PAA Extended Abstract

Prenatal Care among Immigrant and Racial-Ethnic Minority Women in a New Immigrant Destination: Exploring the Impact of Immigrant Legal Status

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[1] The author wishes to acknowledge that this research is supported through a grant from the Russell Sage Foundation.

Introduction

Utilization of prenatal care, one of the foremost advances in obstetrics in the past century (Healy 2006), has been shown to vary widely across the racial-ethnic status, socioeconomic, and cultural backgrounds of mothers. Immigrant women, who constitute a rising share of all mothers in the U.S., and whose proportional increase has been especially remarkable in new immigrant gateway communities (Saenz 2006), display particularly low levels of prenatal care utilization in some settings. Scholars in social science and public health have made important strides in delineating racial-ethnic and nativity differences in healthcare access, including prenatal care utilization. Owing to data limitations, the legal status of immigrants, although of obvious relevance for healthcare access and utilization, has rarely been directly incorporated into analyses of this kind. This paper takes advantage of a unique data source, to investigate whether prenatal care utilization varies across native born racial-ethnics, the foreign born, and among the foreign born, those documented, undocumented, and with uncertain legal status.

Our analyses are motivated, in part by the policy implications posed by the changing demographics of births in Utah in recent years. In the most recent year for which data is available (2007) 22 percent of births were to women who were either Hispanic and/or immigrants. A full 11% of births in Utah in 2007 were to foreign born Latinas. Both figures represent approximately a doubling over figures from 1987. The importance of prenatal care as an outcome is posited to extend beyond enhanced health outcomes. In the words of Shiono and Behrman (1995:10), "a number of benefits accrue from the receipt of these services which do not relate to the prevention of low birth weight." Chief among these benefits is a form of integration into the healthcare system which improves the likelihood of subsequent preventive care and heightens access to social services for mothers and children (Frisbie et al. 2001). For instance, if a woman without a regular care provider has obtained a PNC provider, that provider will likely be able to point the way to other providers, in particular those who serve low-income, uninsured or minority populations, who will see the mother and her newborn for post-natal care, vaccinations, and other health services. PNC also acts as a vehicle for enrolling pregnant women into nutrition and other health promotion programs, thus contributing to longer term, preventive care utilization by mothers and children (Alexander et al 1999; Butz et al 1993). PNC visits, then, can provide the foundation for forming a social network and information base to promote future health and healthcare access, especially in settings where there are significant obstacles to healthcare for the socially and economically disadvantaged.

Theoretically, our objective is to explore how immigrant integration impacts upon use of healthcare systems and health outcomes. In preliminary investigations (as shown below), we have considered how parental background, especially immigrant legal status, and characteristics of neighborhoods, especially the concentration of immigrant populations and share living in poverty, impact upon prenatal care access, on the first hand, and low birth weight, on the second hand. For the foreign born, legal status remains a poorly understood, but likely a highly salient, factor differentiating access to healthcare, in particular prenatal care. Being unauthorized is particularly compromising because it limits, if not precludes, access to public health assistance programs, and circumscribes employment positions and the ability to make claims on public institutions (Thamer et al. 1997). Furthermore, the status of undocumented often generates a marginalized "life in the shadows" as efforts are made to limit contact with institutions and agencies that could jeopardize one's residence in the U.S. Our logic, based on theories of immigrant incorporation, is that although undocumented women are likely to be particularly limited in accessing health care, including prenatal care, due to limits in local knowledge, health

insurance coverage, and social and economic resources. However, institutional access should be made relatively more open to women who encounter and participate in the Utah driver privilege program, such that undocumented mothers who have obtained a driver privilege card will be similar to their documented immigrant counterparts. We also consider how place of residence, which serves as a proxy for socioeconomic status of neighborhoods and delineates immigrant concentration in neighborhoods, may make mothers more or less integrated into the societal mainstream and hence more or less likely to access early and adequate prenatal care.

As mothers have been conceived of as gatekeepers for their children's health (Case et al. 2005) we are quite interested in the health behaviors taken by mothers in preparing for the birth of their children. Because of institutional barriers, including those that are social, economic and cultural, mothers from more marginalized social groups tend to be less likely to receive early and adequate prenatal care, which in turn impacts upon infant health outcomes, complications of labor and delivery, and potentially mothers' and children's knowledge of and access to health care resources more generally.

