

Completeness of Hepatitis B Screening in Pregnant Women and Birth Dose Administration in Newborns: A Review from Selected Indiana Hospitals

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Indiana Perinatal Hepatitis B Program:

- Investigate reported cases of Hepatitis B in pregnant women
- Case management of perinatally exposed infants
- Contact investigation
- Provider, client, and community education
- Universal birth dose policy promotion



Purpose of the Record Review:

- The primary objectives of this review was to:
 - Determine screening practices
 - Determine Hepatitis B birth dose practices
 - Evaluate progress/effectiveness of the Perinatal Hepatitis B program



Introduction to methodology:

- The 13 hospitals involved accounted for 17,242 births (20%) of the state birth cohort of 86,000.
- 1030 maternal records and 1030 newborn records were reviewed.
 - 95% confidence level, 85% expected frequency, 78% worst acceptable
- No individual identifying information was collected (in accordance with HIPAA).



Individual Hospital Comparison by Size and Location:

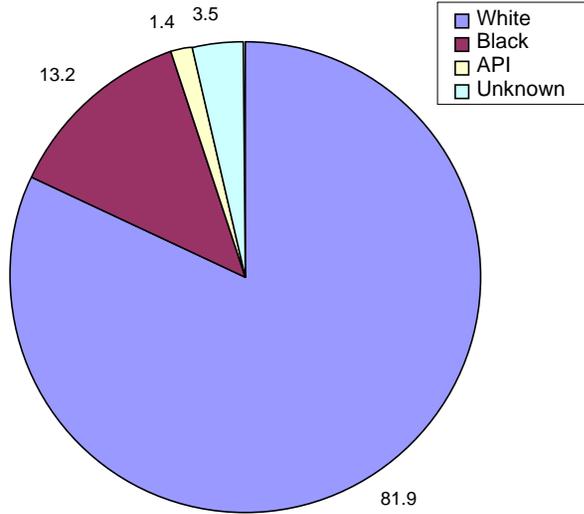
Hospital	# Births	# of Records Reviewed	Hospital Size			Hospital Location	
			Small (0-499)	Medium (500-1499)	Large (1500 and up)	Rural Area	One of 20 largest cities
A	2100	91			X		X
B	2200	92			X		X
C	2065	90			X		X
D	800	81		X		X	
E	96	32	X			X	
G	389	72	X			X	
H	739	88		X			X
I	472	82	X			X	
J	1042	88		X		X	
K	908	58		X			X
L	1666	89			X		X
M	1721	90			X		X
N	3044	94			X		X

Demographics overview:

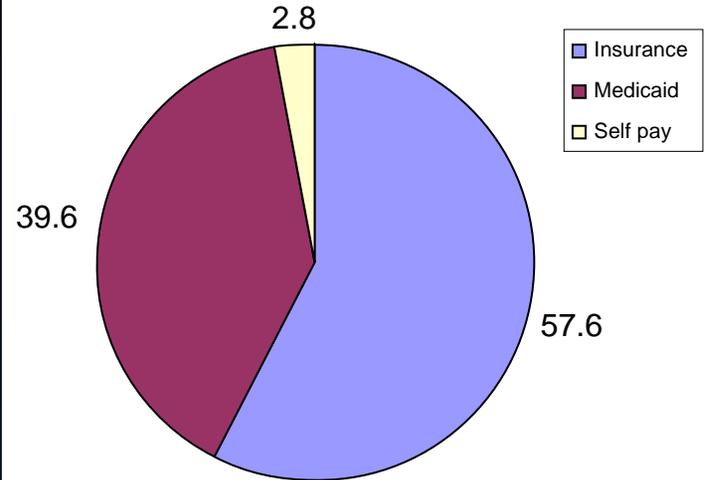
- Indiana is 85.8% white and 8.4% African American
 - Of the charts reviewed, 81.9% were white
 - 1 hospital was 89.7% African American
- 59.7% of women in the review were between the ages 20 and 29
- 57.6% had private insurance



