforts.

This report is designed to answer the following questions, posed by GAO:

- How has the city prepared for a pandemic flu, and in what ways have efforts involved other entities (governments, nonprofits, private businesses)?
- Has the city conducted any pandemic-specific exercises? If so, what were the lessons learned and how were they incorporated into planning and preparations?
- What challenges has the city encountered in preparing for a pandemic flu? Have solutions to those challenges been identified and implemented?
- In its planning efforts, has the city identified any gaps or challenges the federal government could help address as the city prepares for a pandemic flu?

¹ Comptroller General of the United States, *Government Auditing Standards* (Washington, DC: U.S. Government Printing Office 2003), p. 21.

Scope and Methodology

To answer GAO's questions about the city's pandemic flu preparedness, we interviewed the director of the Kansas City, Missouri, Health Department, and the planner for the Cities Readiness Initiative of the Health Department. We also interviewed the director of the City Manager's Office of Emergency Management. We did not confirm the statements made by officials in the interviews. Additional audit work will be necessary to confirm Kansas City's specific level of pandemic flu preparedness.

We also reviewed government publications, literature from journals and periodicals, and educational materials related to pandemic flu and pandemic preparedness planning. See Appendix A for a listing of documents and materials reviewed.

We conducted this audit in accordance with generally accepted government auditing standards. No information was omitted from this report because it was deemed privileged or confidential.

Background

What Is a Pandemic?

A pandemic is a worldwide disease outbreak. A pandemic flu happens when a new flu virus appears to which people have little or no immunity and for which there is no vaccine. The disease spreads easily from person to person, causes serious illness, and can sweep across the country and around the world very quickly. Effective preparation for a pandemic flu can limit the number of illnesses and deaths within our community and help maintain essential services to citizens.²

Some experts estimate that at the peak of a severe pandemic, worker absenteeism could reach 40 percent due to personal illness, the need to care for ill family members, and the fear of infection. High rates of worker absenteeism could significantly reduce the city's ability to provide fire protection and law enforcement, operate water treatment plants, collect trash, and continue other basic city services.

² For websites with information about pandemic flu and guidance for individuals about personal preparedness for a pandemic or other emergency, see Appendix B.

There were three pandemics in the 20th century. The first and most severe occurred from 1918 to 1919 – the “Spanish Flu” – which resulted in more than 500,000 American deaths and up to 50 million deaths worldwide. A less severe pandemic occurred in 1957 with at least 70,000 American deaths. The most recent pandemic occurred in 1968 and resulted in about 34,000 American deaths. Public health experts believe that the world is overdue for another major pandemic.

Studies show social distancing reduced disease transmission. Recent studies of public health records from the 1918-1919 pandemic indicate that there were waves of disease outbreak in many American cities.³ San Francisco, St. Louis, Milwaukee, and Kansas City managed to reduce death and suffering because they quickly implemented social distancing strategies at the onset of infection. They closed schools, churches, and theaters, resulting in death rate reductions of 30-50 percent compared to cities implementing measures later. In the cities studied, it appeared that social distancing was relaxed after 2-8 weeks.⁴ Some cities experienced a second wave of the pandemic following the relaxation of social distancing. Reintroduction of social distancing with the second wave, again, reduced transmission.

Social Distancing During 1918 Pandemic Flu

The 1918 pandemic began in St. Louis and Kansas City at about the same time, the first week of October 1918. On October 7, the mayor of St. Louis closed “all theaters, moving picture shows, pool and billiard halls, Sunday schools, cabarets, lodges, societies, public funerals, open air meetings, dance halls and conventions.”

Not long after, on October 17, the *Kansas City Star* proclaimed, “A *Drastic Ban Is On.*” All schools, churches, and theaters were ordered closed immediately and indefinitely. Public gatherings of 20 or more people were prohibited, including dances, parties, weddings, or funerals. Crowding in stores was banned. Streetcars were forbidden to carry more than 20 standing passengers. Elevators were sterilized once a day. Telephone booths were sterilized twice a day.

Source: Opening Remarks Prepared for Delivery by the Hon. Mike Leavitt, Secretary, Health and Human Services, February 23, 2006 for the Missouri State Summit on Pandemic Flu Preparations.

