



Perinatal Hepatitis B Case Management 2014

Massachusetts Department of
Public Health
Immunization Program

[Outline]

- Overview of hepatitis B disease burden
- Prevalence of perinatal transmission of hepatitis B in Massachusetts
- Current status of perinatal hepatitis B case management in Massachusetts
- Public Health Nursing's role in hepatitis B prevention

Background on hepatitis B

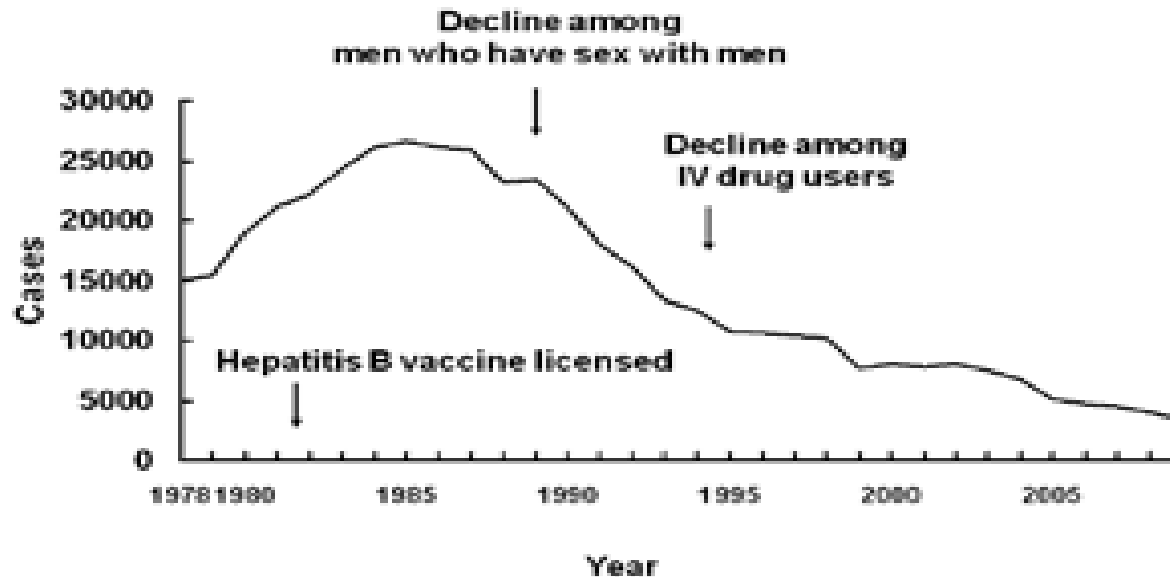
- Hepatitis B is a liver disease caused by the hepatitis B virus (HBV).
- HBV is found in the blood and other body fluids of infected people (e.g., serum, semen, saliva, and vaginal secretions).
- An infant can acquire HBV from:
 - An infected mother (transmitted at birth)
 - A chronically infected member of the household

