Update on Herpes Zoster

ACIP Meeting
June 25, 2015

Rafael Harpaz, MD, MPH

CDC Lead, Zoster Working Group
National Center for Immunizations and Respiratory Diseases
Centers for Disease Control and Prevention

Outline

- Clinical manifestations
- Epidemiology
- Zoster vaccine
- More recent policy developments
- Zoster vaccine uptake

Clinical Manifestations

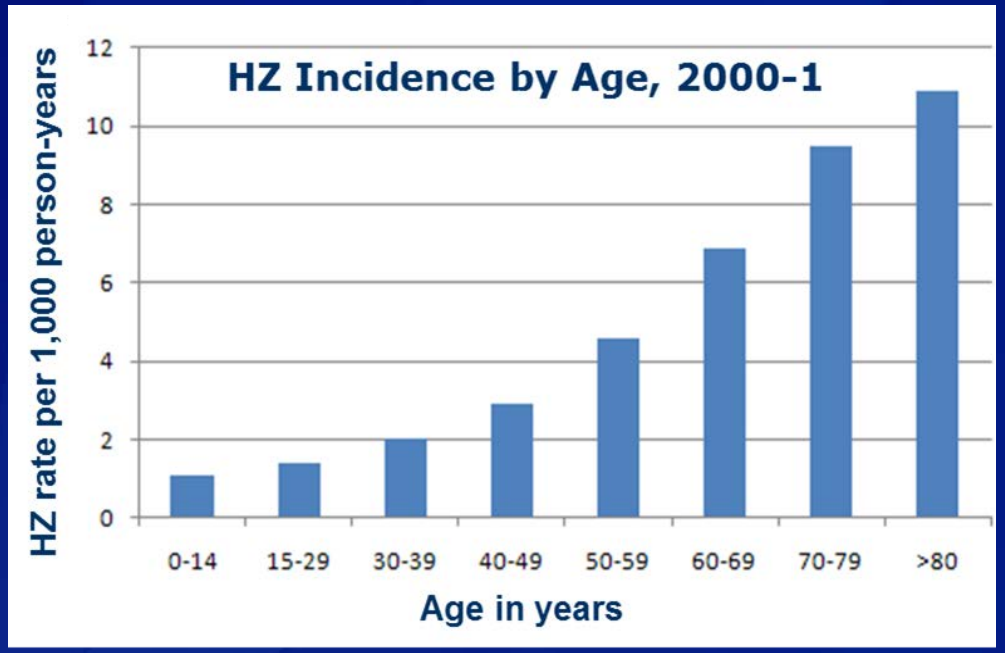
Letter from Patient with PHN:

> “Doctor, I sure hope you can help me with this pain, it is so bad it has changed my whole life. I am unable to do any of the things I used to do.”

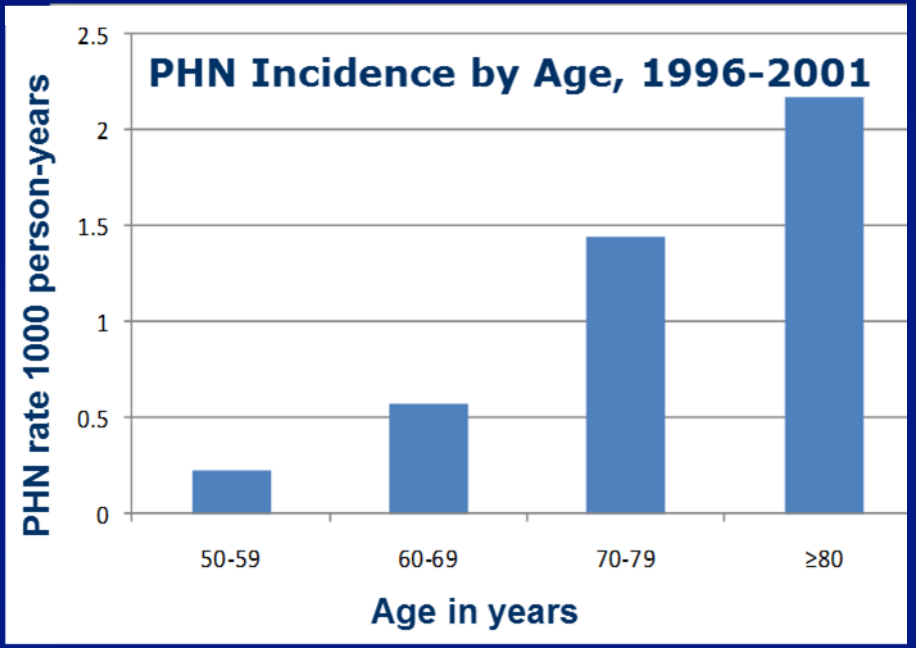
Herpes Zoster Ophthalmicus (HZO)

