



National Center for
Disaster Preparedness

Mailman School of Public Health
Columbia University

722 West 168th Street, Suite 1014
New York, NY 10032



National Center for
Disaster Preparedness

Mailman School of Public Health
Columbia University

The New York City Principals Pandemic Flu Survey: **Are Schools Prepared?**



**INFO
BRIEF**
APRIL 2007

Authors

Gregory A. Thomas, MS

DEPUTY DIRECTOR, PLANNING AND RESPONSE
National Center for Disaster Preparedness
Columbia University Mailman School of Public Health

Stephen Morse, PhD, MS

FOUNDING DIRECTOR AND SENIOR INVESTIGATOR
Center for Public Health Preparedness
National Center for Disaster Preparedness
ASSOCIATE PROFESSOR OF CLINICAL EPIDEMIOLOGY
Columbia University Mailman School of Public Health

Wilmer Alvarez, MA

ASSOCIATE DIRECTOR
National Center for Disaster Preparedness
Columbia University Mailman School of Public Health

Lisa Soloff

RESEARCH ASSISTANT
National Center for Disaster Preparedness
Columbia University Mailman School of Public Health

David M. Abramson, PhD MPH

ACTING DIRECTOR OF RESEARCH
National Center for Disaster Preparedness
ASSOCIATE RESEARCH SCIENTIST
Columbia University Mailman School of Public Health

Irwin Redlener, MD

ASSOCIATE DEAN FOR PUBLIC HEALTH ADVOCACY,
DIRECTOR, National Center for Disaster Preparedness
Columbia University Mailman School of Public Health
PRESIDENT AND CO-FOUNDER
The Children's Health Fund

The authors and staff at the National Center for Disaster Preparedness, Columbia University Mailman School of Public Health, would like to thank the leadership, staff and members of the Council of Supervisors and Administrators (CSA) for their unwavering support of our research and for their participation in our survey on school preparedness.

We are particularly grateful to Ms. Jill Levy, National President of The American Federation of School Administrators, Mr. Ernest Logan, President of the CSA, Mr. Peter McNally, CSA Executive Vice President and Ms. Anita Gomez-Palacio, CSA Executive Director for their ongoing support of our work and for all that they do to promote safety and preparedness in schools.

This work was funded by CDC cooperative agreement U90/CCU224241 (Centers for Public Health Preparedness).

Cover Picture: George Armstrong/FEMA

Table of Contents

Executive Summary	4
National Context	5
The Role of School Principals	6
The New York City School System	7
Key Findings	8
Summary of Key Findings	8
Lessons Learned and Recommendations	10
Looking Forward	14
Survey Methods	15

Executive Summary

It will be only a matter of time before another influenza pandemic occurs. Pandemic flu refers to a novel human influenza virus that causes a global outbreak, or pandemic. Researchers cannot accurately predict the timing, severity, or source of the next pandemic, but are certain it would present a myriad of issues for the public health infrastructures of our local communities. In the case of a pandemic flu outbreak, daily routine would be interrupted and school administrators would have many challenges to face. School principals in particular serve a unique role in their communities-- they are the link between their schools and the outside world, as well as a means of communication between these two sectors. It is important for individuals in this role to be seen as a clear and constant channel of communication at all times, especially during an emergency.

In October of 2006, researchers from the National Center for Disaster Preparedness (NCDP), in coordination with the New York City

(NYC) based Council of School Supervisors and Administrators (CSA), conducted a web based survey of NYC school principals to gauge their level of preparedness and to address the concern of principals for the many consequences that may arise for their schools if a pandemic flu outbreak is to occur. 330 of the 1260 principals responded (26.2%). Among key findings were the following:

- 84.1% of principals did not have a pandemic flu plan.
- Among the few schools with a plan, four out of five principals were not familiar with it.
- The overwhelming majority of principals said their school had no process for talking with parents, and few have been involved in community level planning efforts.

Schools are a resource to the safety of the community, and the wellbeing of schools and the community are inexorably intertwined. Recommendations for the future center on the need for schools and communities to work together to prepare for pandemic flu, as well as other emergencies. Other important recommendations include improving upon the role of the principal as a risk communicator and integrating the pandemic flu plan into the school's existing safety plan.