Worldwide Rates of Chronic Hepatitis B



Hepatitis B- United States, 1978-2009*

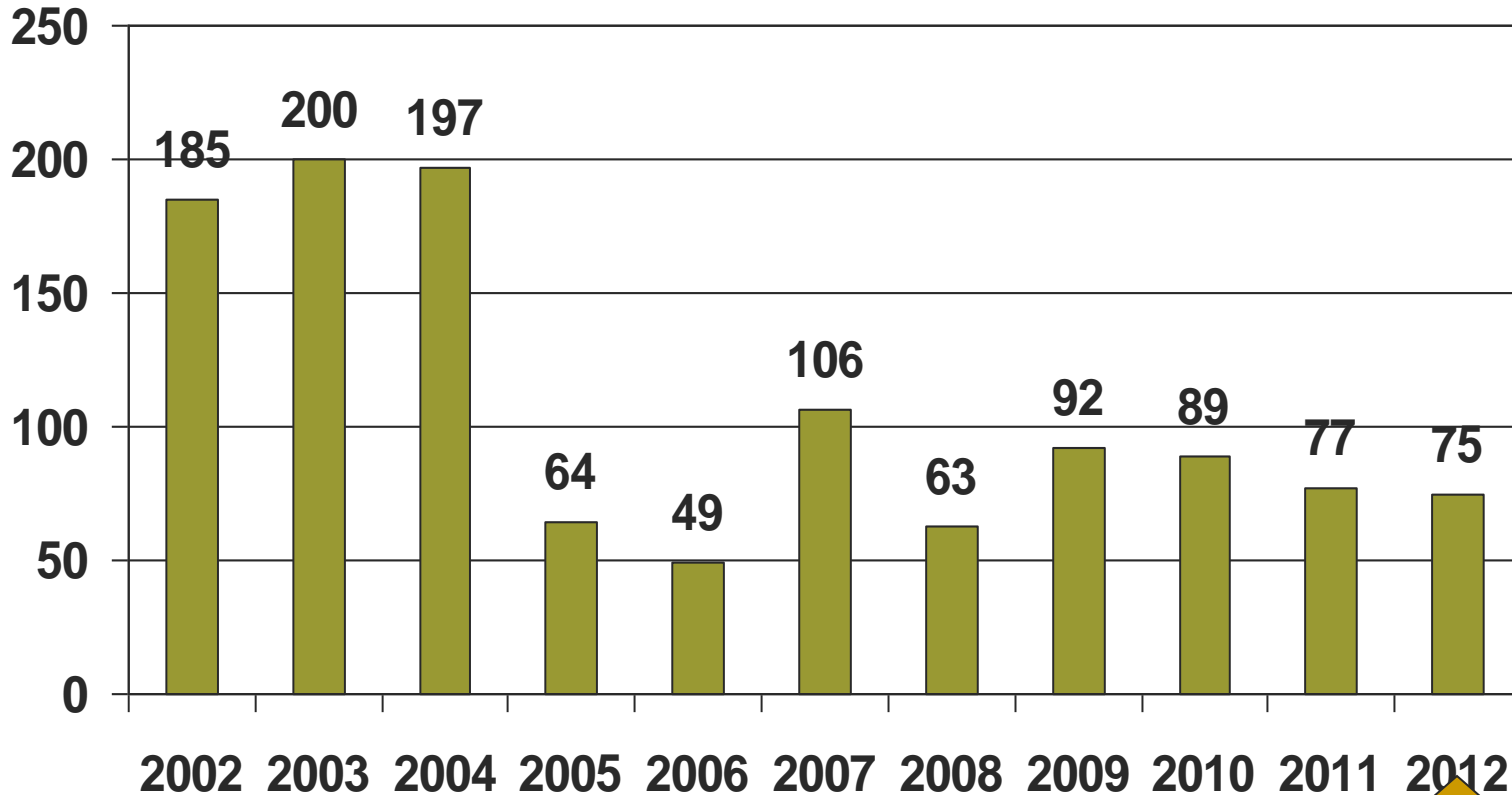
Hepatitis B—United States, 1978-2009



Perinatal Hepatitis B and Hepatitis B Vaccine Requirements in MA

- 105 CMR 300.000 (1985) Requires all hepatitis B positive labs be reported to MDPH
- Perinatal Hepatitis B Program started in 1989
- In 1992 started universal vaccination of all children
- 105 CMR 130.627 (1993) Requires all pregnant women be tested for hepatitis B during each pregnancy
- Provides hepatitis B vaccine free of charge to birth hospitals and providers