Courtesy of MN Oxman UCSD/San Diego VAMC

Epidemiology of HZ



Marketscan administrative data,
Insinga et al., J Gen Intern Med. 2005, 20:748-53.



PHN = 90 days of pain.

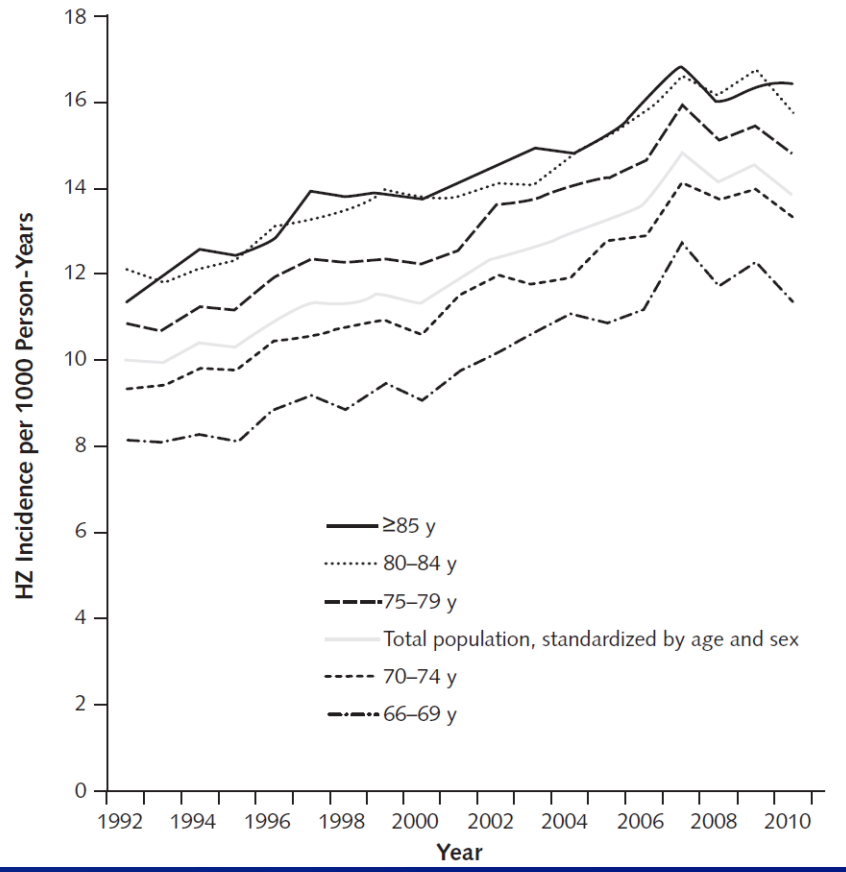
Olmsted County, MN,
Yawn, et al., Mayo Clin Proc. 2007; 82:1341-9.

Epidemiology of HZ in U.S.

- Annual rate ~4 per 1000 population per year
- About 1 million cases in the U.S. annually
- Lifetime risk of developing HZ: about 30%
- Age-adjusted rates appear to be increasing

Epidemiology of HZ in U.S.

Figure. **HZ incidence among Medicare beneficiaries older than 65 years, by age group, 1992–2010.**

