

# H1N1 Influenza - Updates, Information, and Considerations

A health services  
presentation for the  
DISD Board of Trustees,  
Sept. 8, 2009



# Wall Street Journal, Shirley S. Wang, Aug. 27, 2009

"One of the unusual things about the swine flu is that it often strikes young, healthy people, while skipping over the elderly.

The most recent evidence comes today from the Chicago Department of Public health, which reports that kids between 5 and 14 were 14 times more likely than the those over 60 to come down with the H1N1 pandemic flu. The overall rate of kids with confirmed cases was quite low — 147 per 100,000 — but officials say that is likely an underestimate, because many people who got the flu were never tested and not included in confirmed case counts."

"Since April 2009, the State of Texas has been responding to an outbreak of the novel H1N1 virus. When the flu began in the spring there was limited knowledge of the severity of this strain which prompted the Department of State Health Services to recommend school closures in those areas affected by H1N1.

However it has become clear that this flu has more moderate symptoms than first suspected and school closures are no longer the preferred method of limiting transmission.

Because of a potential for another outbreak this fall to coincide with seasonal flu and additional concerns (ie Hurricanes and or flooding) we are encouraging districts to review their emergency preparedness plans".



# Emergency Preparedness and Mitigation Involves ...

strengthening the lines of communication between community agencies and school districts including:

- local/regional health officials,
- emergency planners and personnel,
- volunteer organizations
- local/regional food banks (pantry) for assistance with breakfast and lunch supplements for students.  
(additional guidance on this issue comes from the Texas Department of Agriculture, Robin Wantland and Barb Haflich are working on our plan)

# More Preparedness

- Increase supplies for infection control including hand soap, hand sanitizers, tissues etc.
- Consider holding community meetings to review procedures for limiting transmission of the flu (seasonal and H1N1), protocol for staying home when ill and any other pertinent information.
- Review the waiver procedures on the Texas Education Agency website as well the resources linked to Department of State Health Services, Centers for Disease Control as well as Instruction and Curriculum links from TEA available on the H1N1 web link.

## TEA also recommends...

- Preset local or campus "trigger points" for absenteeism recommended closures.

*There is NO "magic number" of absentees that would cause a campus or district to close. The agency is encouraging LEAs to review their current practice and determine for themselves (sans an emergency) where that number is.*

# The way we were...

- Events in the spring of 2009 happened very quickly. Our prepared pandemic flu plan gave us some foundation for appropriate action, but decisions had to be made reactively; data was scarce, the situation dynamic, and people were fearful for their children's health.

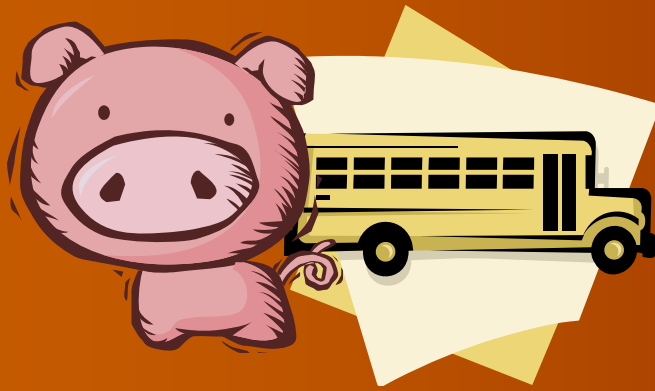


# Pandemic Influenza Planning Assumptions Prior to April 2009

- H5N1 (bird flu) would be the pandemic strain
- Need to plan for high mortality and morbidity
- Outbreak would begin overseas (Asia)
- Potential for rapid spread
- Elderly, chronically ill, and very young would be the most affected
- Vaccine would not be available
- Key role for community mitigation
- Unpredictability of influenza virus

# 2009 Pandemic Reality

- H1N1 was the pandemic strain
- Low mortality
- Outbreak began in Mexico
- Rapid spread
- Primarily affected school age children
- Vaccines will be available after clinical trials
- Schools were closed as a precaution
- Conducted surveillance for changes in the virus strains



# This little piggy went to school...

## Review of spring '09 timeline of events

- April 27 -CDRT alert/ short presentation to cabinet on H1N1
- April 28 - first suspected cases at Navo, Providence
- April 29 - nurses sending home more students with symptoms consistent with H1N1 from Lantana area and central part of district
  - emergency board meeting called to discuss situation, decision made to close two schools
- April 30 -Navo and Providence closed for rest of week and next, daily conferences with state and health department