Acute confirmed cases of HBV infection, 2002-2012*

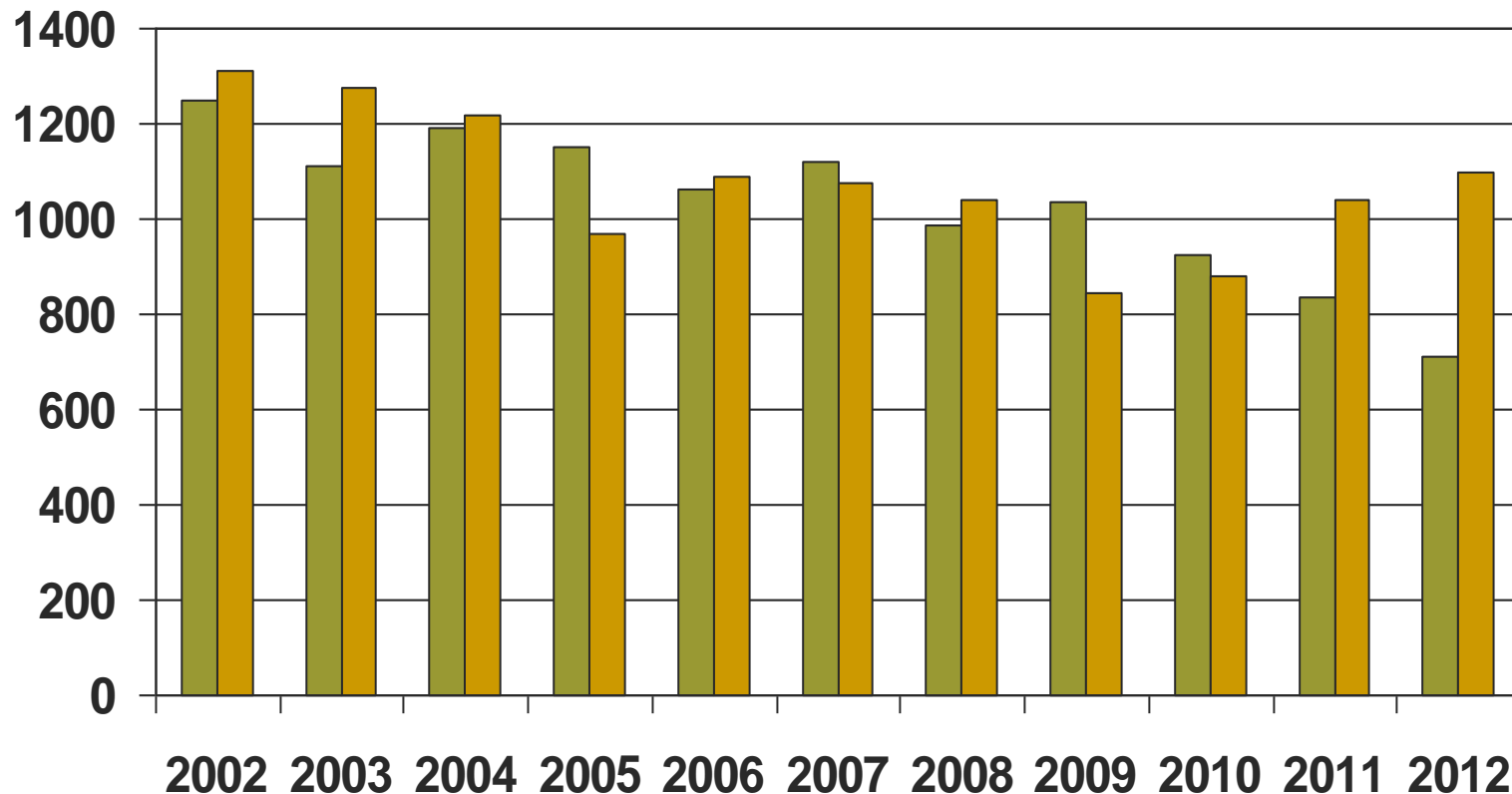


*Data as of 8/29/13 and are subject to change

Source: MDPH Office of Integrated Surveillance and Informatics Services

+48 acute suspect cases in 2012=123 cases investigated

Confirmed and probable chronic cases of HBV infection, 2002-2012*



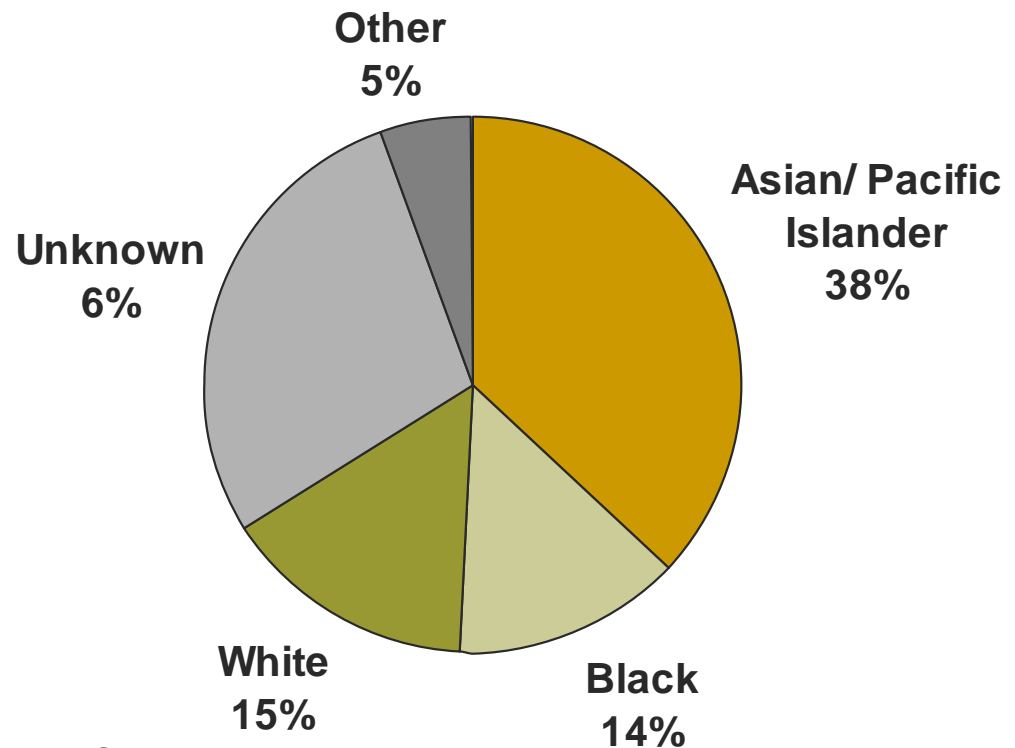
*Data as of 8/29/13 and are subject to change

Source: MDPH Office of Integrated Surveillance and Informatics Services

Confirmed and probable chronic cases of HBV infection in 2012: Demographics

2012 reported confirmed and probable chronic HBV infections = 1,806

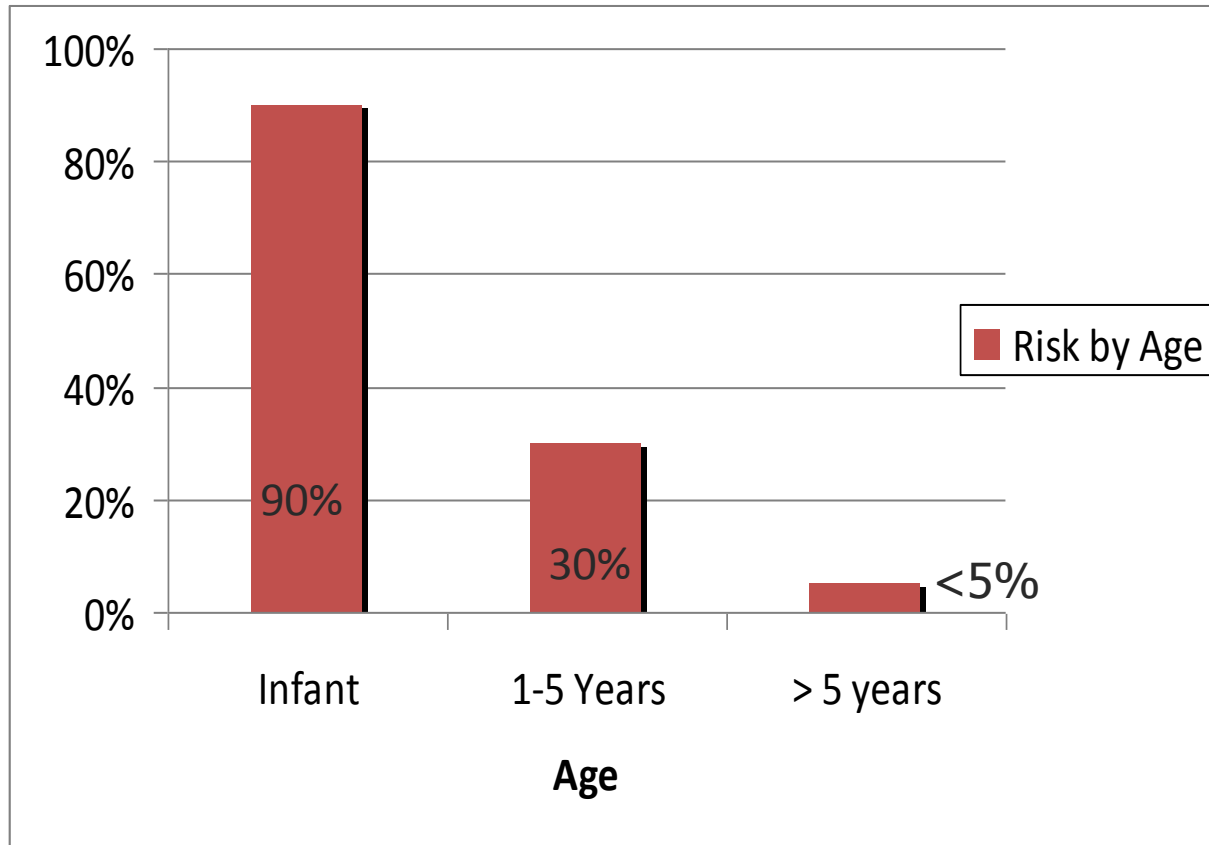
- Average Age: 42 years
- Gender: 45% female, 55% male
- Majority of cases are A/PI
- Likely represents immigrants from HBV endemic countries



