



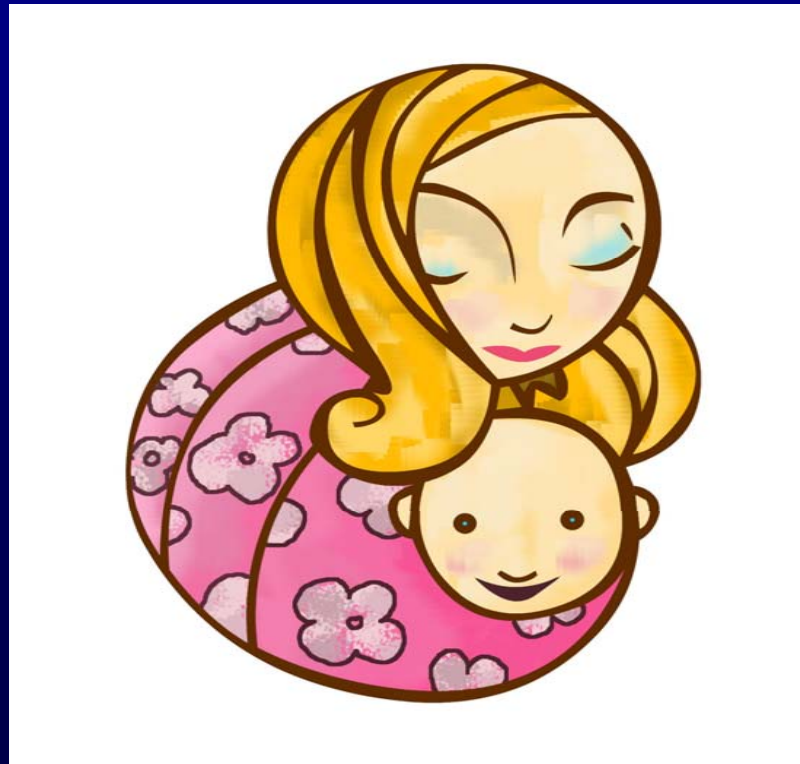
PUBLIC HEALTH

**ALWAYS WORKING FOR A SAFER AND
HEALTHIER WASHINGTON**

**Perinatal Hepatitis B Prevention Practices
Washington State Hospitals 2006
5/15/07**

Perinatal Hepatitis B Prevention Practices, Washington State Hospitals 2006

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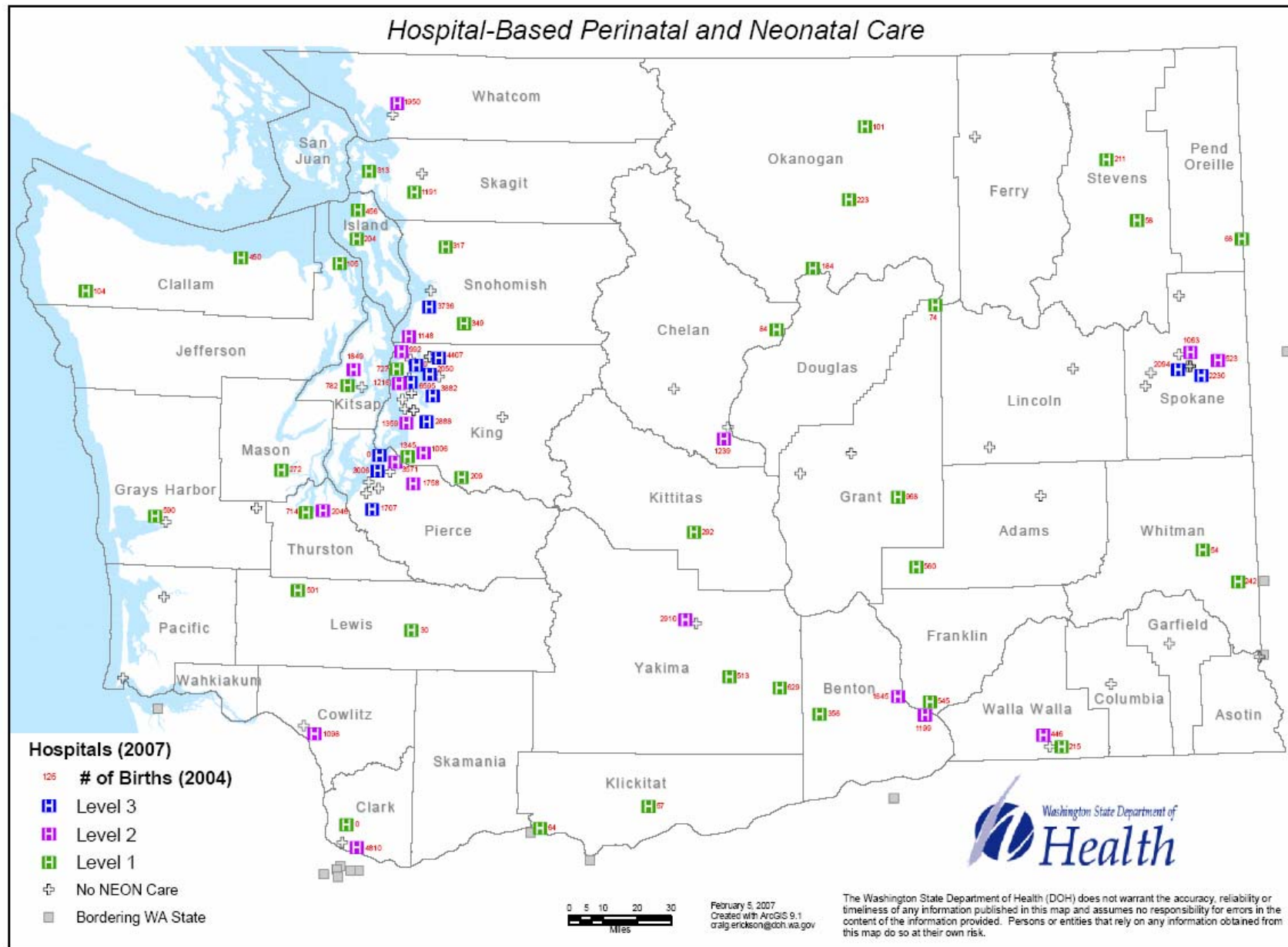
Washington State