## Continued timeline...

- **May 1** - more suspected cases spread throughout district
- **May 2** - decision made to close all campuses, communication out to all parents and employees
- **May 4 and 5** - all campus locations closed except for small admin. staff on Monday morning, cleaning of schools begun
- **May 5** - CDC reverses initial recommendations for school closure
- **May 7** - all classes resume in Denton ISD



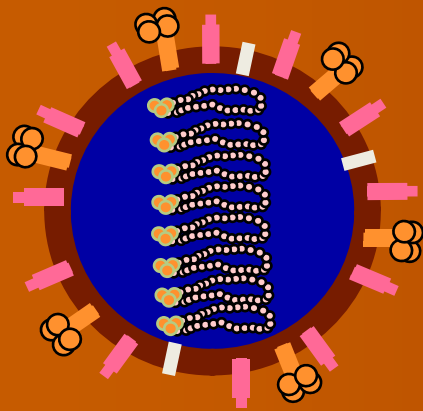
## And now...

- H1N1 has persisted all summer
- School RNs began surveillance from first day of school, sending students home who have fever, sore throat, cough
- CDC guidelines emphasize keeping schools open
- Media keeps situation in public eye daily
- Parents have begun calling to ask if we have current cases

# Myths: H1N1 Virus

- "Swine" flu is more benign than seasonal flu
- You can catch "swine" flu from eating pork. (The CDC states that it is safe to eat properly handled and cooked pork and pork products.)
- You can avoid the "swine" flu by wearing a facemask. (Little is actually known about whether a disposable facemask or respirator can prevent you from getting the "swine" flu.)

# Influenza Virus Infection



Several types of influenza virus are circulating.

## General Characteristics

Sudden onset of symptoms

Incubation period: ~1-4 days

Infectious period: 5+ days, starting 1 day before symptoms (longer in children)

Fever, headache, cough, sore throat, aches, possibly vomiting and diarrhea

50% of individuals with typical "seasonal" influenza have contact with the health care system (ranging from a doctor visit to hospital admission)

# Signs and Symptoms of Confirmed Cases\*

Symptoms	Percent
● Fever (>100°F) ( median temp: 102.0°F)	94%
● Sore throat	61%
● Cough	87%
● GI symptoms (diarrhea and/or vomiting)	47%
● Met Influenza Like Illness (ILI) case definition (fever and sore throat or cough)	88%

\*as of July 27,2009

# Characteristics of Confirmed Cases by Demographic/Percent Gender

- Male 49%
- Female 51%

**Age** (median 10 yrs, range 1 mo - - 84 yrs)

- <5 years 16%
- 5-18 years 65%
- 19-45 years 15%
- >45 years 4%

\*Our student demographic!

\* Much of our employee demographic

TDSHS - as of July 27, 2009



# Surveillance in Denton ISD

- Our school RNs are sending students home who have fever, sore throat, cough or other signs of concern (may or may NOT be the flu)
- They are monitoring daily absences with the attendance clerks, and trying to ascertain with parents the reason(s) for absence
- Nurses are sending in weekly reports to the epidemiologist at the health dept. and alerting the director of health services if there are any alarming trends (none so far!)

# Our important role in surveillance

- Determine circulation patterns, intensity, impact and unusual events
- Provide data for leadership to support schools remaining open or
- Provide basis for determining need for school closure

# Groups at High Risk for Complications

- Children younger than 5 years old
- Persons 65 years or older
- Children and adolescents:
  - Less than 18 years
  - Receiving long term aspirin therapy
  - At risk for experiencing Reye syndrome *after influenza virus infection*
- Pregnant women
- Adults and children with: chronic pulmonary, cardiovascular, hepatic, hematological, neurologic, neuromuscular, metabolic disorders and/or immunosuppression including those caused by medications or HIV
- Residents of nursing homes



# Where we are today in Denton ISD

- We are seeing students with symptoms of flu-like illness in all of our schools - may or may not be H1N1 (mono, strep throat, etc)
- Numbers of students we are seeing with ILI (Influenza-Like Illness) are compatible with last year's numbers at this time - very slight increase of less than 1 student per school

# We are also...

- Providing hand sanitizer for every employee
- Collaborating with our in-district and contract custodial staff to follow/exceed cleaning recommendations from CDC
- Posting information on our websites for parents

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[www.dentonisd.org](http://www.dentonisd.org)