National Context

Numerous federal agencies, including the U.S. Department of Education, the Centers for Disease Control and Prevention (CDC), and the National Institutes of Health have noted the potential health crisis that pandemic flu could present. Officials from the CDC and the National Institutes of Health recently met with the Senate Labor-Health and Human Services Appropriations Subcommittee to once again discuss the dangers of such an outbreak, the need for increased funding from Congress to combat this threat, the status of existing efforts to develop treatments, and concerns that public attention to the illness might be waning.¹

Like common seasonal flu, an influenza pandemic usually occurs when a new variety of influenza virus appears and is able to rapidly spread from person to person. However, unlike seasonal flu,

the virus is novel so most people have no immunity to it. As a result, almost everyone can become infected. While the traditional flu season occurs in the winter months, usually peaking sometime around late January or February, pandemic flu may or may not follow the same pattern. For example, the pandemic flu outbreaks in 1957 began in July.

The worst influenza pandemic in recorded history, the Spanish influenza of 1918, infected one-fifth of the world's population and 28 % of all Americans, taking the lives of 675,000 in the U.S. alone and more than 20 million worldwide. Unlike seasonal influenza, during this pandemic, otherwise healthy adults were not spared. Subsequent smaller influenza pandemics, such as the 1957 Asian flu, caused at least 70,000 U.S. deaths and 2 million deaths worldwide. The 1968 Hong Kong influenza pandemic caused about 34,000 U.S. deaths and 1 million fatalities worldwide.² Incidence data from the 1918 flu pandemic suggests that in the cities where schools were closed earlier, transmission tapered off more quickly and total number of cases never peaked nearly as high as in cities where such precautions were not taken. In a composite study of 17 cities, early interventions were significantly associated with lower peak death rates, and early school closures appeared to be one of the most effective interventions.³ In St. Louis, where social distancing measures (closing schools, work place changes, cancelling public

gatherings, closing social venues such as movie theaters, pool halls, funeral homes, etc.) happened early into the outbreak, only 2% of the population was infected, as opposed to Philadelphia where schools waited longer to intervene and more than 10% of the population was infected.⁴

Recent disease modeling and analyses conducted by CDC and other researchers also support school closures. Most researchers agree that the effect of social distancing measures would not reduce the total number of people infected by pandemic flu, but would delay and flatten the epidemic peak (possibly by as much as 40%⁵) allowing a longer time for the development and distribution of vaccine or medication, thereby reducing the epidemic's impact on individuals, groups, healthcare providers, public health systems, and the economy. In order to be effective, school closures must occur early in the course of the epidemic. Some researchers say schools must be closed before less than 3% of the total number of cases have accrued.⁶

1 Lee, Kristen. "Health agencies again sound alarm on flu pandemic." Gov Exec.com Daily Briefing, Jan 25, 2007. http://www.govexec.com/story_page.cfm?articleid=35955&dcn=e_gvet

2 CDC, WHO

3 Roos, Robert. "IOM says community measures may help in a pandemic." Center for Infectious Disease Research and Policy.

4 Cetron, Martin. "Modeling Community Containment." Lecture at Institute of Medicine, October 25, 2006.

5 Ferguson, Neil. "Modeling Community Containment: The Midas Effect." Lecture at Institute of Medicine, October 25, 2006.

6 Longini, Ira. "Modeling Community Containment." Lecture at Institute of Medicine, October 25, 2006.

A Clear and Constant Channel of Communication: The Role of School Principals in Preparing for Pandemic Flu or Other Potential School Based Emergencies

There are 95,615 public primary and secondary schools in the United States.⁷ Because of the diverse makeup of our country, each of these schools will have its own unique set of values, educational standards and challenges. Some will face special challenges and barriers because of the region of the country in which they are located, while others will face difficulties because of the complexity or makeup of their student body. No matter the size or the location in which any of these schools are located, they all will have one thing in common – the “captain of the ship” will always be the school principal.