³ Martin C. J. Bootsma and Neil M. Ferguson, “The Effect of Public Health Measures On the 1918 Influenza Pandemic in U.S. Cities,” *Proceedings of the National Academy of Sciences*, April 6, 2007; and Richard J. Hatchett, Carter E. Mecher, and Marc Lipstich, “Public Health Interventions and Epidemic Intensity During the 1918 Influenza Pandemic,” *Proceedings of the National Academy of Sciences*, April 6, 2007.

⁴ “Public Health Interventions and Epidemic Intensity During the 1918 Influenza Pandemic,” p. 4.

There are three types of influenza viruses that infect humans – A, B, and C. Only influenza A causes pandemics. In 1918, the pandemic that killed more than 500,000 people in the United States was caused by an influenza A strain known as H1N1. The avian flu that is now infecting birds across Asia, Africa, and Europe is the influenza A strain known as H5N1.⁵

If the avian flu virus mutates into a form that can easily be transmitted from person to person, a pandemic could occur. Over the past few years, H5N1 has been detected in nearly 60 countries outside of North America, resulting in the death and destruction of millions of wild and domestic birds throughout Asia, Europe, Africa, and the Middle East. Health experts are concerned that if the virus mutates and develops the capacity to spread easily from person to person, a pandemic could occur. According to the World Health Organization, controlling the virus in poultry is the principal way to reduce the opportunity for a pandemic to emerge.⁶

Six months will be needed from the start of a pandemic before a well-matched vaccine can be developed. The secretary of the Department of Health and Human Services issued an update on federal pandemic flu planning in July 2007 stating that the department’s “driving sense of urgency” is based on a two-part reality: (1) that six months will be needed from the start of a pandemic before a well-matched vaccine can be developed, and (2) that even then, current manufacturing capacity is insufficient to provide a vaccine for all Americans in advance of a possible, and many say likely, second pandemic wave.

One of our greatest vulnerabilities is lack of connectivity and coordination. The Homeland Security Council’s July 2007 report noted that critical gaps need to be addressed and one of our greatest vulnerabilities is lack of connectivity and coordination of effort between various communities responsible for pandemic preparedness. The report also said a unified effort that engages all levels of government, as well as the public health community, the medical care community, the private sector, faith-based and community-based organizations, and the public is critical for an effective response.

⁵ Eleanor Peters and Michael P. Williams, “Confronting the Continuing Challenge of Influenza,” *The Missouri Municipal Review*, Vol. 72, No. 6, July 2007, p. 12.

⁶ *Avian Influenza: USDA Has Taken Important Steps to Prepare for Outbreaks, but Better Planning Could Improve Response*, Government Accountability Office, GAO-07-652, June 2007.

Findings

Summary

The city is preparing for a flu pandemic. Working with area partners, the city has identified various opportunities to strengthen connectivity and cooperation with local businesses, non-profit organizations, other governments, and neighborhood groups. Preparation should be considered ongoing as scientists and public health officials develop new information about the virus, its spread, treatment, and prevention.

Communities must assume that they will not be able to rely on mutual aid resources from local, state, and federal sources, as each will be impacted as a pandemic spreads. Consequently, the city's planning efforts are being focused on personal preparedness and business continuity support.

The city's Health Department plays a key role in local and regional planning. Its role is one of coordinating local preparation and response activities. The Health Department also provides guidance to other city departments and community partners. Among the partnerships the city has developed are neighboring local and state health departments, area planning agencies, local research institutes, faith-based organizations, and institutions of higher education.

The city has also selected a vendor to conduct a preliminary analysis of the city's business processes and risks. The vendor will work with city staff from all departments to develop a continuity plan for essential government services in the case of a crisis like, but not limited to, a pandemic flu outbreak.

Challenges for the city remain. City officials must provide enough information to motivate people to prepare for a pandemic flu event; but not so much information that people are discouraged and do nothing to prepare. Local businesses are interested in business continuity planning, but also are concerned about the lack of vaccine and medicines to protect and treat their workforces. Food supply and distribution might be a serious problem, and local citizen preparedness is not at the level it should be. In addition, the development of a regional consensus about the timing of measures to limit disease transmission is needed.

The federal government and its agencies can help address some of the challenges the city has identified in local and regional preparedness planning, such as:

- Expanding production of vaccines and antiviral medications, and providing guidance on priority schedules for distributing them;
- Clarifying guidance on what to do at various phases of a pandemic, including criteria for closing schools and implementing other social distancing measures; and
- Further encouraging seasonal vaccination campaigns and public education about the safety of vaccines.