- Communicating with our parents through informational letters sent home at the beginning of the year (collaborated with the health dept. and surrounding districts to provide consistent information from all)

# We are continuing to focus on our mission - education

- Teaching and reinforcing good public health measures
- Hand washing, using hand sanitizer when washing is not feasible
- Cough etiquette
- Stay home if you are sick (students and staff)
- Do not return until fever-free for 24 hours without the use of fever-reducing drugs
- Stressing the importance of prevention and promoting vaccines

# Non-Pharmaceutical Interventions (NPI)

- Activities used to limit the spread of an infectious disease
- Does not include medications or medical interventions
- Address two main areas:
  - Infection Control (wash hands, cough etiquette, disinfect shared surfaces, keep hands away from face, etc.)
  - Social Distancing (*stay home when sick* - staff and students)
- Benefits:
  - Immediately available
  - Limited cost
  - Applied by anyone
  - Scalable to Individual/Family, Community, or International levels
  - Reduce the spread of disease in a community
  - Reduce stress on health and medical services
  - Guided by science

# Preventive Measures in Schools

- DSHS concurs with CDC that the primary ways to reduce spread of flu in schools are:
  - Vaccination - seasonal and novel H1N1 influenza
  - Staying home when ill
  - Early identification of ill students, faculty and staff
  - Practicing prevention strategies (good cough etiquette and hand hygiene)
  - At this time, school closure is not advised for a single suspected or confirmed H1N1 case (this recommendation may change if pandemic changes: check [www.texasflu.org](http://www.texasflu.org) for updates)
  - School boards in consultation with local health authority decide to close public schools
  - Owners in consultation with local health authority make the decision to close private schools/daycares.

# CDC is updating guidance to help local communities make decisions about how to:

- Keep healthy students in school and sick people at home
- Determine appropriate use of antiviral medications to maximize their benefit and preserve their effectiveness
- Decide when personal protective equipment (such as masks) should be worn, and what kind
- Determine when/if more disruptive measures (such as cancellation of mass gatherings, school dismissals) should be used

# Role of DSHS and ISDs

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- Provide guidance based on Federal recommendations and evidence-based science

## Role of Local Health Departments

- Provide local guidance on specific recommendations
- Partner with other community entities including ISDs

## Role of ISDs

- School Superintendents and County Judges may initiate school closures
- This decision will be based on the impact influenza has on the school (e.g., average daily attendance, staff absenteeism, and the school's ability to function)
- Provide specific guidance in collaboration with school boards

# Guidance: Schools

## ● School Closure

- Based on the current severity of the disease, school closure is not recommended for disease control. If severity of outbreaks increase, school closures may be approached differently
- The decision to close schools is made at the local level
- For more information, [www.tea.state.tx.us](http://www.tea.state.tx.us)

## ● School Breakfast and Lunch Programs

- Schools will be able to provide food service to students in non-congregate settings following a federal public health emergency declaration
- Community organizations, such as food banks and Boys/Girls Clubs, will also be able to provide food service to students
- Entities must have an agreement with the Texas Department of Agriculture to receive meal reimbursement
- For more information, [www.tda.state.tx.us](http://www.tda.state.tx.us)



# Seasonal vs. Novel H1N1



VACCINES

What are the  
differences?

# Looking at them in general...



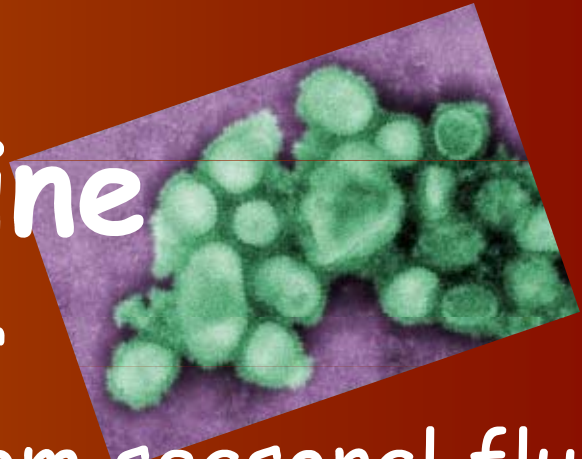
- H1N1 vaccine is a separate vaccine from seasonal vaccine, no crossover protection
- Both seasonal and H1N1 vaccines are important to prevent illness from the viruses during influenza season
- Concerns exist regarding a possible confluence of seasonal and pandemic vaccination in Fall 2009