In addition to serving as the building administrator and instructional leader of their schools, most principals are asked to manage the day to day work of the school staff, which typically includes teachers, counselors, custodians and many others. Dr. Gerald N. Tirozzi, who currently serves as the executive director of the National Association of Secondary School Principals and was a former school principal and former Assistant Secretary of Elementary and Secondary Education at the U.S. Department of Education, perhaps put it best when he said that the school principal is “held responsible for just about everything under the sun.”⁸

During a school emergency (or during the process of averting or preparing for one), school principals must show that they are truly up to the task as leaders. Because of the young age of their charges, principals must create an environment that is ready to respond to an untoward event in a moment’s

notice. And because schools are critical to the “normal functioning” of their surrounding community, during the safety planning process principals must be sure to include the input of the appropriate school, community and government stakeholders. They must also create processes that allow for the timely and accurate flow of information to their colleagues at the school district level and to parents and guardians so that they can reduce the levels of anxiety that are sure to be present when an emergency or disaster affects a school.

Since many school principals are likely not specialists in the fields of public safety or public health, it is critical that they are able to access the resources in their sister government agencies to ensure that all of the available assets are brought to bear during an emergency that affects a school and/ or its local community. Many schools and school systems around the country have struggled with the process of developing structured relationships with their government partners, with some resorting to creating legal documents such as interagency memoranda of understanding. Just as it essential for coordination of roles and responsibilities to be understood within a school prior to an emergency, the same is true for entire school systems, as well as for school system and their outside partners.

⁷ US Census Bureau

⁸ Gross de Leon, A. “The School Leadership Crisis: Have School Principals Been Left Behind.” *The Carnegie Reporter* 4(1). Fall 2006.

The New York City School System: A Unique Opportunity for Collaboration with the Public Health Community

Creating and maintaining sound relationships with government partners will always be a “work in progress” for schools across the country. School principals in the New York City school system, however, are fortunate to operate under a governance structure that at a minimum provides them with an opportunity to work closely with officials in the public safety and public health communities.

In 2002, when the New York State Senate formally granted New York City Mayor Michael Bloomberg direct control over New York City’s more than 1.1 million students and 1450 schools, it in effect, abolished the former system, a body that was wholly independent of New York City Government and its rules and policies. The Board of Education, as it was then called, consisted of 32 local community school districts and a seven person board (all appointees, but only two of whom were appointed by the mayor) that played a central role in the way that schools functioned.

In addition to bringing the accountability and responsibility for education to the office of the chief executive of New York City, this governance shift also brought the school system “under the umbrella” of New York City government, allowing for information and resource sharing, a process long enjoyed by other city agencies. To formalize this change, the mayor was also granted the authority to hire the schools chancellor (the CEO of the school system) and to establish a new mayoral agency which is now formally known as the New York City Department of Education. This new model further restructured the “educational landscape” by placing the 32 local community school districts under a supervisory system that now consists of ten regional offices with regional superintendents that have responsibility for a varying range of schools (K-12). This new retooling of the system provides the chance for schools and city agencies to partner on many issues without some of the bureaucratic restraints that are often present when groups with different organizational structures try to collaborate. Progress can be made faster, schools and city officials can learn from one another,

and both schools and city agencies will be afforded the opportunity to present themselves in a positive light to their constituencies.

In addition, New York City is fortunate to have a nationally acclaimed Department of Health (the New York City Department of Health & Mental Hygiene, (DOHMH), which is exceptionally well positioned to advise the schools and deal with health related emergencies. The safety of our nation’s schools is a constant on the minds of educators, parents and local and federal governmental officials. The streamlining of the NYC schools under the jurisdiction of the city government, as well as the size and accessibility of the NYCDOHMH can serve as great assets to the NYC school system, and it is critical that the benefits afforded the New York City schools be used to address many of the concerns voiced by the principals who responded to our survey. To do otherwise would waste a streamlined system that is rare and dearly sought after by many of their colleagues around the country.

