



Influenza Medical Response

Paul R. Cieslak, MD
Medical Director, Immunization Program

1



- Medical response goals
- Limited role of influenza antivirals
- Vaccinations – our best defense

2

Medical response goals

- Reduce spread of flu.
- Protect vulnerable people from complications.
- Assure availability of treatment for severely ill.
- Minimize social and economic disruption.

3

Influenza antivirals

- Four Drugs
- Oseltamivir (Tamiflu[®]) is “stockpiled”
- Two uses
 - Treatment
 - Prophylaxis

4

Treatment vs. Prophylaxis

Treatment: Used to shorten illness duration and limit complications. Most effective if started within the first 48 hours of illness.

Prophylaxis: Prevents infection in otherwise healthy people. Must be given the entire duration of possible exposure to illness.

5

Oregon's stockpile of Oseltamivir*



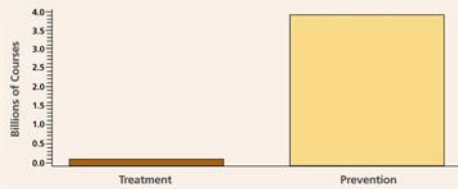
Oregon share of Federal stockpile (SNS)	Already received	137,000
	Still with SNS	407,000
State-purchased stockpile	Optional state purchase with 25 percent federal subsidy	13,000
Total		557,000

*Treatment courses

6

Antivirals for prevention unrealistic

Antiviral courses required
United States, 16-week pandemic



7

Oseltamivir (Tamiflu®): Summary

- Only works if it's influenza
- Only works if virus susceptible
- Needs to be taken early
- Shortens illness -- unclear if it saves lives

8

Influenza vaccine

Effectiveness

- Among healthy persons 65 years or younger:
70-90 percent effective.
- Among frail, elderly persons:
 - Reduces illness by 30-40 percent;
 - Reduces hospitalization by 50-60 percent; and
 - Reduces fatalities by 80 percent.

CDC. Epidemiology and Prevention of Vaccine-Preventable Diseases, 2009

9

US Influenza vaccination strategy

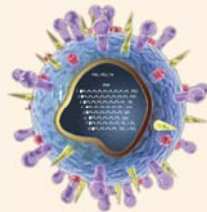
Protect the people at high risk as well as those likely to transmit influenza to them.



10

Regular "Seasonal" Influenza Vaccine

- Three strains
- In general, one dose



11

Pandemic H1N1 vaccine

- Undergoing safety, potency trials
- Expect FDA approval
- Will need two doses, at least three weeks apart

CDC. Epidemiology and Prevention of Vaccine-Preventable Diseases, 2009

12

Influenza vaccine supply -- United States

- 2008 -- 130 million doses

- Pandemic H1N1

- 45 million by mid-October
- 20 million weekly thereafter
- Estimates likely to change

13

Vaccination target populations

Oregon

Pregnant women	60,127
Persons between six months and 24 years of age	1,222,286
People who live with or care for children younger than six months of age	60,006
Health care and emergency service personnel	155,467
People age 25 through 64 years who are at high risk for complications	381,141
Total Population	1, 879, 027
Total Doses	3, 758, 054

14

Pandemic vaccine distribution, Oregon, 2009

- Federal Government has purchased vaccine
- Distributed through state public health only
- Allocated to local health departments by state based on population
- Local health departments determine where vaccine available
 - Hospitals, clinics, mass vaccinators, others

15

Key points

- Vaccine is our best weapon.
- We'll need three doses of vaccine:
 - Two doses for pandemic strain
 - One dose for seasonal strains.
- Vaccine supply still unknown.
- Challenge: vaccinate ~2,000,000 Oregonians.
- Antiviral medications will play a minor role.

16