# Seasonal Vaccine



- Most vaccine is used in elderly and high risk adults
- Most vaccine procured via private health system
- ~100 M doses typically given from Sept-Jan
- Majority of vaccine given before flu season begins
- Mostly private sector delivery in various settings
- Most people need only 1 dose

# H1N1 Vaccine



- ACIP recommendations for those most at risk differ from seasonal flu
- Procurement by federal government
- May need many doses over shorter time
- Vaccine may not be available before novel H1N1 increases
- State managed distribution to providers
- Most may need 2 doses

# H1N1 Vaccinations: Expected in October 2009

## INITIAL TARGETED GROUPS:

- Pregnant women
- Household contacts and caregivers for children < 6 months
- Healthcare and emergency medical services personnel
- *All people 6 months - 24 years of age*
- Persons 25 years through 64 years of age who have health conditions associated with higher risk of medical complications from influenza disease

# IF LIMITED VACCINE AVAILABILITY:

- Pregnant women
- Household contacts and caregivers for children < 6 months
- Healthcare and emergency medical services personnel who have direct contact with patients or infectious material
- *Children aged 6 months - 4 years*
- *Children and adolescents aged 5 - 18 years who have health conditions associated with higher risk of medical complications from influenza*

# Getting the vaccine to our students and staff is important...

What is the best way to do that safely and effectively?

- Let parents/staff handle it through their own health resources
- Offer vaccinations at school-located clinics during school hours (with the aid of outside resources)
- Collaborate with other community health agencies to provide the vaccine at district or other sites not during school hours, providing our support and resources to them
- Combinations of all the above

# 2009 H1N1 - Events could change...

- Disease severity
- Transmissibility
- Antiviral resistance patterns
- Vaccine effectiveness, safety, match

We must be flexible enough to adjust plans and response based on data.



# School Districts conducting school -located clinics

- None in the state so far - a few are on a "wait and see" basis, most have said they will not be conducting clinics during school.
- All of New York schools plan on conducting clinics - will do it in conjunction with their own medical/nursing staff and the department of health and other health resources coming to aid in the schools.
- Some districts in other states are also planning clinics - unable to get details.

# Components of a Voluntary H1N1 Vaccination Program

## Program planning

- Engaging partners in government (state, local) and private sector
- Financing of program and vaccine administration costs

## Implementation and vaccine distribution

- Tracking of vaccines and supplies
- Assessing uptake and coverage

## Communications

- General public
- Health professionals

## Monitoring vaccine safety

## Assessing vaccine effectiveness



# Previous experience with flu clinics in Denton ISD

## Employees:

- Annual seasonal flu shots for employees and adult family members - every year for at least 12 years (when vaccine was available)
- Usually have around 1500-1800 participants, contract with DRMC Occupational Medicine Dept., school RNs and wellness reps help with facilitation and sometimes administration
- Changing from sites at all buildings this year to seven locations (middle schools and transportation) because of difficulty in trying to reach 45 buildings in a timely way, using resources more effectively (director facilitated each clinic, usually picking up contract staff to ensure timely presence at each building)

# Student clinics

- Student flu clinics conducted over last few years have had varied effectiveness - also contracted/collaborated with outside agencies

Fall '07 - Rivera, 48 students with DCHD

EP Rayzor, 85 students and family members,

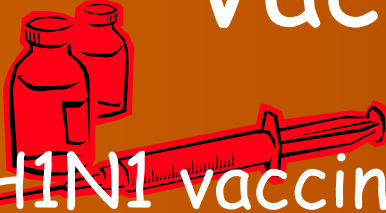
Fall '08 - Lantana area schools, 150 students and family members,

DCHD

Each year for past 5 years, collaboration with CareVan and Texas Medical Alliance to give other immunizations at various DISD sites with varied responses from as few as 12 to as many as 75

All have been conducted during non-instructional time and required on-site parental presence, school nurses volunteered time to help

# Vaccine Safety



- H1N1 vaccines are manufactured in the same manner that Seasonal flu is manufactured
- We have no reason to believe that H1N1 vaccine is any different and expect it to be a similarly safe vaccine to receive
- Clinical trials are currently in progress to assess vaccine effectiveness and safety
- DSHS and federal partners have vaccine safety monitoring systems in place

# Vaccinations: Uncertainties

## Vaccine

- Amount and timing of availability
- Outcome of clinical trials (pediatric trials were begun middle of August)