*Data as of 8/29/13 and are subject to change.

Source: MDPH Office of Integrated Surveillance and Informatics Services

Risk of developing chronic hepatitis B by age at infection



Modes of HBV Transmission in Early Childhood

- Vertical transmission from mother to infant
- Horizontal transmission from infected household contact to child
- *Both modes of transmission can be prevented by vaccination of newborns!*



Massachusetts Births

- 70,000+ births each year in MA
- 27.4% of mothers are non-us born, up from 20.8% in 2000*

Who are our HBsAg+ Moms?

- <1% of births are to HBsAg+ women
 - 80% non-us born API**
 - 9% Black Non-Hispanic**
 - 7% White Non-Hispanic**
 - 3% US born API**

* Source: MA Dept of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation-2010 Births

* **2010 CDC Point Estimate for Massachusetts

Hepatitis B Perinatal Transmission*

- If mother positive for HBsAg and HBeAg
 - 70%-90% of infants infected
 - 90% of infected infants become chronically infected
- If positive for HBsAg only
 - 5%-20% of infants infected
 - 90% of infected infants become chronically infected

*in the absence of postexposure prophylaxis

Massachusetts Virtual Epidemiological Network (MAVEN)

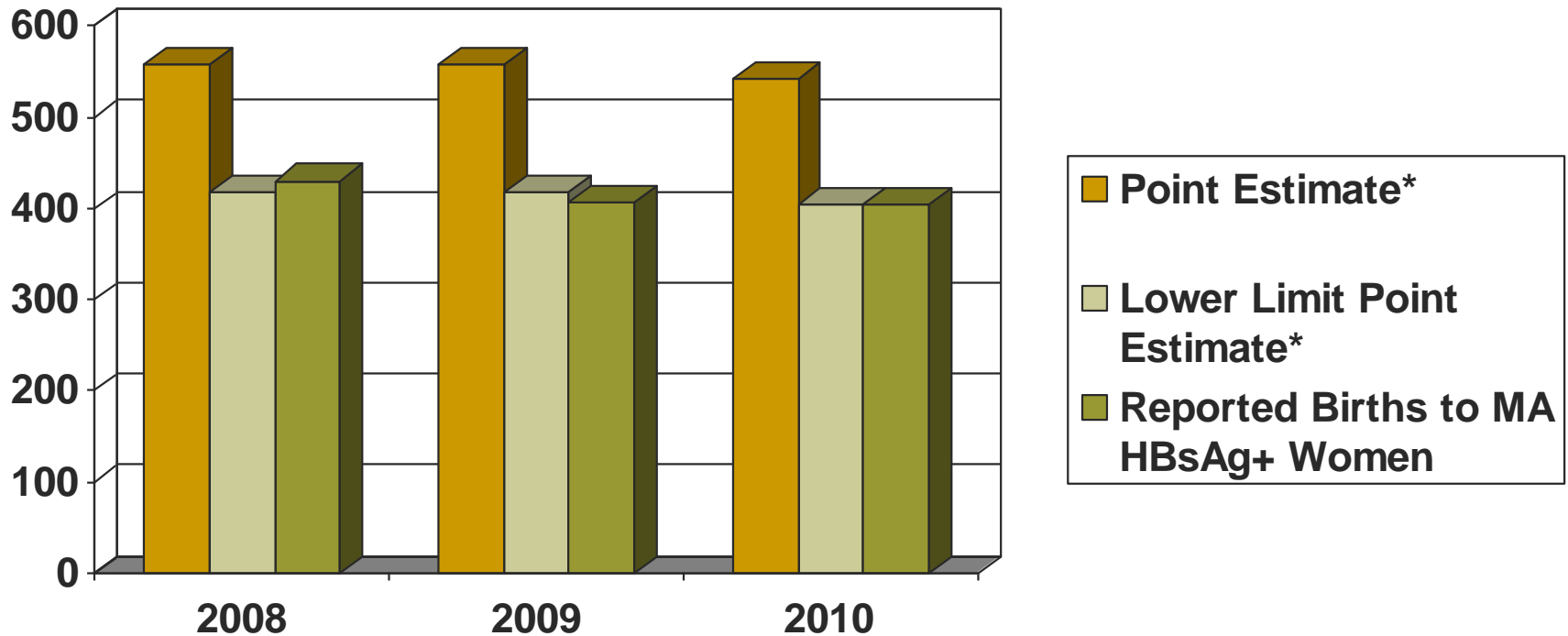
- MA Department of Public Health, Perinatal Hepatitis B Program transitioned from an Access based data management system to a web based surveillance system, MAVEN, on 9/17/06
- Case management is now done from the managers individual desktop and shared with program management in “real time”