City and Partners Preparing for Flu Pandemic

The Kansas City, Missouri, Health Department plays a key role in local and regional flu pandemic planning. It coordinates local preparation and response activities. It also provides guidance to other city departments and community partners. The city has developed partnerships with area planning agencies, such as the Mid-America Regional Council, and with neighboring local and state health departments, research institutes, faith-based organizations, institutions of higher education, and others.

Kansas City, Missouri, Health Department Plays Key Role in Local and Regional Planning

The role of the city's Health Department is to coordinate local preparation and response activities in the event of a pandemic. These activities include disease surveillance, public information and education, community-level containment, antiviral and vaccine management, emergency medical services, infection control, and communications. The department follows guidance from the Centers for Disease Control and Prevention (CDC) and the U.S. Department of Health and Human Services.

The department also provides guidance to community partners to assist in planning to maintain critical infrastructure during a pandemic. Community partners include, but are not limited to, first responder agencies such as EMS, police, and fire departments; social services agencies; the private sector; and the public.

The city's Health Department developed the Pandemic Influenza Preparedness Plan for Kansas City, Missouri. This plan is part of the department's overall Public Health Emergency Response Plan. It outlines and defines the roles, responsibilities, and actions of officials to

limit illnesses and deaths in the community, and maintain continuity of essential government functions. It was developed through work with the Missouri Department of Health and Senior Services, other area health departments, as well as federal agencies.

According to the plan, the Health Department updates the material in the plan annually and after every exercise. It is also updated to reflect new developments in the understanding of the virus, its spread, treatment, and prevention. The plan incorporates changes in response roles and improvements in response capability developed through ongoing planning efforts.

The Health Department launched the ‘Learn to Live’ campaign.

Learn to Live is designed to meet the community’s need for targeted education and outreach about the threat of pandemic flu. The department mailed letters to more than 3,000 Kansas City business leaders, schools, and community groups in October 2006 notifying them of the campaign and providing a request for information form. The director told us the campaign materials can be and are continually tailored to any community audience. With federal funding, the department created the position of pandemic influenza outreach coordinator to work with local businesses and other organizations to prepare for the effects of a pandemic.

The department formed the Public Health Ambassador Volunteer Corps. Volunteers are recruited from neighborhood associations and churches to join the Health Department in public education efforts.

Volunteers are taught how to keep themselves safe and healthy and to share this information with family and friends. The goal is to keep the community informed and engaged in preparation and prevention activities, as well as to be available to assist the department in case of public health emergencies such as a pandemic.

Other efforts by the city’s Health Department. The Health Department has initiated efforts to engage other city departments and organizations in pandemic flu preparedness, including:

- Participating in statewide planning committees;
- Establishing an internal pandemic flu committee that meets bi-weekly to discuss the pandemic flu situation, both domestically and internationally, and to address topics like grant deliverables and planning issues;
- Working with the Aviation Department and the CDC to develop a response protocol for the KCI Airport;

- Providing guidance to Water Services in its efforts to stockpile chemicals necessary for water treatment services;
- Collaborating with hospitals, philanthropic organizations, research institutes, other regional federal agencies, local financial institutions, and institutions of higher education;
- Distributing news releases through various channels updating elected officials and the public about developments in pandemic flu preparedness; and
- Contributing to various municipal government and public health periodicals about pandemic flu and emergency preparedness.

City-wide committee to develop Continuity of Government

Operations Plan. The city manager directed the development of a planning task force in July 2006 to undertake a pandemic flu continuity plan. Representatives from all city departments were directed to participate. More recently, representatives from several city departments, including Health, Aviation, Information Technology, and the Office of Emergency Management, wrote an RFP to select a vendor to facilitate a continuity of government plan.

The director of the Office of Emergency Management reports that a vendor was selected. The scope of services requires the vendor to conduct a preliminary analysis of the city's business processes; evaluate the unique characteristics and risks of Kansas City; and consider the potential impacts, effects, and loss that could be associated with a crisis such as, but not limited to, a pandemic flu outbreak. Working with representatives from all departments, the plan will develop recovery strategies and provide a business operations continuity plan as well as a management methodology for ongoing maintenance of the plan.