Key Findings

MODERATE CONCERN AND KNOWLEDGE, LOW PREPAREDNESS

The most overwhelming and unsettling survey finding was the low level of preparedness reported by principals. 84.1% of principals reported that their school did not have a pandemic flu preparedness plan. Less than 1% of principals responded that they did have a pandemic flu plan and only 7.6% reported that they were in the process of developing one. In total, only 5.7% of principals said that they and their staff were “somewhat” familiar with their pandemic flu preparedness plan. Of the few schools that reported having a plan, less than 15% of principals reported that they and their staff were “slightly” or “somewhat” familiar with the plan. Even in the small percentage of schools where these plans exist, the vast majority of principals (79.5%) reported that they are “not at all” familiar with their pandemic flu preparedness plans. Close to three quarters of principals (71.9%) reported that there was no process in place to distribute information to parents about how to talk to their children about pandemic flu.

Principals also did not seem to be able to predict and anticipate the type and extent of hurdles that they were likely to have to overcome in the case of a flu pandemic. 36.7% reported that they were not sure how likely it was that their staff would come to work. Of those that were able to make predictions, an additional 32% said that it was either not at all or minimally likely that their staff would report to work in the case of a pandemic flu outbreak. Only 17.4% of principals reported knowing where to find up to date and reliable information about pandemic flu if necessary.

Despite this low level of preparedness, the majority of principals do seem to be concerned about pandemic flu. 31.7% of principals reported that they were “somewhat” concerned, and an additional 36% reported that they were “fairly” or “very concerned.” The majority of principals (82.4%) were knowledgeable enough in pandemic flu terminology and background to know that avian influenza H5N1 and pandemic influenza are not the same thing. It is important to understand that while pandemic flu is a viable cause for concern because it can arise quickly, there is currently no pandemic flu. If pandemic flu were to develop, it could begin in humans or in other animals, for example, swine and then transmit to humans. The remaining survey findings shed some light on why there was such a low level of preparedness despite the moderate level of concern and knowledge about pandemic flu.

Summary of Key Findings

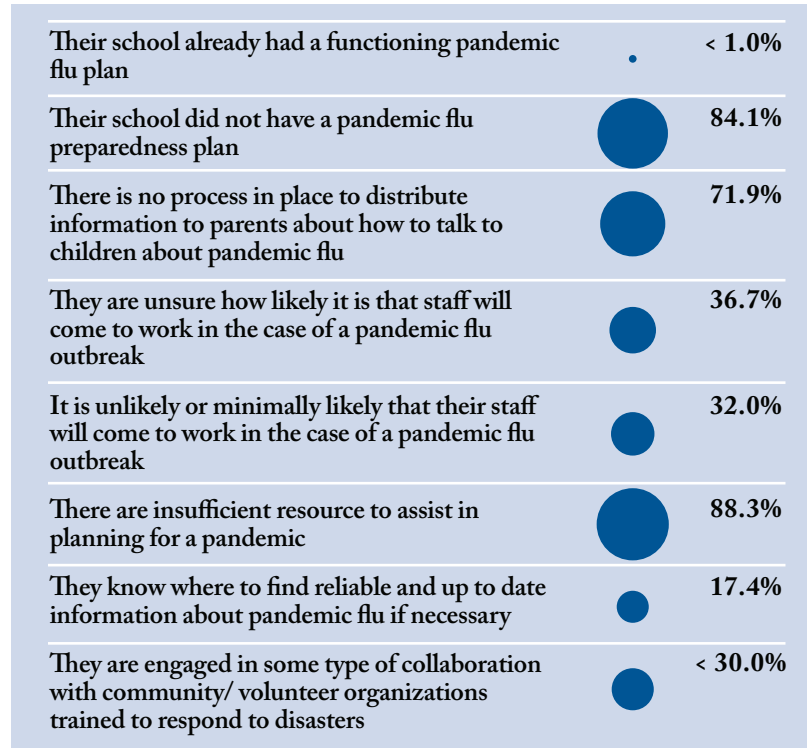
LACK OF RESOURCES AND AWARENESS

The overwhelming majority of school principals (88.3%) reported feeling that there were not enough resources available to assist in their planning for a pandemic outbreak. In addition to citing this shortage of resources, it appears that school principals are not familiar with some of the valuable resources that already exist. For example, an overwhelming 95.7 % were not aware of the CDC's template for pandemic preparedness planning for schools, which is available at <http://www.pandemicflu.gov>