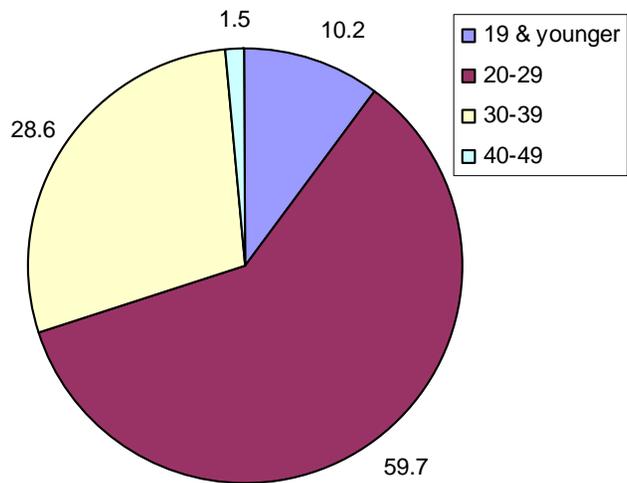
Racial Distribution (%)



Healthcare Coverage (%)



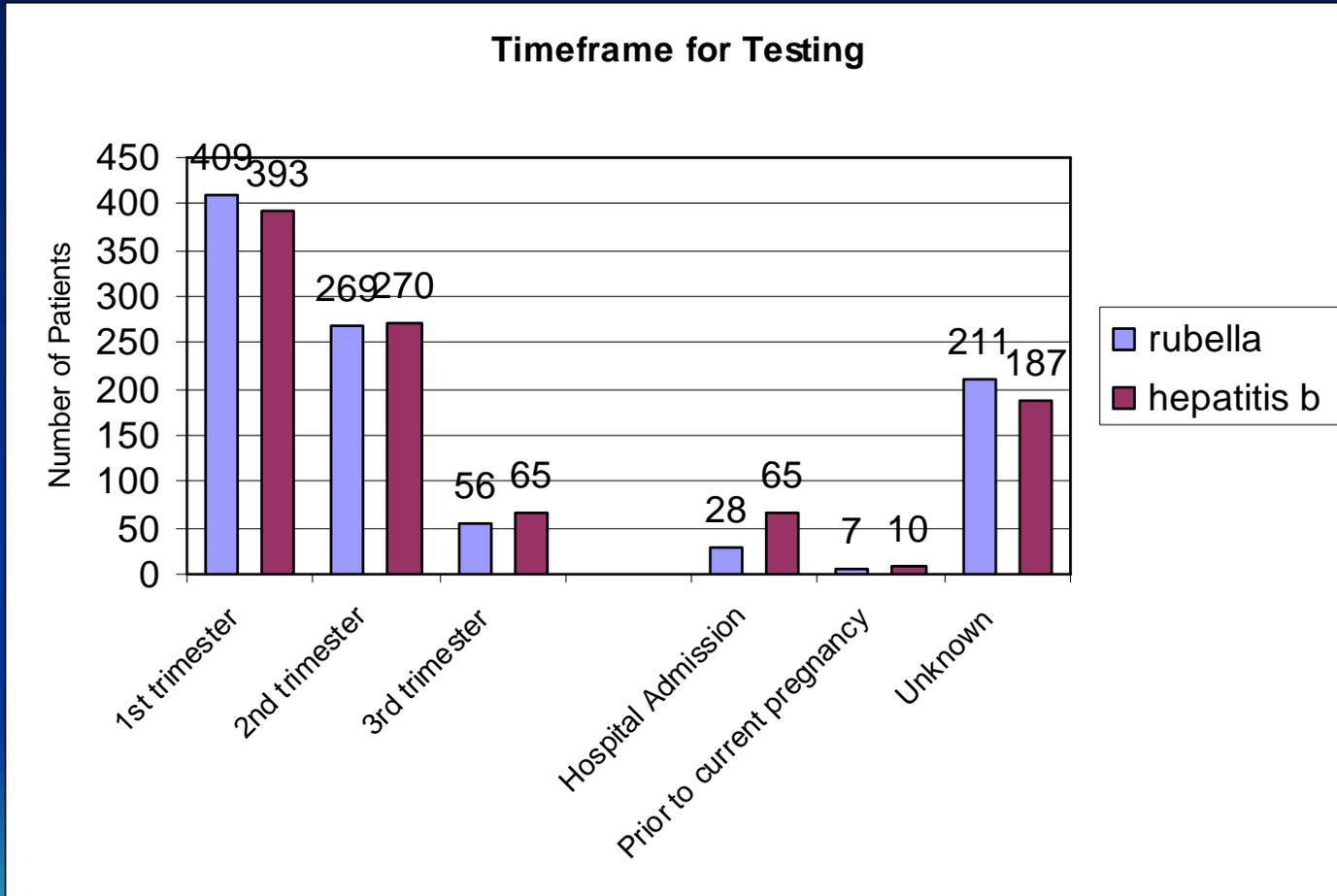
Age Distribution (%)