Kansas City Partners with the Mid-America Regional Council

The city's Health Department works with the Mid-America Regional Council (MARC) on various projects to educate the community about pandemic flu and to support preparation in the community. MARC, a metropolitan planning agency, is the association of city and county governments serving the bi-state Kansas City metropolitan area. It is governed by a board of 32 local elected officials representing nine counties and the six largest cities in the region. The mayor of Kansas City, Missouri, and three members of the City Council serve on the MARC board of directors, and a fourth councilperson serves as an alternate.

Kansas City elected officials and city staff work with committees sponsored by MARC to promote public health and foster greater regional connectivity and cooperation about pandemic flu preparedness.

The Metropolitan Official Health Agencies of the Kansas City Area (MOHAKCA). The President of MOHAKCA is the director of the Kansas City, Missouri, Health Department. MOHAKCA is a MARC-sponsored organization created to promote public health by coordinating local city and county health agencies. It is composed of 11 regional county health departments from Kansas and Missouri, and the health departments of Independence and Kansas City, Missouri. MOHAKCA has also developed materials for wide distribution to the public on topics including pandemic flu preparedness.

Metropolitan Emergency Managers Committee (MEMC). MEMC serves as a forum for local leaders and interested citizens to discuss and resolve issues and problems. The mission is to foster coordination, communication, and cooperation among local emergency management and allied organizations. The MEMC's Citizen Readiness Committee developed a disaster preparedness website,⁷ which includes information about pandemic flu, educational materials, and links to other resources, including those produced by the American Public Health Association on pandemic flu preparedness.

Mid-America Medical Reserve Corps. These volunteer members are ready to provide support to city and county public health departments throughout the Kansas City area. In case of a large-scale public health emergency situation, trained volunteers may dispense medicines or administer immunizations for large numbers of people. The Corps is sponsored by MARC and the Greater Kansas City Chapter of the American Red Cross.

Lessons Learned From Pandemic Flu Planning Efforts

According to the director of health, participation in pandemic-specific exercises and other planning efforts has shown that the community will rely heavily on government during a pandemic flu. However, government support will be limited. As such, the city's planning efforts are being focused on personal preparedness and business continuity support.

⁷ www.preparemetrokc.org

The city's Health Department has participated in and conducted pandemic-specific exercises. In August 2007, the department participated in a state-sponsored antiviral distribution exercise. The department is also using its seasonal flu vaccine clinics as an exercise opportunity to test mass inoculation plans. Multiple table-top exercises⁸ have been performed with local businesses, the faith community, non-profit organizations, and other regional health departments.

Most recently, the department held a day-long event entitled "Mission Possible, Spiritual Response and Survival During a Public Health Crisis," attended by approximately 200 people. Morning presentations were followed with a table-top exercise in the afternoon.

The city's preparedness efforts focus on personal preparedness and business continuity support. Through statewide, regional, and local planning activities, the city has learned that all sectors of the community will rely heavily upon government for support and medications in a pandemic flu. Support will be limited, and perhaps not timely, as governments will be impacted, too. As such, the Health Department's planning efforts have become focused on personal preparedness and business continuity support.

Challenges Remain in Preparedness Efforts

According to the director of the Kansas City, Missouri, Health Department, challenges remain that must be addressed as the community plans for a pandemic flu event. The level of local citizen preparedness is inadequate. Some people do not know how to create an emergency supply of food or do not have the financial resources to do so. A large percentage of children in our community rely on free and reduced meals at school, however, in the event of a pandemic, those programs probably would not be possible because schools would be closed. It is challenging to communicate the potential limitations of government in responding to a pandemic and the need for personal preparedness. Political leadership and honesty are essential to keep moving preparedness efforts forward. The director also said that because the buzz about pandemic flu has declined, it is becoming more difficult to solicit support and audiences.

⁸ According to the Department of Health and Human Services, a table-top exercise is led by a facilitator who presents participants with segments of a scenario, separated by discussion points. Participants are asked to describe how they would respond to an evolving scenario at particular points in time. The exercise sometimes relies on "forced decision-making," which requires participants to make key decisions at critical points. In the case of a pandemic flu table-top exercise, there are three components: unfolding situation—decisions and responses; later developments—decisions and responses; debriefing and self-evaluation. The exercise allows participants to anticipate their actions, and those of others, and to evaluate consequences before an event occurs.