Data and Methods

In this paper we draw upon the Utah Population Database, a unique, comprehensive linked system of vital and other administrative records, in order to analyze prenatal care utilization within a recent cohort of births to mothers residing in the state of Utah, a pre-emerging immigrant gateway in the U.S. intermountain west. Our analyses focus simultaneously on the racial-ethnic, nativity and legal status of infants' mothers as factors influencing access to prenatal care. Details on maternal, paternal and infant characteristics are obtained from birth certificates for all births occurring in the state of Utah between 2000 and 2007. Among foreign-born mothers we draw upon state administrative records, specifically Driver's privilege cards made available to undocumented migrants in the state, to delineate mothers who are undocumented from those who are documented and those with uncertain legal status.

Our main analyses consist of logistic regression analyses of two dichotomous measures of prenatal care adequacy – whether the mother had a first prenatal care visit in the first trimester (or later), or whether prenatal care utilization was adequate (or inadequate) as judged on the Kotelchuck Index of prenatal care adequacy. The Kotelchuck Index is calculated according to the gestational age at delivery, the date of prenatal care initiation, and the number of prenatal visits obtained during pregnancy. These values are combined to indicate whether a mother obtained adequate, intermediate, or inadequate prenatal care during pregnancy, relative to the American College of Obstetrics and Gynecologists recommendations (ACOG) (Kotelchuck 1994). Inadequate utilization is defined as either late initiation (after the fourth month) and/or less than 50% of ACOG-recommended visits (ACOG 1974).

Preliminary Results

Our analysis focuses on the population of singleton live births to mothers between 2000 and 2007 in the State of Utah. Characteristics of mothers, fathers and births are as reported on birth certificates in the Utah State vital registry and accessed through the UPDB. Preliminary logistic regression results are shown in Table One. In the interest of brevity, we present only the results, in the form of odds ratios, for the correlates of inadequate prenatal care.

[Insert Table One about here]

Briefly, our results indicate that it is important to disaggregate the expansive categories of "Hispanic" and "foreign born" so as to better understand processes of healthcare utilization and health behavior that account for the Hispanic epidemiological paradox. In particular, we find that immigrant mothers' legal status is an important factor (in addition to country of origin and a host of other social demographic factors) influencing health status and health care access.

Discussion

These results will be discussed in light of public policies, such as programs that extend driver privileges to undocumented immigrants, which aim to integrate migrants into destination communities.

Table One. Logistic Regression Analysis: Predictors of *Inadequate* Prenatal Care among Mothers in Utah, 2000-2007
Source: Utah Population Database

	Model 1 - Parent Characteristics Only	Model 2 - Parent & Block Group Characteristics	Model 3 - Nativity/Ethnicity & Community Interacted Model
	Odds Ratio/ [Robust SE]	Odds Ratio/ [Robust SE]	Odds Ratio/ [Robust SE]
US Born, Non-Hispanic White (omitted)	1.00	1.00	1.00
	--	--	--
US Born, Hispanic	1.53***	1.46***	1.53***
	[.05]	[.05]	[.08]
Foreign-born Hispanic with Regular DL (DOCUMENTED)	1.42***	1.25***	1.59***
	[.05]	[.06]	[.11]
Foreign-born, Non Hispanic	2.05***	2.06***	2.11***
	[.06]	[.08]	[.12]
US Born, Non Hispanic Black	2.77***	2.03***	3.14***
	[.31]	[.36]	[.91]
US Born, Non Hispanic American Indian	2.22***	1.97***	2.02***
	[.16]	[.23]	[.42]
US Born, Non Hispanic, Asian/Pacific Islander	2.76***	3.38***	2.37***
	[.25]	[.39]	[.45]
Foreign-born, Hispanic, with no DL/DPC (UNCERTAIN/LIKELY UNDOCUMENTED)	2.48***	2.22***	3.37***
	[.10]	[.11]	[.23]
Foreign-born, Hispanic, with Driver Privilege Card (UNDOCUMENTED)	1.43***	1.31***	1.79***
	[.06]	[.06]	[.13]
Mother's Age at Birth: <=19	1.17***	1.16***	1.16***
	[.03]	[.04]	[.04]
Mother's Age at Birth: 20-34 (omitted)	1.00	1.00	1.00
	--	--	--
Mother's Age at Birth: 35 & Older	1.00	.94	.94
	[.03]	[.04]	[.04]
Previous Live Births: Zero	.64***	.67***	.67***
	[.01]	[.02]	[.02]
Previous Live Births: One	.75***	.76***	.76***
	[.01]	[.01]	[.02]
Previous Live Births: Two or more (omitted)	1.00	1.00	1.00
	--	--	--
Number of Previous Stillbirths/Terminations: Zero (omitted)	1.00	1.00	1.00
	--	--	--
Number of Previous Stillbirths/Terminations: One or more	.83***	.84***	.84***
	[.01]	[.02]	[.02]
Smoking During Pregnancy: None (omitted)	1.00	1.00	1.00
	--	--	--
Smoking During Pregnancy: Some reported	1.84***	1.80***	1.78***
	[.05]	[.06]	[.06]
Smoking During Pregnancy: Missing/Unknown	1.19	.88	.89
	[.24]	[.21]	[.22]
Alcohol During Pregnancy: None (omitted)	1.00	1.00	1.00
	--	--	--
Alcohol During Pregnancy: Some reported	1.45***	1.33***	1.33***
	[.08]	[.09]	[.09]
Alcohol During Pregnancy: Missing/Unknown	1.36	1.77**	1.75**
	[.25]	[.37]	[.37]
Mother's Marital Status at Time of Birth - Not Married (omitted: Married)	1.57***	1.48***	1.48***
	[.04]	[.04]	[.04]
Mother's Educational Attainment - 0-9 years	1.23***	1.21***	1.22***
	[.04]	[.05]	[.05]
Mother's Educational Attainment - 10-12 years	1.15***	1.15***	1.15***
	[.02]	[.03]	[.03]
Mother's Educational Attainment - 13-16 years (omitted)	1.00	1.00	1.00
	--	--	--
Mother's Educational Attainment - Greater than 16 years	.97	.99	.99
	[.04]	[.04]	[.04]
Mother's Educational Attainment - Missing Information	1.18**	1.24**	1.24**
	[.07]	[.09]	[.09]
Mother's Labor Force Status Prior to Birth - Employed (omitted)	1.00	1.00	1.00
	--	--	--
Mother's Labor Force Status Prior to Birth - Student	1.24***	1.27***	1.26***
	[.05]	[.07]	[.07]
Mother's Labor Force Status Prior to Birth - Homemaker	1.35***	1.39***	1.39***
	[.02]	[.03]	[.03]
Mother's Labor Force Status Prior to Birth - Missing Information	1.54	1.10	1.08
	[.40]	[.43]	[.45]
Father's Educational Attainment - 0-9 years	1.39***	1.32***	1.33***
	[.05]	[.06]	[.06]
Father's Educational Attainment - 10-12 years	1.27***	1.26***	1.26***
	[.03]	[.04]	[.04]
Father's Educational Attainment - 13-16 years (omitted)	1.00	1.00	1.00
	--	--	--
Father's Educational Attainment - Greater than 16 years	.98	.94	.95
	[.03]	[.03]	[.03]
Father's Educational Attainment - Missing Information	1.58***	1.41***	1.41***
	[.07]	[.08]	[.08]