Methods of Identification

- Laboratories report HBsAg+ results to MAVEN, pregnancy status is determined
 - 100% of birthing hospital labs reporting via ELR
- Prenatal care providers report cases
- HBsAg+ women self report
- Hospitals report cases directly into MAVEN via Teleform
- Universal reporting mechanisms (birth certificate, newborn screening) detect cases retrospectively

New!

CDC Estimated vs. Reported MA Births to HBsAg+ Women



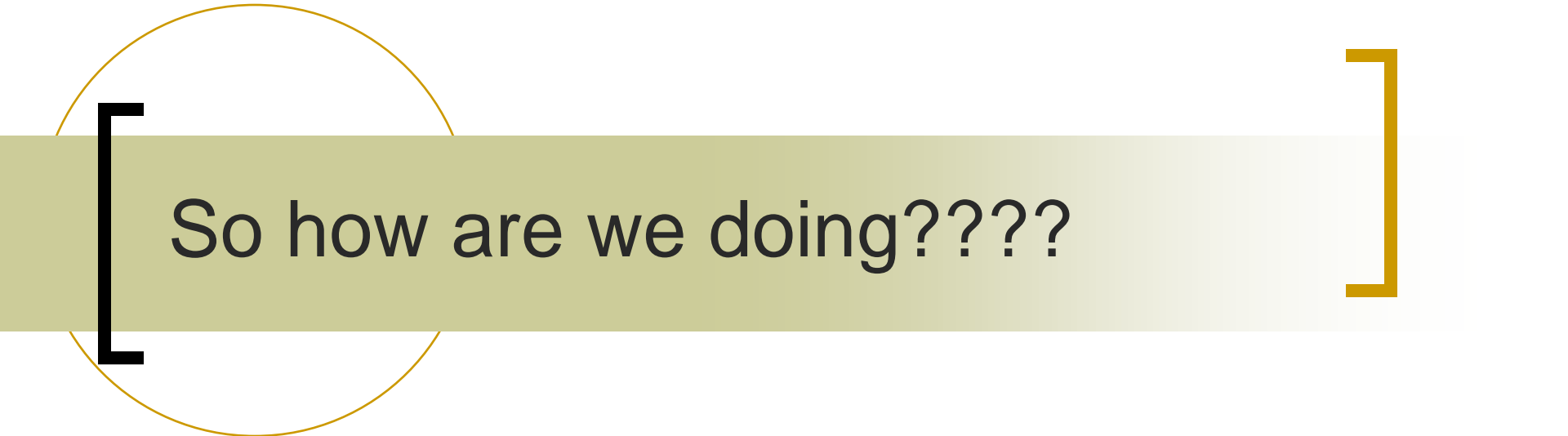
*Source of CDC's HBsAg prevalence estimates: National Health and Nutrition Examination Survey, 1999-2006 & medical literature review

Timing of Hepatitis B Vaccine for Infants Born to HBsAg Positive Women

- HBIG and dose 1 within 24 hours
- Dose 2 at 1-2 months of age
- Dose 3 a minimum of 8 weeks after second dose, and at least 16 weeks after first dose and not before 24 weeks of age

