

# AIM 2019

**Title:** Health Insurance Status as A Predictor of Pediatric Weights-For-Age

**Category:** Global Health Education, Health Disparities, Pediatrics

**Type of Presentation:** Oral Presentation

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**Background:** Medical Students have limited opportunity to provide site-specific research impact or engage in scholarship on a short-term global medicine experience. At the time of this study, Ghana had well-child visits covered under a popular insurance plan. Using demographic data on a convenience sample of consecutive patients seeking primary care in Ghana, researchers evaluated whether health insurance made a difference in pediatric weights-for-age utilizing the WHO pediatric male and female growth curves. Researchers hypothesized that there would be a difference in insured versus uninsured pediatric weights-for-age and that male children would have less deviation from the WHO growth curve compared to female counterparts.

## Methods

Researchers obtained sex, age, weight, and insurance status information on a convenience sample of consecutive patients aged 0-24 months and multiple hospitals in Accra, Ghana. Patients over 24 months were excluded from the study as the WHO growth curves only included standards up to 24 months. IRB approval was waived as this study was observational without intervention. Photographs were obtained with consent.

## Results

Mean weight deviation for the male uninsured group was -0.84 kg. Mean weight deviation for the male insured group was +0.97 kg. Mean weight deviation for the female, uninsured group was -0.62 kg. Mean weight deviation for the female, insured group was -0.48 kg.

## Discussion

Medical students can have site-specific research impact and engage in scholarship on a short term global medicine experience. The data from this study suggest that pediatric patients with insurance demonstrate a less-negative deviation from their mean weights-for-age. This is an important observation since weights that fall under the mean significantly increase a child's risk

for comorbidities and death. Male patients demonstrated less deviation from the WHO growth curve compared to their female counterparts. The study is limited due to power and sampling.

**Special Notes:** We were invited to submit this abstract by the conference planning committee

**Figures:**

## **Figures:**

**Table 1.a – Collected Male Data**

<u>Sex</u>	<u>Insurance</u>	<u>Age (months)</u>	<u>Wt (kg)</u>	<u>Deviation (kg)</u>
M	No	24	10.8	-1.4
M	No	24	11.5	-0.7
M	No	5	7	-0.5
M	No	4	5.7	-1.3
M	No	12	10.4	+0.8
M	No	22	10	-1.8
M	No	9	7.9	-1.0
M	Yes	17	12	+1.3
M	Yes	0.5	4.4	+0.7
M	Yes	2	6.4	+0.8
M	Yes	14	10.2	+0.1
M	Yes	24	13	+0.8
M	Yes	18	12	+1.1
M	Yes	15	14	+3.7
M	Yes	12	11	+1.4
M	Yes	24	11	-1.2

**Table 1: a)** collected Ghanaian male pediatric patient data;  
**b)** collected Ghanaian female pediatric patient data; **c)** calculated average weight deviation from WHO mean weight for age

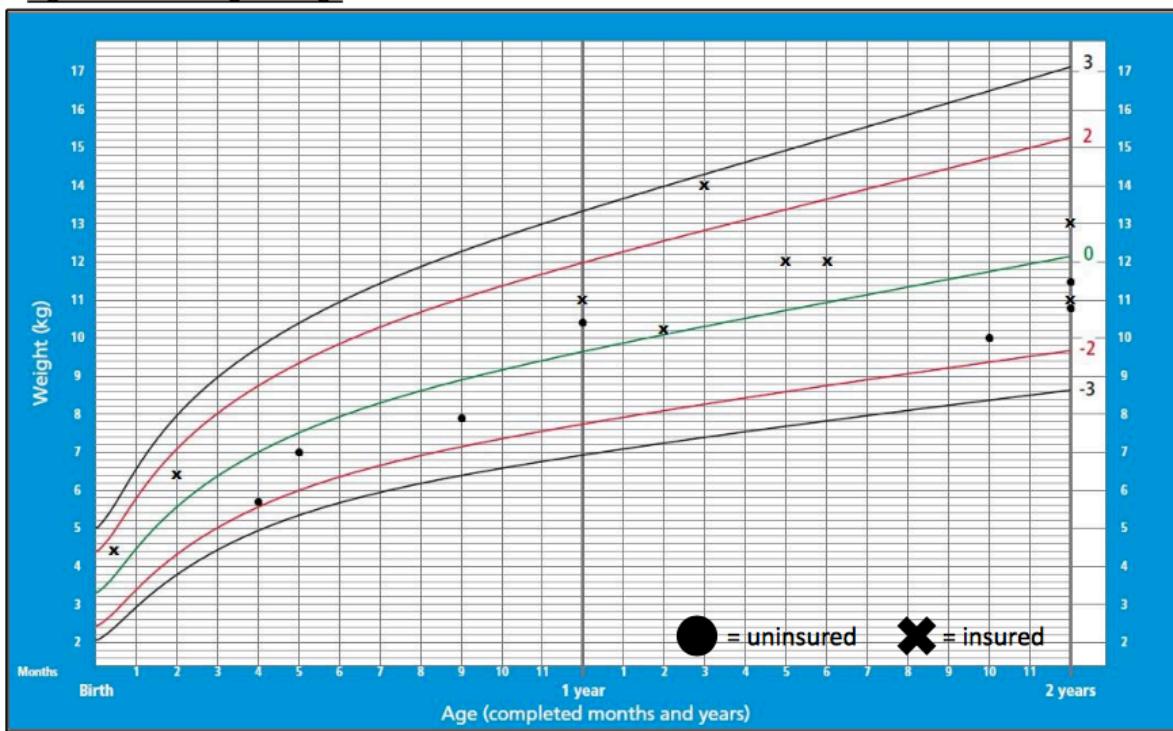
**Table 1.b – Collected Female Data**

<u>Sex</u>	<u>Insurance</u>	<u>Age (months)</u>	<u>Wt (kg)</u>	<u>Deviation (kg)</u>
F	No	20	6.2	-0.2
F	No	3	5.7	+0.2
F	No	6	8.2	+0.9
F	No	24	11	-0.3
F	No	9	7.9	+2.8
F	No	18	7.5	-1.4
F	No	4	6.6	-2.7
F	No	15	8.2	-4.4
F	No	14	13	-0.5
F	Yes	1.75	4.9	0.0
F	Yes	7	6.1	-1.5
F	Yes	23	8.7	+2.0
F	Yes	12	11	-2.4

**Table 1.c – Calculated Mean Deviation**

<u>Sex</u>	<u>Insurance</u>	<u>Mean Deviation (kg)</u>
M	No	-0.84
M	Yes	+0.97
F	No	-0.62
F	Yes	-0.48

**Figure 1 – Male Weight for Age**



**Figure 1:** Male weight plotted against age for insured and uninsured patients on WHO growth standards<sup>1</sup>.

**Figure 2 – Female Weight for Age**



**Figure 2:** Female weight plotted against age for insured and uninsured patients on WHO growth standards<sup>1</sup>.