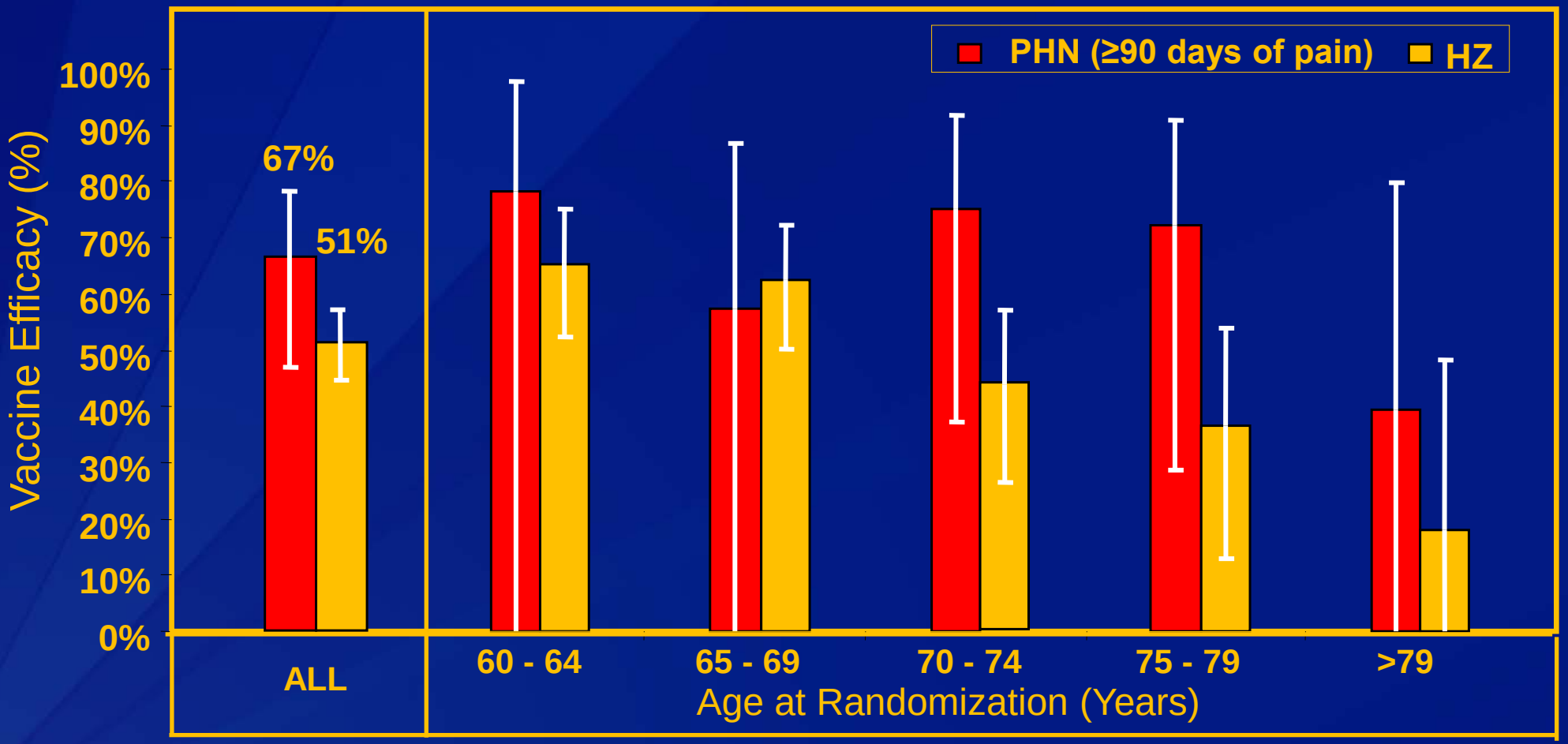


Hales, Annals of Internal Medicine, 2013 159:739

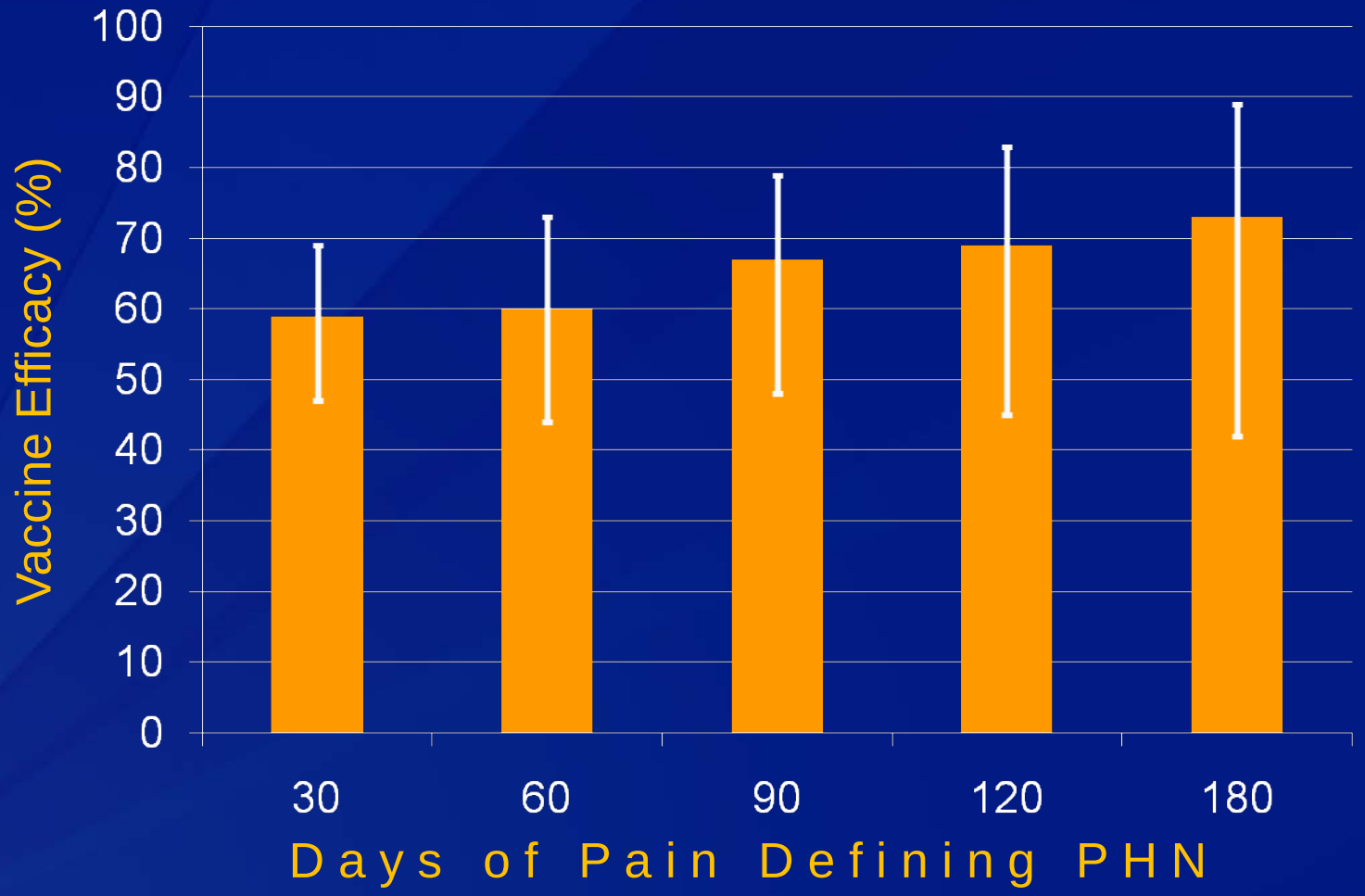
Zoster Vaccine

- Licensed 2006 based on Shingles Prevention Study (SPS)
  - >38,500 healthy adults ≥60, followed ~3 years
  - Attenuated OKA-strain VZV (≥14X titer in Varivax)
  - Vaccine efficacy: 51% vs. HZ, 67% vs. PHN
  - No serious adverse events (local reactions common)
  - ACIP recommendation: 1 dose to adults ≥60 years
- Results supported by subsequent observational studies