Individual Hospital Comparison of Maternal Hepatitis B Testing and the Screening Date:

Hospital	Hepatitis B Testing		Screening Date				
	Tested	Not Tested	1st trimester	2nd or 3rd trimester	Hospital Admission	Prior to Pregnancy	Unknown
A	95.6%	4.4%	34.5%	39.1%	3.4%	2.3%	20.7%
B	98.8%	1.1%	20.9%	43.9%	1.1%	4.4%	29.6%
D	92.6%	7.4%	53.4%	42.6%		1.3%	2.7%
E	93.8%	2.8%	66.7%	23.4%	3.3%	3.3%	3.3%
G	97.2%	2.8%	65.7%	27.1%	2.9%	1.4%	2.9%
I	96.3%	3.7%	26.6%	22.8%	3.8%		46.8%
J	98.6%	1.4%	45.7%	34.3%	15.7%		4.3%
K	96.6%	3.4%	17.9%	42.9%	35.7%		3.6%
L	94.4%	5.6%	22.6%	34.5%			42.9%
N	98.9%	1.1%	60.2%	35.5%	1.1%		3.2%
Average	96.0%	3.7%	40.7%	33.5%	9.6%	2.3%	17.3%

Hepatitis B Testing Timeframe:

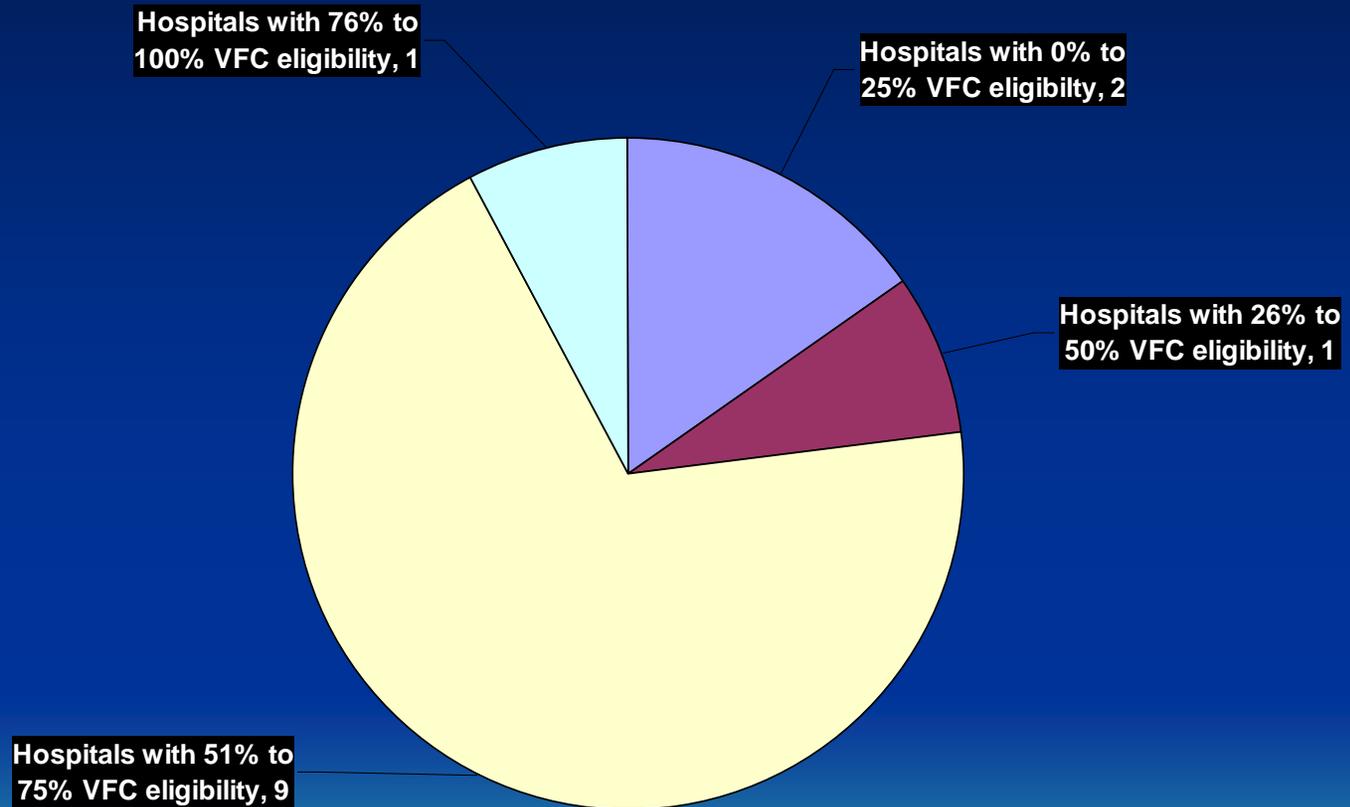


Maternal Charts (combined hospital data):

- 96.1% tested for Hepatitis B
