

# SOCIAL INEQUALITIES IN PERINATAL OUTCOMES: EMILIA-ROMAGNA REGION, 2005-2009

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## INTRODUCTION

Disparities in pregnancy may have effects in adult life. Family' social gaps are associated with some neonatal conditions. It is difficult to identify such mechanisms, also only referring to perinatal outcomes, but Birth Certificate allows Italian Regions to study this relevant moment for health.

## OBJECTIVE

To study inequalities in birth pathways between mothers born in foreign country and those born in Italy; by educational level among native mothers; between main country of birth among immigrants mothers.

## METHODS

Birth Certificates were selected to get a high statistical power, using the five-year period 2005-2009 and deliveries registered in the region. Only single newborns were considered in the analysis (N=195,862). Logistic regression was performed, controlling for mother's age, parity and marital status, in addition to mothers' education level and country of birth. Outcomes regard pregnancy (such as number and timing of visits and hospital accesses), delivery (caesarean) and newborn (low weight, preterm and death):

	Year	N°
	2005	36,386
	2006	38,403
	2007	39,225
	2008	40,737
	2009	41,111
	<b>Total</b>	<b>195,862</b>

Selection:  
exclusion of multiple deliveries (1,4%)

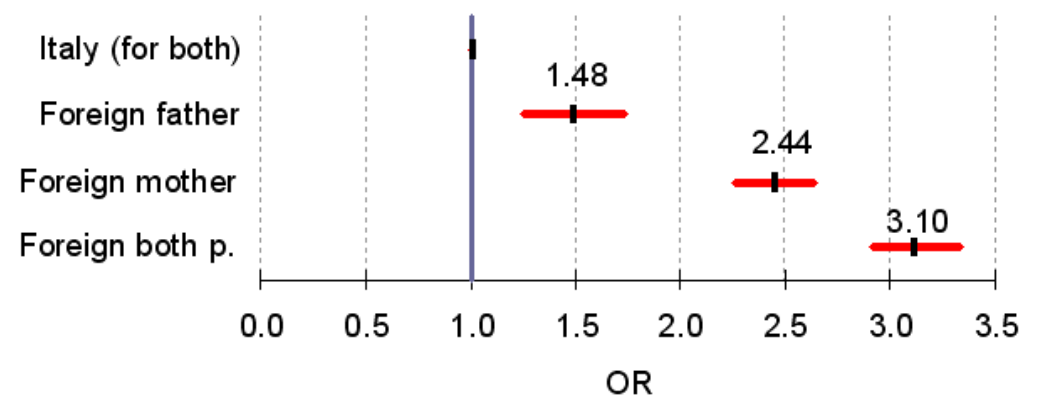
**Study base:** →

Outcomes		Sociodemographic indicators			
	Indicators	%	Indicator	class	%
Pregnancy	Less than 4 visits during pregnancy	4.4	Maternal age	<25 aa	11.5
	First visit after 11 weeks g.a.	14.0		25-34 anni	58.7
	No prenatal invasive exams (age>35y)	43.6		>34 anni	28.8
	Public healthcare usage in pregnancy	34.7	Education level (schooling years)	high (>16)	22.5
Delivery	Hospital admission during pregnancy	7.1		medium (14-16)	45.5
	Caesarean delivery	29.1		low (<13)	32.0
Newborn	Low weight newborn (<2500 g)	5.2	Occupational condition of mothers	Employed	70.3
	Very low weight newborn (<1500 g)	0.8		housewife	24.2
	Preterm newborn (<37 weeks g.a.)	6.6		unemployed	4.1
	Dead newborn	0.2		other	1.4
			Marital status	Married	71.4
				nubile	28.6
			Parents birth country	Italy (for both)	72.5
				Foreign father	2.6
				Foreign mother	7.9
				Foreign both p.	17.0
			Parity	First	54.1
				following	45.9

## RESULTS

In comparison to mothers (and father) born in Italy, non-native ones have higher risks regarding indicators of minor assistance and slightly higher risk of preterm birth, while risk of hospital admission during pregnancy and of caesarean delivery is slightly lower [1].

For insufficient number of visit during pregnancy and parents birth country:



Among mothers born in Italy, low education level (schooling years: SY<13) is associated with minor assistance in pregnancy (e.g.: less than 4 visits; low Vs. high education: OR=1.41, 95% CI: 1.26-1.59), higher risk of having caesarean delivery and preterm newborn (OR=1.38, 95% CI: 1.29-1.48). Moreover, there is a trend in relations observed in three categories of education (low, medium, high≧[SY>16]) considered. Lastly, among main mothers' country of birth there are various differences; in particular Sub-Saharan mothers have an higher risk of caesarean delivery (OR=1.67; 95% CI: 1.56-1.79) and of preterm, together with mothers born in Sub-continental Asia (OR: 1.79, CI 95%: 1.60-2.00; OR: 1.54, CI 95%: 1.37-1.74).

## CONCLUSIONS

The results highlight already known differences between host and immigrant populations and differences by country of birth among mothers also clearly stand out. A statistically significant relation between Italian mothers' education and negative indicators analyzed has to be noted. To sum up, country of origin and social characteristics of mothers are both relevant to birth pathways.

[1] Vv. Aa. "La nascita in Emilia Romagna", 7th report, 2010:  
<http://www.regione.emilia-romagna.it/sas/cedap/pubblicazioni.htm>