- **Population size: 6,205,535** (US census, 2004)
- **Number of birthing hospitals: 69**
- **Number of live hospital births: 80, 829**
(WA State Vital Statistics, 2005)
- **Expected HBsAg+ births: 471-635** (CDC, 2004)
- **Identified HBsAg+ births: 321**
(WA State DOH surveillance, 2004)

Purposes of Study

- To assess policies and practices regarding perinatal hepatitis B prevention
- To review medical records to determine HBsAg screening and hepatitis B birth dose administration rates during hospitalization
- To assess the percentage of infants born to HBsAg infected mothers statewide

Perinatal hepatitis B Prevention





Perinatal hepatitis B Prevention

- **Policy review and practice survey**

Perinatal hepatitis B Policy

**Prophylaxis Management of Infants
born to HBsAg+ women**

**Prophylaxis Management of Infants
of mothers of unknown status**

Universal Vaccination of Infants

Delivery hospital characteristics



Hospital Assessment

- **Medical Record Abstraction**

- **Maternal medical record**



Demographics



Prenatal care



Admission to labor and delivery

Hospital Assessment

- **Medical Record Abstraction**

- **Neonatal Medical record**

-  **Maternal HBsAg test result**

-  **HBIG administration**

-  **Standing orders**

-  **Birth dose of hepatitis B**

-  **Reasons for not vaccinating**

Medical Record Abstraction

- **Sampling method: probability proportional to size (PPS) cluster sampling**
- **Eligible hospitals included at least 300 births**
 - **Military hospitals included**
- **Births between October 2005 and February 2006**
- **30 Clusters of 25 mother/newborn pairs (n=750) selected from 25 birthing hospitals**

The Prep Work

- Team selection
 - Clinician, Epidemiologist, Record Abstractor
- Communications
 - Written and verbal
 - Audiences – Hospital Administrators, Nursing, Medical Records, Case Source
 - Consistency

The Prep Work

➤ Products & Processes

- Abstract form
- Timeline
- Case selection
- Background information
- Cross-learning for the Team
- Team responsibilities
- Abstractor notebook

The Real Work

➤ The pilot site

- Clinician and Abstractor
- Make contacts
- Review and abstract charts
- Cross-check abstracts
- Give feedback to hospital staff
- Test Assumptions
- Make Adjustments

The Real Work

- Complete Proposed Schedule
 - External, Uncontrollable Factors
 - Geography
 - Abstractor availability

The Real Work

➤ Contact Facilities

- Contact person & information
- Study information and forms
- Hospital requirements
- Competing audits
- Medical chart format & location
- Abstractor's information & requirements