- 39.7% tested during first trimester
- 89.9% of the results were transcribed



Hospital VFC Eligibility:



Individual Hospital Comparison of Vaccination Procedures:

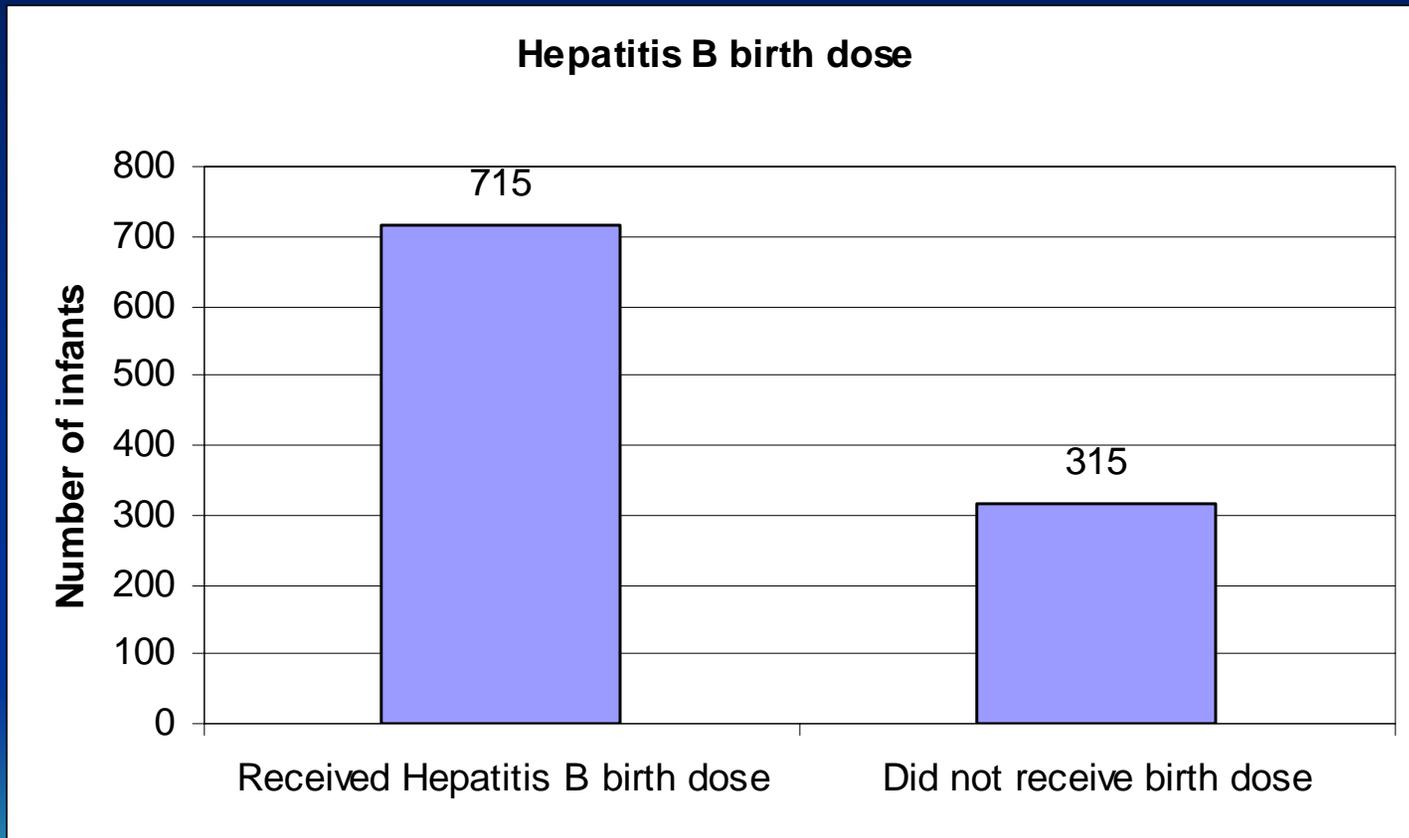
Hospital	Hepatitis B Birth Dose Administered		Was the VIS provided and edition date recorded?			Parental Consent	
	Yes	No	Yes	Yes, but incorrect/ missing edition date	Unknown	Yes	No
A	84.6%	15.4%	88.3%		11.7%	92.2%	7.8%
B	96.7%	3.3%			100.0%	100.0%	
C		100.0%					
D		100.0%					
E	46.9%	53.1%				100.0%	
G	81.9%	18.1%			100.0%	100.0%	
H	94.3%	5.7%			100.0%	98.8%	1.2%
I	92.7%	7.3%			100.0%	100.0%	
J	94.4%	5.6%			100.0%	100.0%	
K	96.6%	3.4%			100.0%	100.0%	
L	41.6%	58.4%		100.0%		100.0%	
M	98.9%	1.1%			100.0%	100.0%	
N	71.3%	28.7%	59.7%	11.9%	28.4%	71.6%	28.4%
Average	81.8%	30.8%	74.0%	56.0%	82.2%	96.6%	12.5%