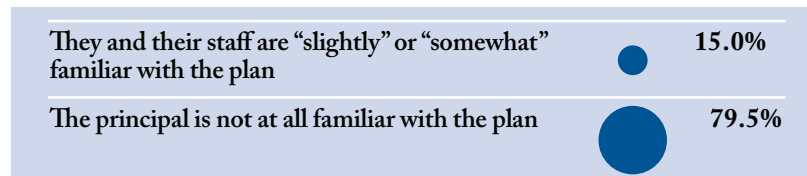
UNDEVELOPED COLLABORATIONS

Another striking finding was the lack of developed partnerships and collaborations between schools and community or public health groups. Despite the noted deleterious effects that an outbreak could have on the pediatric and adolescent communities, no principals reported being asked either by the local health department or by local community groups to help in the development of community pandemic plans. This unfortunate lack of communication does not seem to be isolated to pandemic flu planning. Less than 30 % of principals reported any type of collaboration with community and volunteer organizations trained to respond to public health emergencies and disasters.

PERCENTAGE OF PRINCIPALS WHO REPORTED THAT:



IN SCHOOLS WITH AN EXISTING PLAN, PERCENTAGE OF PRINCIPALS WHO REPORTED THAT:



Lessons Learned and Recommendations

Despite a moderate level of understanding about and concern regarding some aspects of pandemic flu, it is clear that New York City principals are in need of more information and resources to be the clear and constant communication channel they should strive to be. Successful mitigation of, preparedness for, response to, and recovery from, a pandemic flu outbreak will rely heavily upon the overall safety planning process that schools already have in place, as well as engagement of the community and a strong base of support from corresponding city agencies. Ms. Camille Welborn, special adviser on pandemic flu to the U.S. Secretary of Education stressed that it is essential for principals, at minimum, “to begin educating themselves, their staff, and their community about what a pandemic is” and to begin “putting infectious disease preparation in place.” It needs to start now, she urges.⁹

The societal disruptions likely to accompany a flu pandemic will compound the hardships of the outbreak of disease itself, presenting more challenges for schools and administrators. Not only will early planning and preparation ensure a better response plan, and there-

fore, a higher chance of mitigating the negative health outcomes of the epidemic, but there are also a host of other logistical reasons that suggest that planning early is beneficial. The National School Boards Association suggests that careful preemptive planning will help to avert or at least minimize potential legal issues that school districts might face in the case of a pandemic. Planning early affords more time to consider these likely challenges. School boards will have more time to determine how they will compensate employees in the case that schools are closed for an extended period of time, or if teachers or administrators are required to take on extra duties. In addition, school districts will have more time to consider alternatives to classroom learning, what to do if the annual allotted number of hours of instruction are not met, contingency plans for children with special needs, and how to handle disruptions to school athletics, the college application process, standardized test preparation, etc.¹⁰

1. SCHOOL PRINCIPALS AS RISK COMMUNICATORS

The first and foremost goal of principals in an emergency situation should be the ability to communicate risk and to provide timely and accurate updates to the school community. To accomplish this, principals need to have a consistent and structured interface with key outside groups. Yet an underlying and recurring theme noted in the survey responses was a lack of planning, coordination, and communication between principals, their respective regional supervisors, parents, and sister city agencies. Without support and resources from these partners, it will be difficult for principals to be adequately prepared for pandemic flu, or any other public health emergency or safety challenges that they might face. Before the value of pandemic flu plans can be understood and appreciated, principals must be able to effectively communicate the risk and suggest appropriate actions to their staff and to parents.

It is unrealistic and unnecessary for principals to be pandemic flu experts, but they should be provided with resources that will help them find many of the answers to questions and concerns that might arise in their schools. Like fires and school shootings, pandemic flu is a low probability, high impact event for which those in the front line need to be prepared. Principals must have a good understanding of these risks themselves, and train-

ing and awareness must come from experts in the public health fields, facilitated by leadership at the central Department of Education and at the Department of Health.

The current structure of New York City government, wherein schools and their leadership and budget are controlled by the Mayor, provides an excellent opportunity for this type of interagency collaboration and coordination. Once this collaboration is established, regular meetings and evaluations should be held at the regional level to provide information, conduct drills and to assess the progress that is being made in schools.

