



NASA Update
Novel Influenza A (H1N1)
23 June 2009

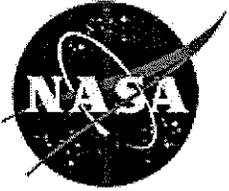
Office of the Chief Health and
Medical Officer

Dr. Richard S. Williams



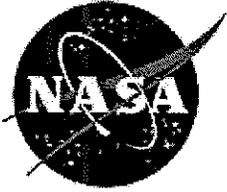
Background

- 2009 Flu Pandemic: Novel strain of influenza A virus subtype H1N1
- Genetic assortment of 4 endemic strains:
 - human (1), birds (1), swine (2)
- Moderate severity in developed nations/greater severity in developing nations
- Overall case fatality rate 0.4% (0.3% - 1.8%)
- Seasonal case fatality rate estimate 0.05%
- Annual influenza epidemics affect 5 - 15% of population
 - 250,000 - 500,000 deaths worldwide
- 1918 Flu Pandemic 600,000 US fatalities
 - mild (herald) cases in spring
 - 20 - 100 Million deaths worldwide (CFR > than 2.5%)



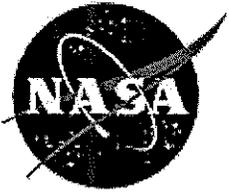
History

- 3/18/2009 first case appeared in Mexico
- 4/15/2009 CDC confirmation in US
- 4/22/2009 CDC activates EOC
- 4/26/2009 US declares health emergency
 - Implements Pandemic Response Plan
- WHO raises alert to Phase 5
 - Phase 5 - Pandemic is imminent



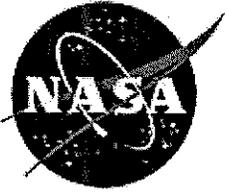
History (cont)

- 6/3/2009 All 50 states, DC, PR - report cases
- 6/11/2009 Pandemic declared – Phase 6
 - Phase 6 reflects geographic spread not severity
- 6/22/2009 WHO Update 52: 52,160 cases/231 deaths/93 countries
- 6/22/2009 US Update: 21,449 cases/87 deaths



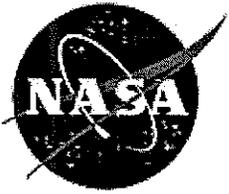
Response

- Panic – News reports, School closings, Travel Advisories, PPE scarce, Tamiflu hoarding
- Controlled US government response – Briefings, telecons, e-mails
- WHO/Assembly – concern over economy
- Data reporting and accuracy
- Actions concerning pigs



Virus Transmission

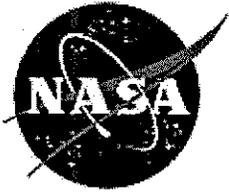
- Rate of infection: WHO reports cases increased over 10% in two days
 - Argentina, Australia, El Salvador/double cases
 - US cases decreasing except in NE
 - Estimate over 100,000 cases in US
- Virus mutation – seasonal (tamiflu resistance) or H5N1 (MR 60-70%)
- PCR diagnostic test kit distributed world wide
- 33% People greater than age 60 show antibody reaction
- MMWR (6/19/2009) – HCP 48 cases/50% in health care setting



Signs and Symptoms

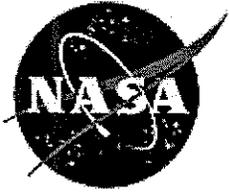
- Fever (94%)
- Cough (92%)
- Sore Throat (66%)
- Diarrhea (25%)
- Vomiting (25%)
- CXR Infiltrate (50%)
- ICU (36%)
- Intubate (18%)

* NEJM June 18, 2009 (642 cases 4/15/2009 – 5/5/2009, 60% < 18 years of age)



Prevention

- Containment and quarantine
- School closures
- Workplace/telecommute
- Hygiene
- PPE
- Chemo prophylaxis
 - Stockpile deployment
- Vaccine



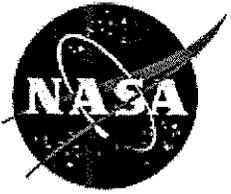
OCHMO Response

- Monitoring the evolving event
- Reviewing CDC guidance documents
- Attending CDC briefing by telecon
- NASA Health Alert sent to the NASA workforce
- Reviewing NASA Pandemic Plan Guidance - 2006
- Updating the NASA OH Website
- Ongoing communications with senior leadership, OSPP, HR, OH community



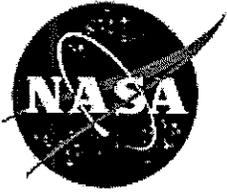
OCHMO Response (cont)

- Advised Occupational Medicine clinics should:
 - Ensure that a clinic representative at all EOC briefings related to the potential flu outbreak
 - Be prepared to coordinate with local health department authorities as requested
 - Review and become familiar with Appendix C of the OCHMO Draft Pandemic Plan which details clinic – specific infection control guidelines



OCHMO Response (cont)

- Review and ramp-up their on-site infection control plans as needed
- Monitor websites for influenza updates (eg. CDC, WHO, NEJM)
- Monitor CDC teleconferences and/or download the subsequent content of the teleconferences and share with clinic staff
- Refer employees to the CDC link on the first page of the OH website



OCHMO Forward Work

- Initiating discussions with OSPP, HR and OGC concerning limitation of exposure in the workplace
 - “Send home” policies
 - Liberal use of telecommuting
 - Self identification to exposure
 - Telecommute for 5 days to reduce spread of infection?