SPS: Vaccine Efficacy by Age – HZ &PHN



SPS: Vaccine Efficacy vs. PHN of Varying Duration



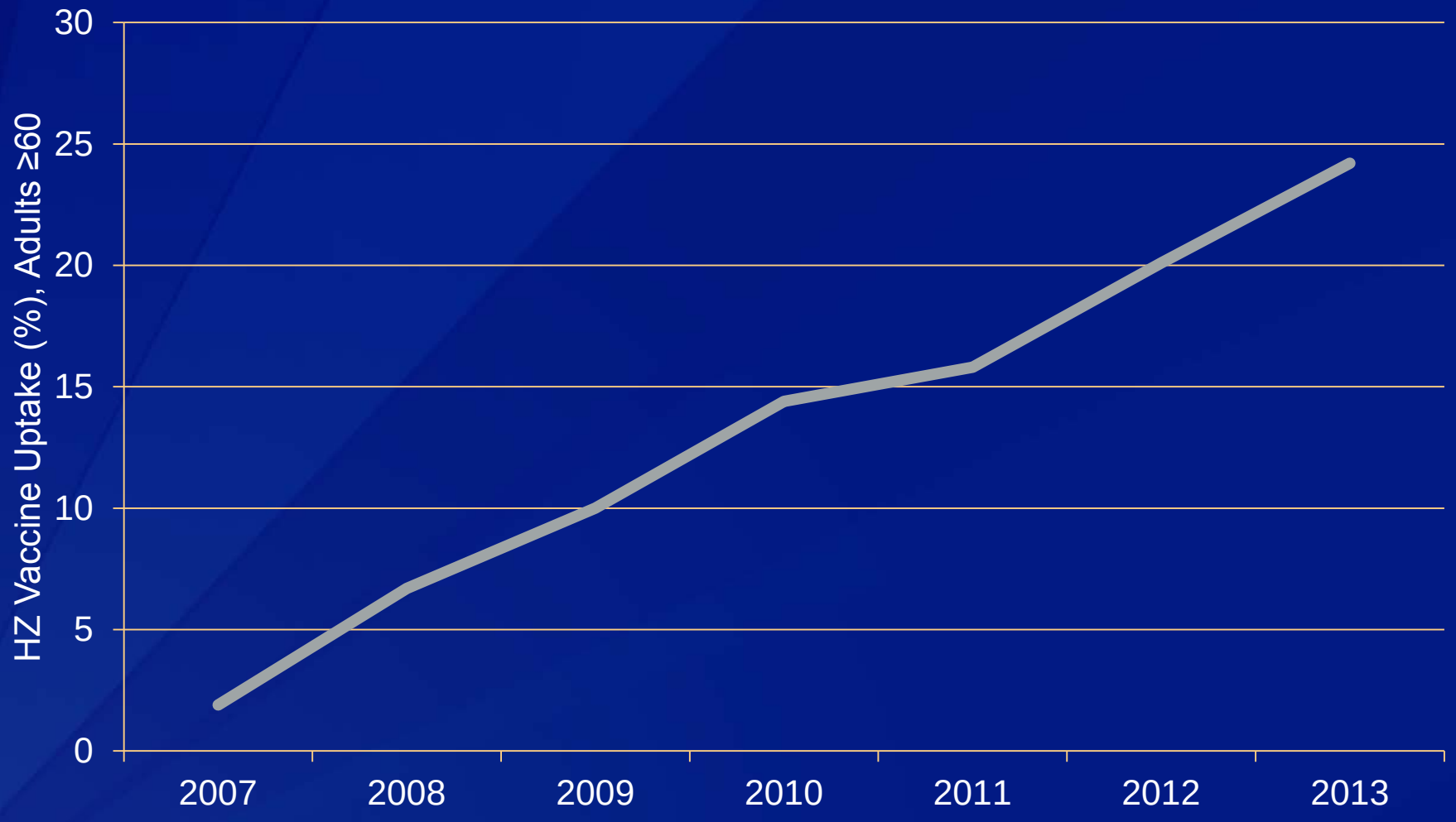
More Recent Developments

- Clinical trial of adults 50-59: vaccine efficacy vs. HZ 70%,
  - Zostavax licensed for adults 50-59 in 2011
- Follow up of original SPS-cohort to assess durability:
  - Effectiveness at 7-11 years reported as 21%, but study was not blinded, had modest precision, and lacked controls
- Second dose study: immunogenicity ≥10 years after 1st dose, compared to an initial dose in age-matched adults ≥70
  - Immunogenicity outcomes comparable in 2 arms, but these outcomes do not adequately predict protection

More Recent Developments

- ACIP recommendations are unchanged: 1 dose of zoster vaccine routinely recommended for adults ≥60 years
- "Programmatic conservatism" given that:
  - HZ burden increases markedly with age
  - Duration of vaccine protection uncertain
  - Degree of protection provided by a 2nd dose uncertain

Zoster Vaccine Uptake



* 2007: National immunization Survey (Lu et al, Vaccine 27:882-7); 2008-13: NHIS (Am J Prev Med 40:e1-6 & unpublished)

Zoster Vaccine Uptake

Why has uptake been sluggish?

- Price
- Storage & handling (frozen vaccine)
- Supply shortages (resolved)
- Medicare Part D reimbursement
- Lowered prioritization of adult vaccines
- General fragmentation of preventive care for seniors

Thank You!!!