Just as parents and teachers will be looking to principals for guidance, principals and other school officials should be assured that they can look to the leadership at the central Department of Education and from the local health department and public health community for direction if a pandemic flu, or any large scale public health emergency, should occur. School administrators can learn from public health agencies and local health departments, which can in turn learn from schools, as they make planning assumptions regarding sheltering and immunization locations.

This process of information sharing should be extended to the approximately 1000 schools in the private and non-public sectors (e.g. independent schools, parochial schools, Jewish day-schools). These communities are responsible for providing educational services to approximately 30,000 students and are typically left out of the mainstream networking and training that often occurs around safety planning in the public school system. While the U.S. Department of Education has gone a long way to address this void by requiring that every school district that is receiving federal grant funding improve its crisis plans to “provide for the equitable participation of private school children, their teachers, and other educational personnel in private schools located in areas served by the grant recipient,”¹¹ collaboration of this type still needs to be strengthened.

⁹ November 2006 monthly newsletter of the National Association of Elementary School Principals,

¹⁰ Lisa E Sorrenson, Staff Attorney, National School Boards Association

¹¹ “Emergency Response & Crisis Management: A Grant Competition to Improve and Strengthen School Emergency Response and Crisis Management Plans” U.S. Department of Education Office of Safe and Drug-Free Schools, June 2006, page 21. <http://www.ed.gov/programs/dvpeemergencyresponse/2006-184e.doc>

Lessons Learned and Recommendations

In an urban area as large as New York City, it is critical that safety planning for schools transcend jurisdictional boundaries. Sharing planning efforts for the pandemic flu can ensure that these boundaries have no opportunity to develop and present further complications down the road.

RECOMMENDATIONS

- The New York City Department of Education should work closely with officials from the New York City Department of Health and Mental Hygiene (DOHMH) to immediately develop a pandemic flu planning template for all schools.
- When the plan is completed, working closely with the DOHMH, The New York City Department of Education should develop and distribute a pandemic flu information brief. A fact sheet should be developed and distributed to all principals, staff and all school stakeholders (including those education partners in the private and non-public school sectors).
- Region-wide trainings sessions should be held in which principals are:
 - Educated about the threats of pandemic flu
 - Provided with strategies for answering questions and addressing fears of staff, students, and parents in a calm manner

2. INTEGRATING PANDEMIC FLU PLANNING INTO OVERALL SCHOOL SAFETY PLANS

Regardless of when and if a flu pandemic occurs, the skills learned from making sure the pandemic flu plan is up to date, as well as the benefits of the partnerships developed in doing so, can carry over to other challenges that principals face. In practice, the pandemic flu plan should not be separate from, but instead should be a part of the overall school safety plan. Valuable lessons from existing school safety measures, such as those that are used in response to on-site medical emergencies can be used in the preparation for an infectious disease outbreak. Furthermore, when fully integrated, certain portions of a school's pandemic flu plan (e.g. plans for continuity of instruction, processes for communicating, and reuniting students with their parents) will be valuable references when a school is forced to respond to other emergencies.

RECOMMENDATIONS

- Administrators should advise school principals of the need to use their existing school safety plans as a critical starting point in their development of their pandemic flu plan. Principals should further be advised on ways that they can integrate their pandemic flu plans into existing plans for safety and into lesson plans that address hygiene and health care.
- The development of a pandemic flu plan should serve as an opportunity to make sure that each

school's overall school safety plan is complete and up to date. As plans are updated, principals should be encouraged to work with their local health and public safety partners to test the plan internally, as well as to conduct tabletop exercises and drills to test the ability of their schools to respond to a pandemic flu outbreak.

3. LINKING PLAN IMPLEMENTATION AND AN INCREASE IN CITIZEN CONFIDENCE

On a daily basis, parents across the country send their children to school with the expectation that they will be safe and secure until they are reunited at the end of the day. A school or education system that is not properly prepared for an emergency will serve to raise the anxiety of parents and caretakers and may cause them to take steps that can create a host of problems for local government in their response to an emergency.

