

# Seroprevalence of Hepatitis B and C Virus Infections among Pregnant Women in Haiti, 2012

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## INTRODUCTION

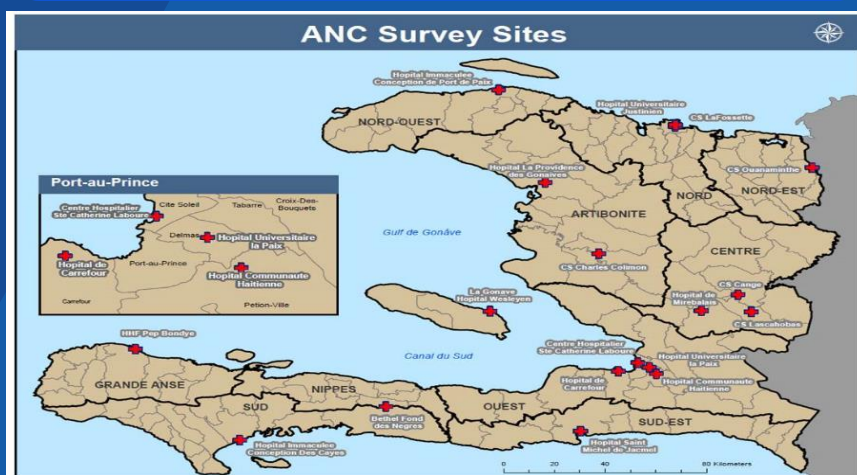
- Hepatitis B virus (HBV) and hepatitis C virus (HCV) infections are leading causes of morbidity and mortality due to hepatocellular carcinoma and liver cirrhosis worldwide
- Haiti introduced hepatitis B vaccine in October 2012
  - Pentavalent vaccine: 6, 10, and 14 weeks of age

## OBJECTIVES

Assess the seroprevalence of hepatitis B and C in pregnant women in Haiti and subsequent risk of Mother to Child Transmission (MTCT)

## METHODS

- Selected 1364 specimens from 6241 de-linked, residual serum specimens collected for the 2012 Biannual Sentinel Serosurvey for HIV among Pregnant Women attending antenatal care clinics (ANC)
- All 164 HIV+ specimens
- 1200 HIV- specimens (600 in Ouest department and 600 in other departments)
- Serology and molecular testing for HBV (anti-HBc, HBsAg, HBV DNA) and HCV (anti-HCV, HCV RNA)



## RESULTS

**Table 1. General characteristics of survey sample of pregnant women attending antenatal care clinics—Haiti, 2012**

	Ouest N=634 %	Other Departments N=673 %	p-value
<b>Age</b>			
15-19 years	13.9	14.0	0.6
20-24 years	27.9	25.7	
25-29 years	27.3	26.8	
30-34 years	18.6	18.0	
35-39 years	9.5	11.6	
≥ 40 years	2.8	3.9	
<b>Education level</b>			
None	7.9	11.0	<0.001
Primary	30.0	41.0	
Secondary	56.6	44.1	
Post-secondary	5.5	3.9	
<b>Married</b>	23.0	24.4	0.6
<b>Employed</b>	55.0	59.9	0.08
<b>HIV-Positive</b>	6.0	12.6	<0.001

**Table 2. Hepatitis B and C seroprevalence among pregnant women in Haiti**

	Total N=1307		Ouest N=634		Other Departments N=673		p-value
	n	%	n	%	n	%	
<b>Hepatitis B</b>							
<b>Anti-HBc positive</b>	422	33	171	27	251	38	<0.001
<b>HBsAg positive</b>	33	2.5	13	2.1	20	3	0.4
<b>HBV DNA (IU/mL)</b>							
Negative	7	21.2	2	15.4	5	25	0.8
<1000	6	18.2	3	23.1	3	15	
1000-4999	5	15.2	2	15.4	3	15	
≥5000	15*	45.4	6	46.1	9	45	
<b>Hepatitis C</b>							
<b>Anti-HCV positive</b>	6	0.5	2	0.3	4	0.6	0.7

\*Nine women had HBV DNA levels > 200,000 IU/mL  
All anti-HCV positive women were HCV RNA negative

**Table 3. Factors associated with anti-HBc positivity among pregnant women—Haiti, 2012**

Characteristics	Total Anti-HBc positive		
	Adjusted OR	95% CI	p-value
<b>Age (years)</b>			
15-19	1.00	-	
20-24	1.58	1.03-2.45	0.03
25-29	1.71	1.11-2.68	0.01
30-34	2.43	1.53-3.91	<0.001
35-39	3.26	1.94-5.53	<0.001
≥ 40	2.77	1.33-5.75	0.006
<b>Education level</b>			
None	1.00	-	
Primary	0.73	0.48-1.10	0.1
Secondary	0.54	0.36-0.81	0.003
Post-secondary	0.40	0.19-0.79	0.01
<b>Marital status</b>			
Married	1.00	-	
Not-married	1.37	1.01-1.87	0.04
<b>Job status</b>			
Employed	1.00	-	
Unemployed	0.91	0.70-1.17	0.4
<b>HIV status</b>			
Negative	1.00	-	
Positive	1.37	0.92-2.02	0.1

Analysis was adjusted for all variables in this table

Small number of HBsAg positive women (n=33), hence unable to identify factors associated with HBsAg positivity

## CONCLUSIONS

- Haiti has an intermediate endemicity of chronic hepatitis B
- High prevalence of positive HBV DNA among HBsAg positive women increases the risk of MTCT of hepatitis B
- Introduction of a universal hepatitis B birth dose with an assumption of achieving hepatitis B vaccine birth dose coverage within the range of 50%–80% could prevent 38%–61% of perinatal infections and HBV-related deaths due to perinatal infection in Haiti
- HCV infection does not seem to be a burden among pregnant women in Haiti

## ACKNOWLEDGMENTS

Jacquecius Compère; Natacha Louis Jeune, Josiane Buteau, Nicole Freeman LNSP; Yves Gaston Deslouches, Roc Magloire, MSPP; Institut Haïtien de l'Enfance; Erlantz Hyppolite, Barbara Roussel, NASTAD; Alina Choudhury; Barbara Marston, Jan Drobeniuc, Francisco Averhoff, Yves Frantz Jean-Louis, Chong-Gee Teo, Kathleen Wannemuehler, CDC

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