Local citizen preparedness is not at the level it should be. In 2006, the Health Department surveyed households about whether they had an emergency plan; how they would contact family, relatives, friends, and response authorities; the method that would be used to receive information; and whether their household had a weather alert radio or first aid kit. Of those who reported an emergency plan – 37.8 percent – only one-third said they had a minimum three-day supply of food and water for each person in the household. Since authorities may not be able to provide food and water during the early period of an emergency, the survey suggests that additional outreach is needed to educate and help people accept the necessity of personal preparedness.

Public health experts advise that two weeks of food and water be stockpiled to prepare for a pandemic flu. Medications and supplies for pets should also be stockpiled. (See Appendix C for an emergency supplies list.) The director of health said that some people don't know how to create an emergency supply of food and how to rotate the foods in the stockpile. He also said that some people in our community do not have the financial resources to stockpile food. Jackson County has the greatest number of emergency assistance and homeless recipients in the Kansas City metropolitan region. According to the most recent survey by the U.S. Census Bureau, it is estimated that there are nearly 80,500 people in Jackson County living in poverty. Of these, nearly 29,500 are children between the ages of 0 and 17 years. This is approximately 17 percent of all the children in the county.⁹

Almost 97 percent of students in the Kansas City, Missouri, school district received free or reduced cost meals in the 2005-06 school year.¹⁰ According to the United States Department of Agriculture, child nutrition programs will probably not be possible in the event of a pandemic flu.¹¹ Because schools would be closed as a social distancing measure, the facilities and staff would be unavailable. While foods from the Child Nutrition Program might be available for distribution to community groups and other public agencies, those groups would have to determine how to get the food to those who need it.

Communicating government's limitations and the need for personal preparedness is challenging. It is challenging to strike the right balance when communicating the need for personal preparedness. The message

⁹ Mid America Assistance Coalition, "Annual Statistical Report: Emergency Assistance and Homeless Services in the Kansas City Metropolitan Region," 2005, p. 9.

¹⁰ Mid-America Regional Council, Metro Data Line www.metrodataline.org.

¹¹ Memorandum from Stanley C. Garnett, Director, United States Department of Agriculture, Food and Nutrition Service, Child Nutrition Division to State Agencies, State Child Nutrition Programs, and Regional Directors, Special Nutrition Programs, June 11, 2007.

must be presented by trusted spokespersons and have enough substance to motivate people to prepare, but not so much that it will discourage intentions to prepare. It is also challenging to communicate the potential limitations of government in responding to a pandemic – the possibility of vaccine and antiviral shortages and the need for priority schedules for distribution, and the need for coordination and sharing of resources.

Political leadership and honesty are essential. The director of the Health Department believes another challenge is political leadership and the need to be very honest with the public about pandemic flu risks. Political leaders must continue to pressure the federal government and the health care system to keep moving preparedness forward. If there is not public awareness of the need for preparedness, it will not happen.

The Federal Government Can Help Address Challenges

In response to our questions about gaps or challenges identified during planning efforts that the federal government could help to address, the director of the Kansas City, Missouri, Health Department said a major concern is expanding vaccine and antiviral medication production for the nation. And, he believes the federal government should further encourage seasonal vaccination campaigns and public education about the safety of vaccines. Other Health Department staff believe the federal government should clarify guidance on social distancing measures, such as school closings, and the criteria that will trigger these measures.

The federal government should expand the production of vaccines and antiviral medications. According to the director of health, there is a huge need for work on expanding vaccine and antiviral medication production in this nation – the U.S. is just limping along. Currently, with seasonal flu outbreaks, the United States is only producing enough vaccine for one out of three people. The capacity to produce enough vaccine for the nation in a pandemic flu is not there.

The federal government needs to provide firm guidance on what to do at various phases of a pandemic. Other Health Department staff believe there is not good consensus on what to do at the various phases of a pandemic. Regional health departments need to reach consensus on distribution schedules and when to initiate containment measures. The federal government needs to provide firm guidance about the need for school closings, explaining in which phase of a pandemic schools should close. There is also a need for guidance about the priority schedules that will be used when vaccine and antiviral medications are distributed, and

whether people should use the N95-type face mask,¹² or whether the more common surgical face mask will suffice.

The federal government should further encourage seasonal vaccination campaigns and education. Education is needed to eliminate stigmas and false information about pandemic flu. Some people fear vaccine because they believe it will lead to illness. People sometimes confuse seasonal flu with other, more dangerous, influenza viruses that might cause a pandemic.