Newborn Results (Combined Hospital):

- 69.4% of the newborns received the Hepatitis B birth dose
- Only 13% had proper VIS documentation!
- 81.7% had a maternal Hepatitis B result in their chart



Infants who received the Hepatitis B birth dose:



Maternal Recommendations:

- All women should be screened in the first trimester for HBsAg. *
- The actual lab results should be included in the chart.
- If a woman has one or more of the risk factors, she should be re-tested in the third trimester (or at hospital admission) for HBsAg. *
- *as recommended by the CDC and ACOG.



Newborn Recommendations:

- All newborns should receive a birth dose of Hepatitis B vaccine regardless of the mother's status. *
- The maternal Hepatitis B status should be recorded in the newborn's chart.
- If the mother is HBsAg positive, the newborn should also receive HBIG within 12 hours. *
- Proper Vaccine Information Statement (VIS) procedures should be followed (NCVIA).

*as recommended by the CDC, AAP, and AAFP.

Prevent this!



Impact on reviewed Hospitals:

- Met with each hospital to provide results
 - Met with OB and Peds nurse managers
 - Included booklet, individual report, recommendations, and general immunization information
- 3 physician groups educated
- 2 groups implemented maternal re-screen
- 3 enrolled in VFC
- 1 implemented universal birth dose policy
 - 1 hospital brought rates up (holdout physician decided to provide birth dose)

Impact on other hospitals:

- 3 implemented universal birth dose policy
- 3 enrolled in the VFC program
- Used information in letter to encourage a universal birth dose policy
 - Mailed to physicians not providing birth dose



Hospital's feedback:

- “Information/update session was very helpful. It provided a data comparison letting us know the effectiveness of our program compared with other hospitals as well as giving recommendations we will incorporate to maximize our current program.”
- “I appreciate the state coming in and providing this data to us. Now we have the information to build and improve our hospital processes.”
- “The review process was easy to implement. We were glad to be of assistance. The information you provided following the audit was also informative.”



Future Plans:

- Just performed 14th record review in November 2005.
- 10 states, as well as the CDC, have asked for a copy of our methods.
- Update record review questionnaire – add maternal risk factors question?
- Will re-evaluate these hospitals in 3 years to gauge improvement and program success.



- **This project could not have been accomplished without the assistance of the following people:**
- **ISDH Epidemiologists: Wayne Staggs and Megan Steiger**
- **Fellow PHB Investigators: Kari Tapley and Susan Sparks**
- **PHB Program Coordinator: Beverly Sheets**
- **Immunization Medical Director: Charlene Graves, MD**
- **And an additional thank you to the hospitals and all the staff that assisted with the review!**

- **If you would like copies of the record review results or the methodology, please contact Beverly Sheets at 317-501-5722 or at hepbbev@aol.com**