The Real Work

➤ At the Facility

- Introductions and Connections
- Abstractor's requirements
- Verify hospital rules/protocols
- Check medical charts against case listing
- Request missing charts or information
- Review charts and complete abstracts
- Check abstract forms for completeness
- Request exemplary forms/examples

The Follow-up

➤ Internal

- Abstracts to data entry
- Update to team
- Complete notes on the site visit
- Share exemplary forms

➤ External

- Follow-up on missing cases/charts
- Send thank you

Policy and Practices Survey

- All 69 Birthing Hospitals in WA State
 - 38 Level 1
 - 19 Level 2
 - 12 Level 3
- Respondents
 - Nurse 20 (29%)
 - Clinical Nurse Manager 40 (58%)
 - ARNP/Specialist 3 (4%)
 - Administrative 6 (9%)

Policy and Practices Survey

- Review HBsAg results for all pregnant women at admission to L&D
 - Written Policy 54 (78%)
 - Standing Order 28 (52%)
- HBsAg testing on admission to L&D for women with no test result
 - Written Policy 38 (55%)
 - Standing Order 25 (36%)
- Repeat testing of HBsAg neg. women at risk for HBV
 - Written Policy 38 (55%)

Policy and Practices Survey

- HBIG within 12 hrs. of birth for infants of HBsAg positive mothers
 - Written Policy 51 (74%)
 - Standing Order 48 (70%)
- HBIG Dose - Written Policy
 - Correct 46 (90%)
 - Incorrect 2 (4%)
- HBIG Dose - Standing Order
 - Correct 42 (88%)
 - Incorrect 4 (8%)

Policy and Practices Survey

- Hep B vaccine within 12 hrs. of birth for infants of HBsAg positive mothers

Written Policy	52	(75%)
Standing Order	49	(71%)
- Hep B vaccine within 12 hrs. of birth for infants of HBsAg unknown mothers

Written Policy	45	(65%)
Standing Order	42	(61%)

Policy and Practices Survey

- **HBV Dose - Written Policy (for unknowns)**

Correct	40	(89%)
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Incorrect	2	(4%)
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- **HBV Dose - Standing Order (for unknowns)**

Correct	37	(88%)
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Incorrect	2	(5%)
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Policy and Practices Survey

- Hep B vaccine before discharge for all infants
 - Written Policy 48 (70%)
 - Standing Order 50 (72%)
- Document maternal HBsAg results in infant chart
 - Written Policy 41 (59%)
- Receive Hep B vaccine at no cost through WA State DOH Universal Vaccine Program
 - Yes 45 (65%)
 - No 12 (17%)
 - Don't Know 12 (17%)

Policy and Practices Survey

- Neonatal Practice Policymakers

Physician alone	22	(32%)
Physician w/ Nurse/Mgr/Dir	27	(39%)
Committee	14	(20%)
Manager/Director alone	3	(4%)
Nurse alone	1	(1%)
Other	2	(3%)

Medical Record Abstraction

- Study Sample N=749

- Race/Ethnicity:

Hispanic	131	(17%)
White/Non-Hispanic	401	(54%)
Black/Non-Hispanic	22	(3%)
API	65	(9%)
Other/Unknown	130	(17%)

Medical Record Abstraction

- Insurance Status

Private Insurance	386	(52%)
Medicaid/Med.Coupons/ Healthy Options	302	(40%)
Other Insurance	51	(7%)
Unknown	10	(1%)

Medical Record Abstraction

- Type of Attending Provider

Obstetrician	551	(74%)
Family Practitioner/ Other MD	119	(16%)
Nurse Midwife	73	(10%)
Other	1	(0.1%)
Missing	2	(0.3%)

Medical Record Abstraction

- Prenatal Form in Mother's Chart

▪ Yes, 5+ entries on form	683	(92%)
▪ Yes, 1- 4 entries on form	34	(5%)
▪ No form	29	(4%)

Medical Record Abstraction

- HBsAg Testing Prior to Admission:

▪ Yes	709	(95%)
▪ No Prenatal Care	13	(2%)
▪ No/Not Documented	25	(3%)
▪ Chart Missing	2	(0.3%)

- HBsAg Test Results Prior to Admission:

▪ Positive	5	(0.7%)
▪ Negative	702	(99%)
▪ Missing	2	(0.3%)