¹² According to the CDC, a more sophisticated mask, known as the N95 respirator, is engineered to filter out about 95 percent of particles that could be within an individual's breathing zone. When fitted properly, the N95 mask will reduce the chance of inhaling a virus from someone who is shedding it. The N95 face mask is more expensive than the more typical surgical face mask. The CDC is stockpiling millions of N95 masks for states to distribute to primary healthcare workers in the event of a pandemic.

Appendix A

Pandemic Flu Materials Reviewed

For this audit, we reviewed the following publications and educational materials related to pandemic flu preparedness planning.

- *National Strategy for Pandemic Influenza Implementation Plan*, Homeland Security Council, May 2006.
- *The Joint Pandemic Status System: A More Focused Approach to Pandemic Influenza Planning*, Kansas City, Missouri Health Department.
- *Pandemic Influenza Preparedness Plan for Kansas City, Missouri*, Kansas City, Missouri Health Department.
- *The National Strategy for Pandemic Influenza, Implementation Plan One-Year Summary*, Homeland Security Council, July 2007.
- *Pandemic Planning Update IV*, Department of Health and Human Services, July 2007.
- *The Draft Regional Pandemic Influenza Plan*, Cities Readiness Initiative, December 2006.
- *Influenza Pandemic: Further Efforts Are Needed to Ensure Clearer Federal Leadership Roles and an Effective National Strategy*, Government Accountability Office, #07-781, August 2007.
- *Avian Influenza, USDA Has Taken Important Steps to Prepare for Outbreaks, but Better Planning Could Improve Response*, Government Accountability Office, #07-652, June 2007.
- *Citizen Preparedness*, by Rex Archer, M.D., M.P.H., and Gerald L. Hoff, Ph.D., *The Missouri Municipal Review*, Volume 72, No. 6, July 2007.
- *Confronting the Continuing Challenge of Influenza*, by Eleanor Peters, M.A., M.S.P.H., and Michael P. Williams, Ph.D., *The Missouri Municipal Review*, Volume 72, No. 6, July 2007.
- *Public Health Interventions and Epidemic Intensity During the 1918 Influenza pandemic*, Richard J. Hatchett, Carter E. Mecher, and Marc Lipsitch, April 6, 2007, Proceedings of the National Academy of Sciences.
- *The Effect of Public Health Measures on the 1918 Influenza Pandemic in U.S. Cities*, by Martin C. J. Bootsma, and Neil M. Ferguson, April 6, 2007, Proceedings of the National Academy of Sciences.
- *Nonpharmaceutical Interventions Implemented by U.S. Cities During the 1918-1919 Influenza Pandemic*, by Howard Markel, MD, PhD; Harvey B. Lipman, PhD., J. Alexander Navarro, PhD; Alexandra Sloan, AB; Joseph R. Michalsen, BS; Alexandra Ninna Stern, PhD; Martin S. Cetron, MD, from the *Journal of the American Medical Association*, Vol. 298, No. 6, August 8, 2007.

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- *Avian Flu: What Should Be Done*, by Tyler Cowen, Mercatus Center, George Mason University, Working Paper Series, November 11, 2005.
- Kansas City, Missouri Health Department educational materials, press releases, presentation hand-outs.
- Mid-America Regional Council educational materials.

Appendix B

Websites with Pandemic Flu Information

These websites have additional information about pandemic flu and guidance for individuals about personal preparedness for a pandemic or other emergency.

The U.S. Department of Health and Human Services:
www.pandemicflu.gov

The Centers for Disease Control and Prevention (CDC):
www.cdc.gov/flu

American Public Health Association, “Get Ready” Campaign:
www.getreadyforflu.org

American Red Cross: www.redcross.org/news/ds/panflu/

Missouri Department of Health and Senior Services (MDHSS) “Ready in 3 Campaign,” for personal and family preparedness:
http://www.dhss.mo.gov/Ready_in_3/

Missouri Department of Homeland Security:
www.homelandsecurity.state.mo.us/

University of Missouri Extension: <http://extension.missouri.edu/>, and
<http://missourifamilies.org/>

Kansas City, Missouri Health Department, Pandemic Flu Plan:
www.kcmo.org/health.nsf/web/fluplan.