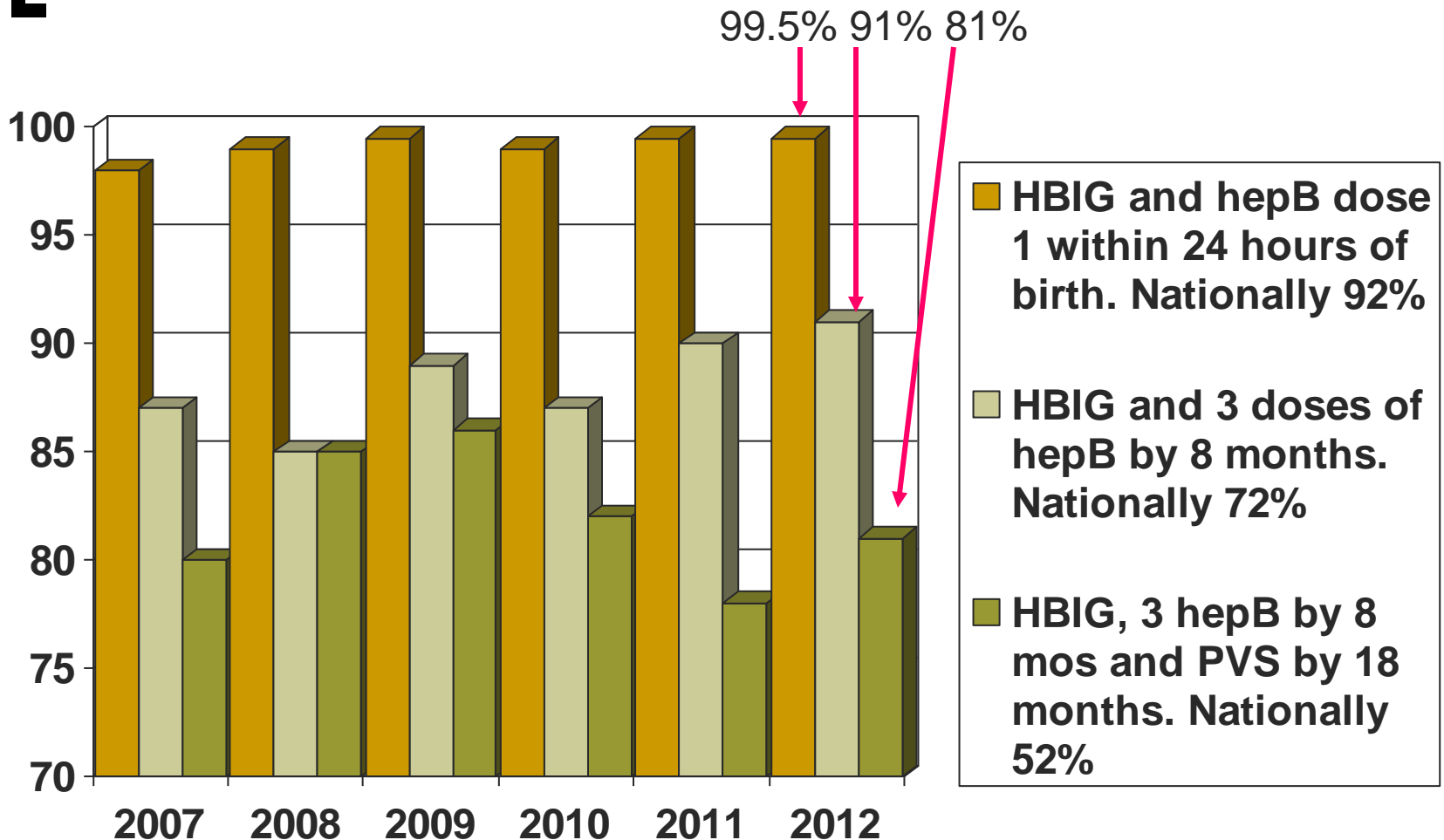
Preterm Infants <2000 grams

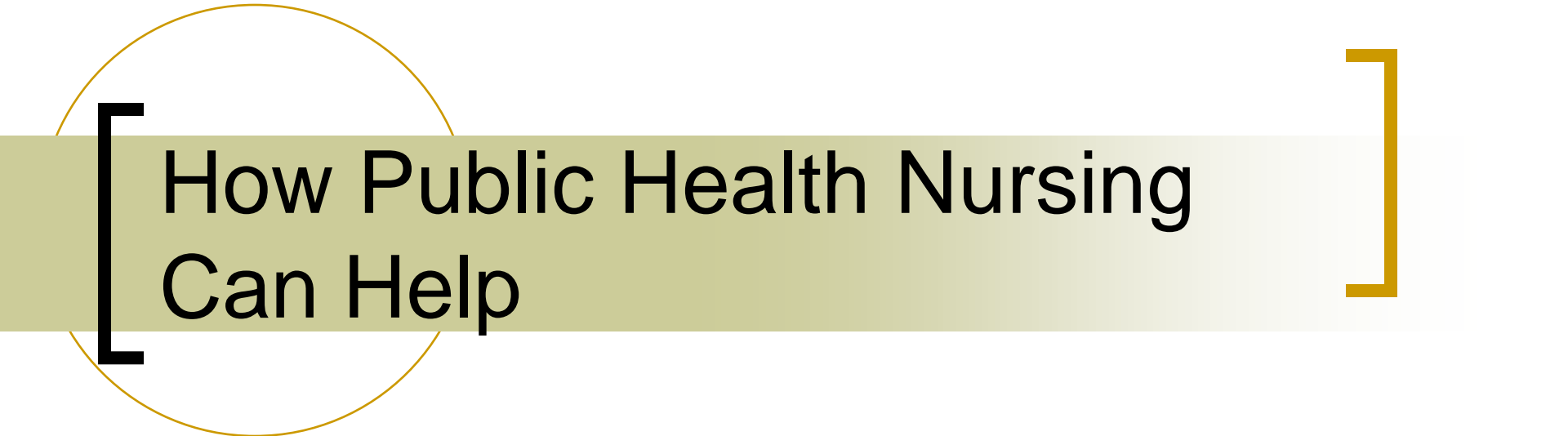
- Birth dose and HBIG if mother HBsAg positive (within 12 hours of birth)
 - Repeat vaccine dose when reach 2000 grams
- Preterm infants who weigh less than 2,000 grams have a decreased response to vaccine administered before 1 month of age
- Delay first dose until chronologic age 1 month if mother HBsAg negative



So how are we doing????