Medical Record Abstraction

- Documentation of Prenatal HBsAg Status

▪ Prenatal Record Form	650	(87%)
▪ Copy of Laboratory Report	40	(5%)
▪ Clinician Transcription	3	(0.4%)
▪ Other	13	(2%)
▪ Missing	41	(5%)

Medical Record Abstraction

- **Maternal HBsAg result in infant chart**
 - **Yes** 740 (99%)
 - **No** 9 (1%)
- **Mother's HBsAg Status in Infant Chart**
 - **Positive** 7 (0.93%)
 - **Negative** 732 (98%)
 - **Unknown** 10 (1%)

Medical Record Abstraction

- Race/Ethnicity of HBsAg Positive Mothers
 - API 4 (57%)
 - White/Non-Hispanic 1 (14%)
 - Black/Non-Hispanic 1 (14%)
 - Other/Unknown 1 (14%)

Medical Record Abstraction

- HBIG Given to Infant: 11 (1.5%)
 - HBsAg Positive 7 (100%)
 - HBsAg Negative 3 (0.4%)
 - HBsAg Unknown 1 (8%)
- HBIG within 12 Hours of Birth: 10
 - 1 given 13 hours after birth to baby of HBsAg negative mother
- All of the hospitals that administered HBIG had standing orders

Medical Record Abstraction

- **HB Vaccine Given to Infant:** 645 (86%)
 - **HBsAg Positive** 7 (100%)
 - **HBsAg Negative** 629 (86%)
 - **HBsAg Unknown** 9 (90%)
- **HB Vaccine Not Given:** 102 (14%)

Medical Record Abstraction

- **HB Vaccine Given within 12 hours of birth:**
 - **HBsAg Positive** 5 (71%)
 - 2 others within 13 hours
 - **HBsAg Unknown** 6 (60%)
 - 2 of remaining 4 were <2000gm.

- **HB Vaccine Given to Infant:** n= 645
 - **Due to Standing Orders** 598 (93%)
 - **Specific MD Orders** 23 (4%)
 - **Unknown** 24 (4%)

Medical Record Abstraction

- **Specific Order to not give HB Vaccine** **11**
 - **Vaccine not given** **10**
- **Reasons for not giving HB Vaccine:** **n= 102**
 - **<2000 gm. at birth** **5** **(5%)**
 - **Guardian refused** **65** **(64%)**
 - **Will have as out-patient** **15** **(15%)**
 - **Other (deferred/died)** **2** **(2%)**
 - **No reason documented** **15** **(15%)**

Summary

- **95% of women were tested prior to hospital admission**
- **95% documented maternal HBsAg test results in maternal record**
- **99% had documentation of maternal HBsAg status in infant chart**

Summary

- **72% of hospitals had standing orders and 70% had written policies for Hep B vaccine before discharge for all infants**
- **Only 55% of hospitals had a policy on repeat testing of HBsAg- women at risk for HBV**

Summary

- **65% of hospitals surveyed indicated they receive Hepatitis B vaccine through the VFC program in Washington State**
- **34% answered no/don't know**

Summary

- **<1% of babies born to HBsAg+ mothers**
- **57% of HBsAg positive mothers are API**
- **100% of babies born to HBsAg+ mothers received HBIG and Hep B vaccine before discharge**

Discussion

- Overall, hospitals show good compliance with perinatal Hep B recommendations
- Standing orders and policies appear to be effective way to assure compliance with recommended practices
- Some improvement needed for prompt prophylaxis of babies born to mothers of unknown HBsAg status

Discussion

- Estimate of HBsAg+ mothers higher in WA due to high API population
- Concerns:
 - guardian refusal of Hep B vaccine
 - decisions to postpone vaccination until out-patient visit

Discussion

- Estimate of HBsAg+ mothers 0.93%
- Applied to population estimate of 80, 829 hospital births to WA residents in 2005
- Expected births to HBsAg+ mothers: 742

Next Steps

- **Share survey results with LHJs and hospitals to identify strengths and weaknesses related to perinatal hepatitis B prevention**
- **Share VFC programmatic and enrollment materials**
- **Share model Hospital policy and procedures**
- **Encourage HBsAg lab reports placed in mothers' charts**

Limitations

- Respondent bias – Policy Survey
- Skip patterns in Policy Survey
- Data quality issues – missing information in medical charts
- Missing charts – very few missing
- Data entry quality

Strengths

- **100% Response Rate to Policy Survey**
- **State-wide survey**
- **Sampling method to provide statewide estimates**
- **Very few missing charts**