



Prenatal Care Utilization in Urban and Rural Haiti



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Introduction

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- Haiti has the highest infant mortality rate in the Americas (WHO, 2000)
 - 74 out of each 1000 live births die before their first birthday in 2000
 - High prevalence of low birth weight, estimated at 15% in 1994-1995
 - Haiti has the second-lowest per capita caloric intake in the world




Introduction (Cont.)

- Correlation between infant mortality or low birth weight and absence of prenatal care or late prenatal care
 - Haiti has the second-lowest per capita caloric intake in the world
 - 80% of the rural population lives below the poverty line
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Introduction (Cont.)

- Rural areas receive only 20% of public investment
 - Less than 40% of the rural areas had access to primary health care services
 - 73 % of all physicians, 67 % of all nurses, 35% of all health care facilities, and 52 % of all hospital beds are in West Department (Port-au-Prince)
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Introduction (Cont.)

- In rural areas, nurse auxiliaries in health stations called dispensaries and traditional birth attendants or midwives provide the bulk of health care to pregnant women
 - Objectives:
 - to examine the determinants of the likelihood of using prenatal care in rural and urban Haiti
 - conditional on any prenatal care use, to examine the determinants of the number of prenatal visits in rural and urban Haiti
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Sample and Data

- Data 2000 “Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-III)”
 - Institut Haitien de l’Enfance with the help of ORC Macro International
 - The EMMUS-III is the third in a series that has been conducted every five years since in 1987
 - The EMMS-III surveyed 9,595 households
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Sample & Data (Cont.)

- A two-stage sampling procedure
 - The 9 departments divided into 19 urban and rural strata and the metropolitan area of Port-au-Prince
 - Trained Haitian nationals conduct face-to-face interviews in Creole
 - The survey incorporated a community questionnaire, a household questionnaire, a men's questionnaire, and a women's questionnaire
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Sample & Data (Cont.)

- Analysis based on childbearing-age women (ages 15 to 49) who reported having given birth during the past three years before the interview date
 - A total of 3,436 women
 - 70 percent in rural areas
 - 30 percent in urban areas
 - Appended community questionnaire
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Empirical Models and Estimation Issues

- Health production aspects of human capital theory
 - Pregnant women consume health care not for its direct pleasure, but for the effect that health care has on health status, and consequently, on well being of both mothers and expected newborns
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Empirical Models and Estimation Issues (Cont.)

- Use of Two-Part Econometric Model
 1. Participation Component or “hurdle component” identifies which factors determine the decision to seek any care (Logistic Model)
 2. “levels component” determines repeated visits among women who had at least one visit (truncated negative binomial) in STATA
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Summary Statistics


Variable	Rural (N=2,392)		Urban (N=1,044)	
	Means	S.E.	Means	S.E.
Prenatal Care Use (%) **	73.58	NA	87.07	NA
Cond. Prenatal Visits **	3.84	2.15	5.14	2.66
Age15_24 (%) **	29.10	NA	33.72	NA
Age25_34 (%)	43.02	NA	46.17	NA
Age35_49 (%) **	27.88	NA	20.11	NA
No Education (%) **	46.95	NA	20.88	NA
Primary Education (%)	45.90	NA	44.54	NA
Sec. Education (%) **	7.15	NA	34.58	NA
Protestant (%)	39.13	NA	37.74	NA
Catholic (%)	51.96	NA	53.07	NA
Atheist (%)	8.90	NA	9.20	NA
Married (%) **	90.01	NA	82.95	NA
Kids Under 5 in Hhold **	2.00	1.00	1.64	0.95
Age at First Birth (yrs) **	20.39	NA	21.09	NA

Summary Statistics

Variable	Rural (N=2,392)		Urban (N=1,044)	
	Means	S.E.	Means	S.E.
Ever Had an Abortion	13.71	NA	12.16	NA
Ever Used Contraception **	48.41	NA	63.51	NA
Pregnancy Wanted **	37.88	NA	43.77	NA
Employed Past 12 Months **	56.40	NA	48.75	NA
Body Mass Index **	2,193	340	2,361	419
Smoker	4.98	NA	4.02	NA
Aware of Where to Go for Pregnancy Complications **	90.68	NA	94.64	NA
Partner No Education **	42.73	NA	18.35	NA
Partner Primary Education**	42.39	NA	33.03	NA
Partner Sec. Education **	14.88	NA	48.61	NA
Family Support	46.36	NA	46.93	NA
Dist. to Nearest Hosp. (km) **	28.05	25.18	9.31	17.90
Dist. to Nearest clinic (km)**	22.20	24.73	5.90	9.28
Road Problems (%) **	48.66	NA	20.11	NA




Results & Conclusions

- Pearson goodness-of-fit of the logistic model for mothers in rural Haiti ($p = 0.57$) and in urban Haiti ($p = 0.15$)
 - Women in rural Haiti were significantly less likely to use prenatal care, compared to mothers who lived in cities
 - Estimated at the means values of the control variables, the expected probability of using prenatal care services in rural Haiti was 77.16 percent, compared to 85.83 percent in urban Haiti
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Results & Conclusions

- Among women users of prenatal care, mothers in rural Haiti used an estimated average of 3.8 prenatal, compared to 5.1 visits for those in urban Haiti
 - Overall, access in Haiti compared favorably to the average of 68 percent of all mothers in developing countries
 - WHO recommends an average of 4 prenatal care visits
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Results & Conclusions

- Overall, education level of both mothers and their partners was found an important predictor of the decision to seek prenatal care services in both urban and rural Haiti
- We found that travel time and distance to dispensaries in rural areas constituted substantial barriers to repeated prenatal visits.
- We did not model other key elements of effective prenatal care such as timing of first visit and use of vitamins supplement



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