## Update: Measles Outbreaks, United States-- 2008

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## Measles Burden

Pre-vaccine era:

- 3-4 million cases annually
- 400-500 died
- 48,000 hospitalized
- 1000 developed chronic disability from measles encephalitis



## Measles Epidemiology, United States, 1962- June 20, 2008



# Average Number of Measles Cases by Month for 2000-07 vs. 2008* 


$\longrightarrow$ Average number of cases for 2000-07
$\rightarrow$ Cases for 2008

* 2008 data through June 20


## Measles Cases Reported to CDC/NCIRD January 1 -- June 20, 2008 (N= 123)



## Importations

- 106 (86\%) cases were import-associated
- 116 (94\%) U.S. residents
- The viruses isolated had a variety of genotypes (i.e. D4, D5, H1)
- 11 (69\%) of 16 the importations from WHO European region:
- 2800 measles cases in European countries
- >1000 cases in Israel


## Proportion of Case-Patients by Vaccination Status, N= 123

## Vaccinated

Unvaccinated, but not eligible for vaccine

29 (24\%)<br>85 (69\%)

Unvaccinated, but eligible for vaccine

## Breakdown of Unvaccinated CasePatients Eligible for Vaccine, $\mathrm{N}=85$

Unknown vaccination status/unknown reasons

Personal Belief Exemptors (PBEs)
Missed opportunity


12-15 months of age (not technically late)

## Communicating to Partners \& the Public

- MMWRs highlighting the following:
- PBEs and increase in measles outbreaks in 2008
- Effectiveness of measles vaccine
- Unvaccinated U.S. residents are at risk (esp. persons traveling abroad)
- Measles diagnosis should be considered in travelers
- Webinar on measles with NACCHO
- Travel alerts on CDC's website (Euro Football, Olympics)
- Measles made an immediately notifiable disease at CSTE


## Summary

- Import-associated cases are on the rise in U.S.
- Most cases are occurring in unvaccinated U.S. residents
- Primary reason for lack of vaccination is personal belief exemptions
- Until better global control is achieved, cases will continue to be imported into the U.S. and outbreaks will persist as long as there are communities of unvaccinated people


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