By understanding the risks and potential consequences of a pandemic flu outbreak, school principals can work more effectively with parents and other stakeholders in their community to develop and communicate the elements of a comprehensive plan of action and to instill a higher sense of confi-

dence in the public health system. Schools are looked to as a community resource-- by taking the planning initiative and communicating it to others, schools and their leadership can prove to the community that they are prepared and present themselves in a positive light.

Keeping schools prepared for the pandemic flu may have a secondary benefit as well. Ensuring that schools are prepared for this or any potential public health emergency can assure residents that city officials are taking great strides to be prepared for the pandemic flu and other potential community-wide emergencies. Another foreseeable benefit is that in the case of an emergency, parents will have a better idea what to expect. For example, after the WTC attacks, parents did not know whether or not to pick up their children immediately. Having a plan in place beforehand can answer some of these difficult questions.

RECOMMENDATIONS

- Principals should ensure that staff, parents, and the neighboring community are aware of the steps that they are taking to prepare for the pandemic flu and where appropriate, have access to it. Transparency of the plan and the preparation behind it is key to a rise in citizen confidence.
- Schools and educators should collaborate with local government officials in the planning for citywide and district wide drills and exercises

in preparation for pandemic flu (as well as for any other potential emergency or disaster). This collaboration is the best way to get a variety of perspectives involved in developing and evaluating a plan, as well as having more eyes to foresee potential weaknesses or flaws.

- New York City health officials should work with the Department of Education to evaluate the progress made by schools in formulating a pandemic flu plan, and updating it on a regular basis, where needed.

Looking Forward

While our survey findings suggest that New York City school principals are not yet prepared for the pandemic flu, their interest and concern about the topic suggests that with some planning and oversight from the Department of Education, this challenge can be overcome. By helping principals improve upon their role as risk communicators and emergency planners, schools will foster mutually rewarding relationships with the neighborhood and with outside government and community agencies. Integration into the school safety plan assures that the advantages of preparing for pandemic flu are not just limited to this one disease, but will also be of benefit to address some of the other daily challenges that schools face. The skills and tasks that will be developed and honed in the process of creating a pandemic flu plan, as well as the collaborative efforts and positive partnerships that come out of it, will benefit schools by

ensuring that they are an asset to the community's safety. Not only will a pandemic flu plan help to mitigate consequences of this public health crisis if it occurs, but by taking the initiative, schools and educators have the opportunity to present themselves positively and receive the recognition they rightly deserve.

While there is currently no pandemic flu in the United States, experts in the public health community are united around the need for every level of government to work collaboratively to develop their plans to respond to one. As critical infrastructures in our communities, there is little debate that schools must also join this collaborative now.

Survey Methods

Specialists in school safety and infectious disease at the National Center for Disaster Preparedness (NCDP) at the Columbia University Mailman School of Public Health have worked closely with senior education officials at the federal level and with educators representing school systems around the country to enhance their preparedness for school or public emergencies and local disasters. The NCDP recently partnered with the CSA, the New York City based professional association that represents the school system's many principals and administrators. Together, the NCDP and the CSA conducted a web-based survey designed to gauge the level of preparedness and to address the concerns of principals for the many consequences that may arise for their schools if a pandemic flu outbreak were to occur. Prior to their posting, the questions were reviewed and approved by the CSA as well as the Columbia University Health Sciences Institutional Review Board (IRB).

In October of 2006, notice of this survey and its questions were emailed through the use of the CSA's intranet portal to approximately 1260 NYC school principals (K- 12) to assess their levels of concern and knowledge about preparedness for pandemic and

avian influenza. Questions were asked to determine whether planning discussions or collaborations with local public health authorities or community based organizations had occurred, whether specific flu preparedness plans existed, and if so, the status of their current stage of development. Questions also focused on the processes currently in place to communicate with parents about the pandemic flu. The survey also attempted to determine if the respondents felt that there were enough resources available at the local government and community level to assist them with their preparation.

The survey was made available via Survey Monkey and notification and reminders were given via email using the CSA membership email list. The survey was first announced on Monday, October 16, 2006. The first reminder email was sent out two weeks after the survey was first announced, and the second email reminder was sent out after three weeks. The survey was closed on November 11, 2006.