Metropolitan Official Health Agencies of the Kansas City Area (MOHAKCA): www.marc.org/emergency/mohakca.htm

Metropolitan Emergency Managers Committee (MEMC) website:
www.preparemetrokc.org

Appendix C

Pandemic Influenza Emergency Supplies Kit



PANDEMIC INFLUENZA EMERGENCY SUPPLIES KIT

To plan for a pandemic, create at least a 2 week supply kit of the following supplies:

<ul style="list-style-type: none"> ■ Water –at least 1 gallon per person, per day (bottled water) ■ Food - Ready-to-eat canned meats, fish, fruits, vegetables, beans, and soups Examples include: <ul style="list-style-type: none"> ▶ Protein, granola or fruit bars ▶ Dry cereal or granola ▶ Peanut butter or nuts ▶ Dried fruit ▶ Crackers ▶ Broth ▶ Applesauce ▶ Protein powder ▶ Canned juices ▶ Canned milk ▶ Canned or jarred baby food/formula ■ Pet Food/Supplies – Don't forget about at least a 2 week supply for your animals as well ■ Baby Supplies <ul style="list-style-type: none"> ▶ Diapers ▶ Wipes ▶ Bottles ▶ Diaper Cream ▶ Extra toys ■ Paper towels, toilet paper, and facial tissue ■ Feminine hygiene supplies ■ Dental supplies <ul style="list-style-type: none"> ▶ Toothbrush ▶ Toothpaste ▶ Floss/Mouthwash ■ Surgical masks 	<ul style="list-style-type: none"> ■ Medicine cabinet <ul style="list-style-type: none"> ▶ Medicines for fever, such as acetaminophen or ibuprofen ▶ Anti-diarrheal medicine ▶ Vitamins ▶ Prescription medicine – ensure a continuous supply ▶ Cough suppressants ▶ Throat lozenges ▶ Antihistamines ■ First-Aid Kit <ul style="list-style-type: none"> ▶ Thermometer ▶ Antibiotic ointment ▶ Adhesive bandages – different sizes ▶ Latex gloves ▶ 2 and 4-inch sterile gauze pads ▶ Antiseptic ▶ Scissors and tweezers ▶ Moistened toweletes ▶ 2 and 3-inch sterile rolled bandages ■ Bags <ul style="list-style-type: none"> ▶ Garbage ▶ Disposable, sealable plastic ■ Manual can opener ■ Cleaning agents <ul style="list-style-type: none"> ▶ Soap ▶ Disinfectant spray ▶ Hand sanitizer – alcohol based ■ Flashlights and extra batteries ■ Important family documents ■ Contact information for neighbors, family members, doctors, and friends
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***This list is a recommended starting point only for developing a pandemic influenza emergency supplies kit. For further information, please see www.pandemicflu.gov.

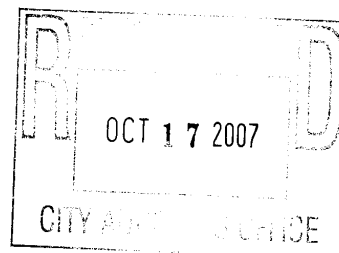
Appendix D

Health Director's Response



Interdepartmental Communication Health Department

DATE: 16 October 2007
TO: Gary White, City Auditor
FROM:  Rex Archer, M.D., M.P.H.
Director



SUBJECT: Response to the Draft Report on Pandemic Flu Preparedness

Thank you for the opportunity to review the draft report of the recent audit of pandemic flu preparedness. We concur with the report. We appreciate the positive statements made in the report concerning our collective efforts and accomplishments to date in preparing the City of Kansas City for such an eventuality. There is much work yet to be done.

Since the finalization of your report the National Public Health Information Coalition (NPHIC) has recognized the Health Department with awards in two categories at its annual awards ceremony. The Department's "Pandemic Flu PSA" received the Gold Award in the "In-house Television Marketing" category and the Silver Award in the "In-house Radio Marketing" category. These awards speak well of the City's efforts. The coalition includes public information officers and risk communicators from federal, state, city, and county health agencies across the country.

This audit report is indeed timely since we have just been notified that the State of Missouri is receiving a 22.4 percent cut in funding for pandemic influenza planning and response with the belief that it may be totally eliminated next year. Given the amount of work that still needs to be done this is unfortunate.

c: Clyde Bolton
Ron Griffin
Frank Thompson