## Formulation

- Adjuvant
- Dose of antigen

## Administration

- One or two doses
- Injection vs. mist

## Demand for vaccine

Population far exceeds vaccine production capacity

# Considerations to address if clinics are conducted by district

- Parental presence vs. off-site parental consent - **very important consideration from a safety/liability standpoint**
- Access and timing - All campuses? Some campuses? Which ones? Why those? During school day? After school? (transportation /safety issues)
- Tracking/Storage of vaccine and supplies (space, integrity, security)
- Facilitation/responsibility for second dose follow-up
- Personnel to maintain crowd, provide information, do initial screening, obtain informed consent, administer vaccine, monitor students for untoward effects, document on all required forms and enter data into Imm-trac (required with the vaccine, important and time-consuming)
- Employee vaccination clinics at same time? Different time? (Will also most likely involve two doses, so we are looking at overlapping clinics all during the fall)

# Concerns - clinics done during school hours

- Loss of instructional time, especially if virus doesn't worsen and this remains a mild to moderate illness for most people (but there is no way of knowing!)
- Very time-consuming for paperwork, follow-up, phone calls, etc
- Unknown side-effects/untoward reactions after the vaccine is given, whether injection or mist (live virus brings some other potential concerns )
- Storing vaccine safely, securely
- Required documentation
- Parents not able to take off work if their presence is required
- If parents not there, liability concerns on part of nurses and administrative staff
- Burden of staff time/involvement during school hours



# Benefits of conducting our own DISD clinics

- Vaccine is very effective strategy to prevent flu and its complications for most people
- School age children have a high vulnerability to the H1N1, it can spread rapidly in the school setting, and then be taken home to the rest of the family
- Decreased burden on local health care providers
- Convenient for parents (if done during school hours and they don't have to attend)
- Captive audience - school is where the children are
- Positive community perception
- Hopefully result in better health for our students, fewer illness-related absences for students and staff

# Some Staff and Parent Comments

- "I'll be glad to host a clinic at our site - must have parents in attendance, and not during the school day"
- "Good idea to encourage vaccinations - I don't want to lose any instructional time for my students, however."
- "I have concerns regarding liability, especially if we do this during school hours while I'm being paid by the district - and who will take care of the multitude of students coming to the health room during that time?"
- The actual shots won't take much time - I'm happy to help with those; I have more concerns about crowd control during school hours, the initial process of informed consent (I anticipate lots of questions) and the documentation - all the doses administered must be entered into ImmTrac - who is going to do that?"
- We would hopefully see a difference in illness and attendance.

