

# HAITIAN TERM NEWBORNS PRESENT LOWER BIRTH WEIGHT THAN CHILEAN TERM NEWBORNS. DO LOCAL FETAL GROWTH CHARTS APPLY FOR MIGRANT POPULATION?

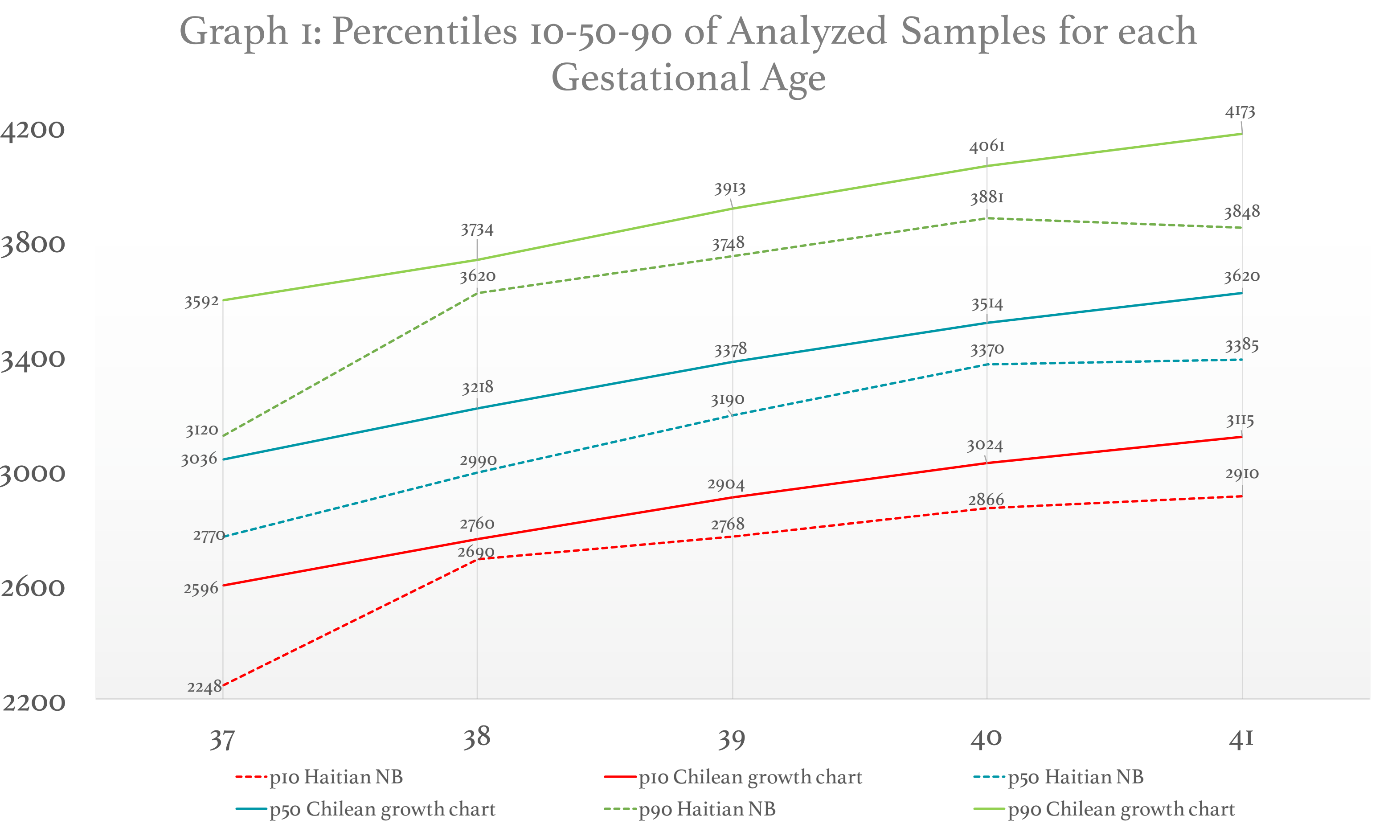
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**INTRODUCTION:** The immigrant population in Chile reached a total of 7% in 2017. The estimated Haitian population was 104.782 last year, it increased 138% compared to 2016. 53% correspond to women of childbearing age. The migrants bring their previous condition of health; personal pathological background, risk factors, hereditary component and local epidemiology, among others, which can affect the birth weight of their newborns (NB).

**OBJECTIVES:** To compare Haitian term NB birth weight to our local fetal growth chart (Alarcón Pittaluga chart).

**METHOD:** An observational, cross-sectional and analytical study was performed. All Haitian alive term NB (between 37 and 41 weeks) delivered at our obstetric unit (Hospital San Juan de Dios, Santiago, Chile) from January 2016 and March 2018 was included. Twin pregnancies were excluded. Birth weights were recorded and compared to our local fetal growth chart. The average weight and percentiles 10-50-90 were compared at the same gestational age (GA). Student's t-test was applied and STATA 12.0 software was used for statistical analysis.

**RESULTS:** There were 252 Haitian alive term newborns born in the period studied. The average weight was 3119 g. (SD 434 g). 33,7% of the deliveries occurred at week 39. In every analyzed percentile (10-50-90) at 37, 38, 39, 40 and 41 weeks, Haitian NB weights were lower than Chilean NB (graph 1).



The average birth weight at 37, 38, 39, 40 and 41 weeks was significantly lower in Haitian newborn than Chilean average ( $p < 0.05$ ) (table 1). The percentage of fetal growth restriction (FGR), applying our local fetal weight chart (Alarcon Pittaluga chart) to this migrant population, was 22.6% (table 2)

Table 1: Distribution of newborn weight for both samples - Haitian NB and Chilean fetal weight chart (Alarcón - Pittaluga chart) per gestational age.

Gestational Age (weeks)	N	Average Sample 1 Chilean AP chart (grams)	Average Sample 2 Haitian NB (grams)	P	CI 95%
37	27	3055,4	2722,4	0,000025	[2588,4 - 2856,3]
38	41	3238,0	3071,6	0,016	[2937,6 - 3205,5]
39	85	3398,3	3204,5	0,00006	[3124,3 - 3284,7]
40	72	3531,6	3384,3	0,023	[3291,1 - 3477,4]
41	27	3633,4	3364,8	0,02	[3204,0 - 3525,5]

Table 2: The percentage of fetal growth restriction (FGR), applying Chilean fetal weight chart (Alarcon Pittaluga chart) to the Haitian sample, per gestational age.

Gestational Age (weeks)	N	N <p10 Chilean AP chart	% FGT (<p10 Chilean AP chart)
37	27	7	25,9%
38	41	9	21,9%
39	85	17	20,0%
40	72	15	20,8%
41	27	9	33%

**CONCLUSION:** Haitian term newborns present significantly lower birth weight than Chilean term newborn. This study suggests that our local fetal weight chart over diagnose FGR in term Haitian singleton pregnancies; hence it is no suitable for this population. This study provides an approximation to the birth weight of Haitian newborns, which can be useful as a basis for future research related to the construction of fetal growth charts suitable for Haitian population in Chile.