Infants Born to HBsAg Positive Women in MA





How Public Health Nursing Can Help

[Identification of Pregnant HBsAg Positive Woman]

- Report to the Perinatal Program
HBsAg positive pregnant woman in
your community to MDPH
Immunization Program at: (617) 983-
6800

Local Public Health Institute of Massachusetts MAVEN Training

Introduction to MAVEN - Windows Internet Explorer

http://sph.bu.edu/otit/LPHI/MAVEN/

File Edit View Favorites Tools Help

Introduction to MAVEN

LOCAL PUBLIC HEALTH INSTITUTE OF MASSACHUSETTS

Introduction to MAVEN

Massachusetts Virtual Epidemiologic Network

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Reporting a Perinatal Hepatitis B Event

The MDPH Perinatal Program investigates:

- All positive hepatitis B labs on women between the ages of 14-44 to determine pregnancy status. MDPH will contact the physician who ordered the lab tests.
- All deliveries of babies (identified via Newborn Screening [NBS] or reported via teleform) born to women who are positive for hepatitis B.

LBOH investigation:

- The LBOH conducts the contact investigation for family/household/close contacts and sexual contacts to the hepatitis B positive pregnant woman.

Notification Via Phone & MAVEN Task

When a hepatitis B positive woman becomes pregnant or delivers her child, the MDPH Perinatal Program Case Manager will notify the LBOH where the woman currently resides by two means: 1) by phone call to the LBOH, and 2) by creating an assignment (i.e., creating a task) using the Task Icon on the MAVEN dashboard. The task will indicate that a contact investigation needs to be undertaken.

Task Description: Hep B contact investigation needed

Notes: Hep B contact investigation needed on pregnant mom for household/family contacts

Assign to User: select an Individual user

Assign to Group: do not assign to LBOH Groups

On this Page

- Reporting a Perinatal Hepatitis B Event
- Notification Via Phone & MAVEN Task
- Case Report Data Collection
- Creating Contacts and Linking Events
- Scenario #1 - Linking to an Existing Event
- Scenario #2 - Linking to Multiple Events Already in MAVEN
- Scenario #3 - Creating a New Contact Event (contact is not yet in MAVEN)

Start

Inbox - Microsof... RE: Power Point... RE: RE: Confir... BU Training Site... 2010 Immunizati... 5 - Perinatal He... MA Perinatal Sli... Perinatal Introduction t...