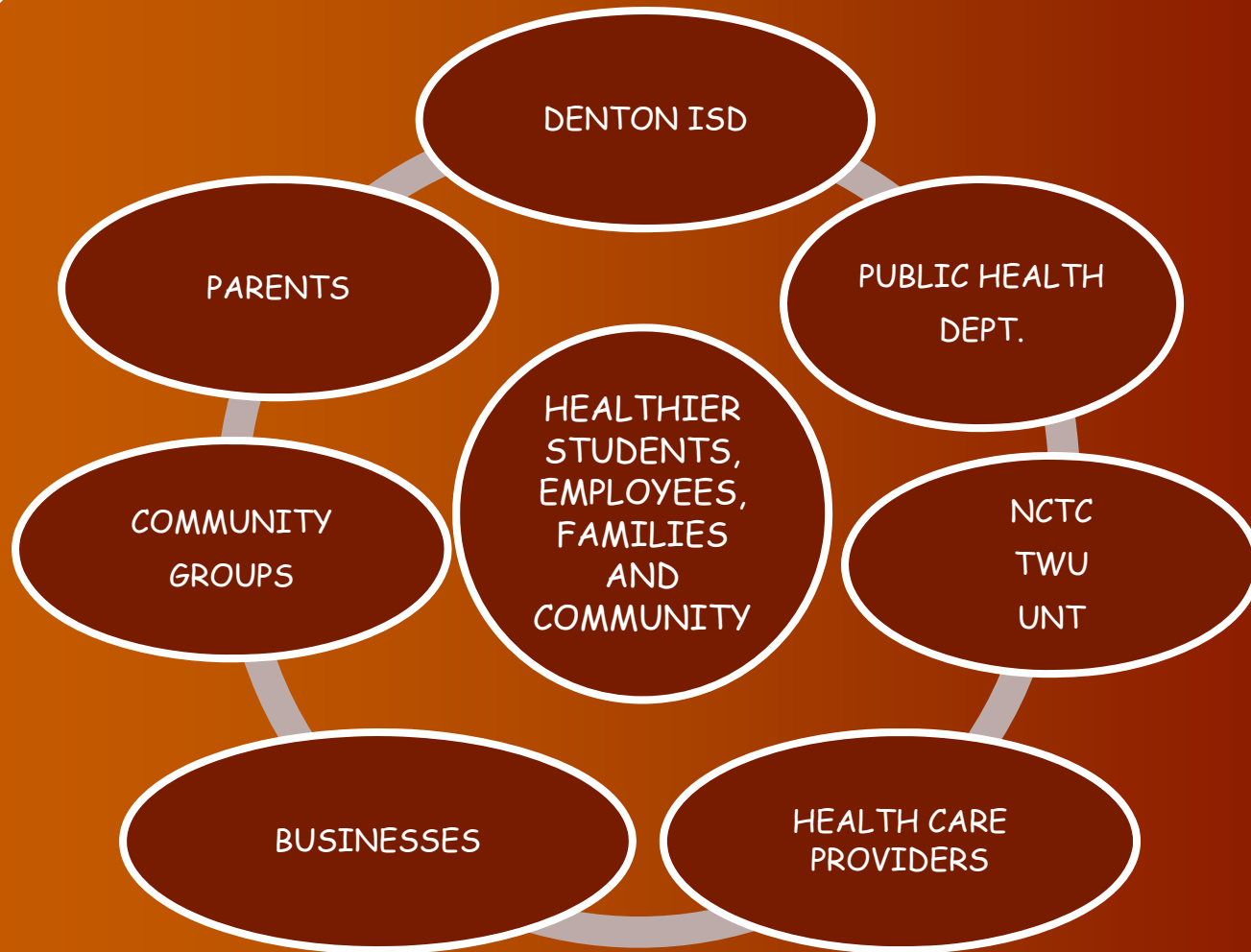
- "If we don't have parents there, what happens if the student refuses to cooperate with the administration of the drug? I do not want to be in the position of restraining the child forcefully to give a shot."
- "I'll be able to come with my children - what will happen if parents can't come and their kids are scared to take the vaccine? "
- "I'm all for it, I want my children to be vaccinated and school is the best place to do it".
- "We would be willing to do this; we would set it up much like our dental schedule and get volunteers to help the nurse."
- "I wouldn't mind having after school clinics, but that would miss the bus riders; I also don't want to put a child on the bus right after they've received a shot."
- "It would work if the whole school was involved - the front office staff would help with paperwork, phone calls, teachers would have to hand out and receive back permission slips and parents could help with crowd control. We'd certainly sacrifice some instructional time for those days, but it might be worth it if this gets worse - who knows what will happen?"

- "It would work best on a Sat. or after school from 4-7pm so parents could be there and take their children home after the vaccine was given. I know we would need lots of help - we could easily have 500 people here during that time, and parking and crowd control would be an issue. Our nurse couldn't possibly do all the shots herself. "
- "It reminds me when we lined up as kids and got polio sugar cubes - can they put it on sugar cubes? We'd be glad to host it for our area after school - really need the parents there."
- "Here are my concerns - who gives the shots (I really don't think my nurse should do that at school), what is the liability for the schools, who takes care of all the paperwork - notification, consents (a potential clerical nightmare) who will screen out those who shouldn't get the vaccine, and will we also be dealing with parents who bring all their preschoolers, grandma and grandpa?"
- "The benefits are definite, the logistics a nightmare, especially with that second dose and Imm-trac documentation."

# Next Steps

- Make plans with others in our community in the event things worsen
  - local governments and emergency planners, health department, hospitals, doctors, businesses, etc.
- Encourage both "seasonal" and novel H1N1 virus vaccinations for students and staff and determine the best ways to make those available
- Communicate plans to all stakeholders so they can plan for impact
- Continue to educate about common sense measures
  - washing hands, covering coughs and sneezes, staying at home when sick with flu-like symptoms, etc.
- Engage in continuity of operations planning at work, personal readiness planning at home
- Role model good public health measures

# Meeting Our Health Challenges Requires Effective Collaboration



# Resources

[www.TexasFlu.org](http://www.TexasFlu.org)

[www.TexasPrepares.org](http://www.TexasPrepares.org)

[www.TEA.state.tx.us](http://www.TEA.state.tx.us)

[www.TDA.state.tx.us](http://www.TDA.state.tx.us)

[www.flu.gov](http://www.flu.gov)

[www.cdc.gov/h1n1flu/](http://www.cdc.gov/h1n1flu/)