Table One (Continued). Logistic Regression Analysis: Predictors of *Inadequate* Prenatal Care among Mothers in Utah, 2000-200
Source: Utah Population Database

	Model 1 - Parent Characteristics Only	Model 2 - Parent & Block Group Characteristics	Model 3 - Nativity/Ethnicity & Community Interacted Model
	Odds Ratio/ [Robust SE]	Odds Ratio/ [Robust SE]	Odds Ratio/ [Robust SE]
% of persons below poverty threshold		1.79***	2.26***
		[.17]	[.28]
% of persons that are foreign born		1.95***	3.88***
		[.21]	[.61]
% below poverty threshold * US Born, Hispanic			.74
			[.27]
% below poverty threshold * Foreign-born Hispanic with Regular DL			.29**
			[.13]
% below poverty threshold * Foreign-born, Non Hispanic			.57
			[.20]
% below poverty threshold * US Born, Non Hispanic Black			1.97
			[.4.33]
% below poverty threshold * US Born, Non Hispanic American Indian			.29
			[.31]
% below poverty threshold * US Born, Non Hispanic, Asian/Pacific Islander			2.47
			[3.06]
% below poverty threshold * Foreign-born, Hispanic, with no DL/DPC			.78
			[.28]
% below poverty threshold * Foreign-born, Hispanic, with DPC			.41*
			[.16]
% foreign born in block group * US Born, Hispanic			0.74
			[.26]
% foreign born in block group * Foreign-born Hispanic with Regular DL			.44*
			[.18]
% foreign born in block group * Foreign-born, Non Hispanic			1.08
			[.39]
% foreign born in block group * US Born, Non Hispanic Black			.01*
			[.03]
% foreign born in block group * US Born, Non Hispanic American Indian			3.78
			[4.02]
% foreign born in block group * US Born, Non Hispanic, Asian/Pacific Islander			4.96
			[5.67]
% foreign born in block group * Foreign-born, Hispanic, with no DL/DPC			.07***
			[.02]
% foreign born in block group * Foreign-born, Hispanic, with DPC			.25***
			[.09]
Observations	387,994	249,711	249,711
Pseudo R2	0.093	0.095	0.096
Robust standard errors in brackets			

* significant at .05; ** significant at .01; *** significant at .001