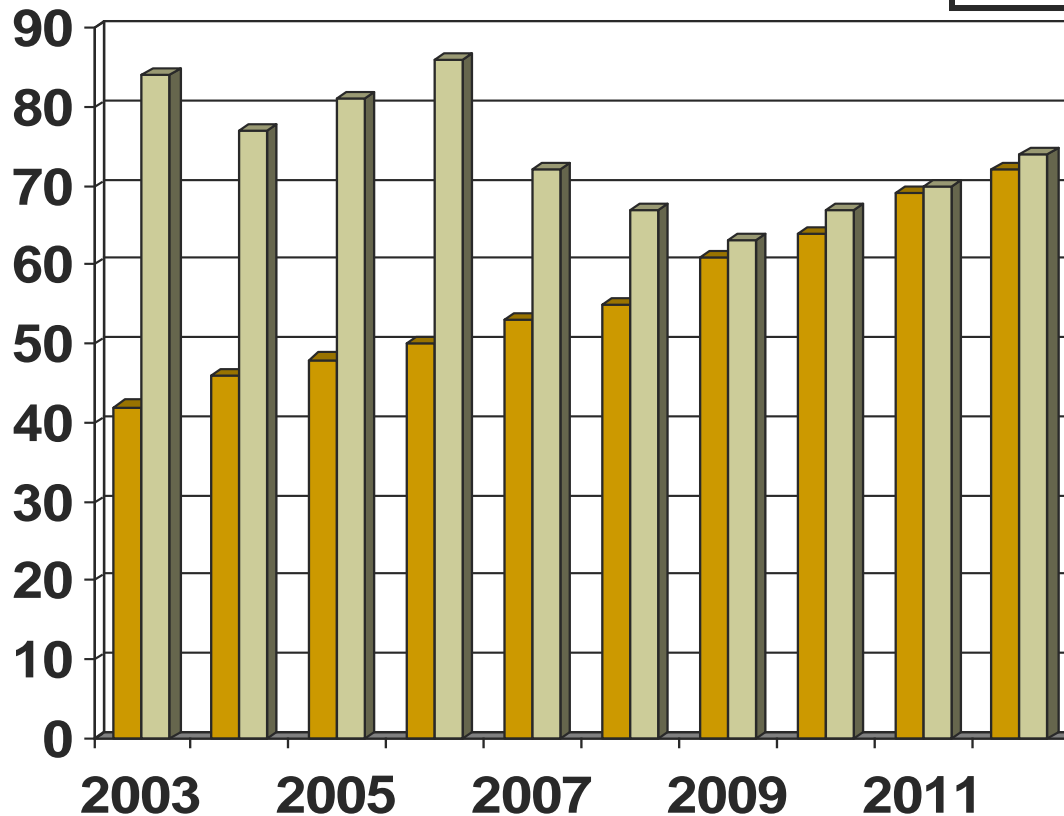
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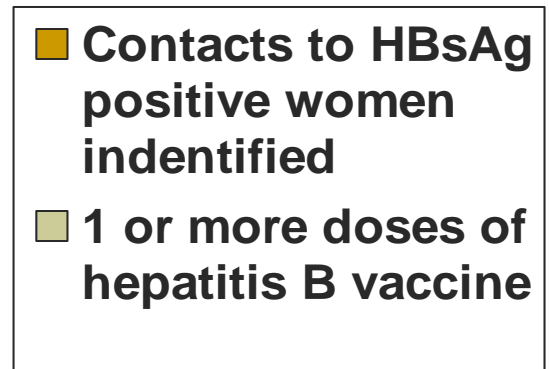
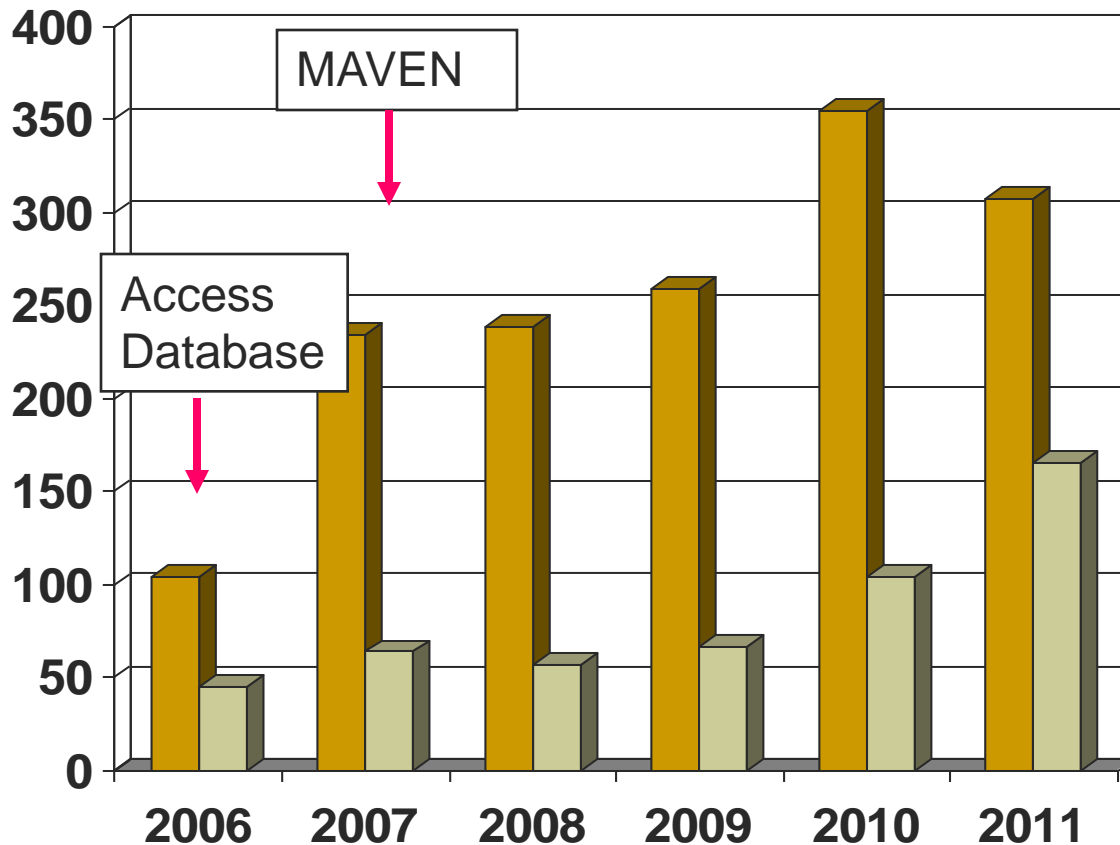
<http://sph.bu.edu/otit/LPHI/MAVEN/>

Estimated vaccination coverage with Hep B Birth Dose* for children 19-35 months, Massachusetts vs. US, 2003 – 2012

Birth Hospital Record Review, MA				
Survey year	1996	2000	2004	2009
% rec'd dose	89%	91%	92%	83%



Household and Sexual Contacts to HBsAg Positive Pregnant Women in MA



Role of LBOH in the Perinatal Hepatitis B Program

- LBOH have access to Maven
- Perinatal Case Managers will notify LBOH via Maven of cases requiring contact investigation
- Pregnant women and their infants will be case managed and followed by the Regional Immunization Nurses or RIHP
- Contact investigation and vaccination will be followed by LBOH
- LBOH able to enter vaccination data and susceptibility information from contact investigation directly into Maven

[Core Data Elements: Contacts]

- Name
- Demographics
- Pre-vaccination test results, date
- Hepatitis B vaccine doses & dates
- Post-vaccination test results (household and sexual contacts)



Role of the MIIS

[Role of the MIIS]

- Data feed from Vital Records began January 1, 2012
- Provides MIIS users with access to infant and mother demographics, infant birth dose if administered at the hospital
- Gives users access to vaccine information on contacts
- Drawback: data availability in the MIIS dependent on when birth hospital sends to eVitals
 - Sometimes a delay in getting information, but overall has been very helpful for case management

Participation in the MIIS

- 2010 legislation requires all immunizing health care providers to report vaccine administration to the MIIS
- Registration for the MIIS considered a key component for pandemic preparedness – register ASAP if you haven't already
- *New Roster Entry functionality coming this summer to help streamline data entry for flu clinics
- MIIS staff has a table here today, available to answer questions

Learn more about the MIIS

- ContactMIIS Resource Center:
www.contactmiis.info
- MDPH Immunization Program:
www.mass.gov/dph/miis
- Questions:
 - Email:
miishelpdesk@state.ma.us
 - Phone: **617-983-4335**
 - Fax: **617-983-4301**



[Thank you!!!]

