

(60.6 vs. 49.6%), multiples (6.1 vs. 2.1%), prematurely born (67.7 vs. 11.7%), weighed less than 2500 grams (71.2 vs. 12.0%), were born in a breech position (26.1 vs. 3.5%), and were delivered by caesarean section (26.5 vs. 18.7%). Their mothers were more often younger than 20 years and 35 years and older [OR=1.8], more often had a Maroon, Creole or Indigenous ethnicity [OR's respectively 1.3, 2.1, 2.5], and were less often Hindustani [OR=0.8] or Javanese [OR=0.3]. Low birth weight, premature birth and a breech position were independently associated with a 6.6, 4.9 and 3.8 times increased risk of neonatal death, respectively. In addition, most babies (74%) died in the early neonatal period and within 24 hours after birth (34%), due to respiratory insufficiency as a result of infant respiratory distress syndrome (IRDS), which accounted for 53% of deaths, followed by sepsis/infection (24%) and congenital malformations (19%).

Interpretation: Neonatal mortality in Suriname is high compared with more developed countries (5‰) but is comparable with other countries in the Caribbean region (19‰). Early neonatal death accounts for a large proportion of neonatal mortality in the multi-ethnic society of Suriname. Two-thirds of these infants are born prematurely and the timing of death is often in the first 24 hours after birth. More than half of the newborns died as a result of respiratory insufficiency. It is imperative that further measures are taken to reduce neonatal mortality. The initiation of a national neonatal intensive care unit would be a major step forward to achieve this goal.

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Examining the link between prevalence of severe early childhood caries and self-reported oral health and quality of life outcomes

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Program/Project Purpose: Children in developing nations are vastly affected by malnutrition and tooth decay with rates of tooth decay increasing over the last several years. Oral health diseases have affected approximately 2.1 billion individuals worldwide, yet little attention has been given to improving oral health. Oral diseases negatively impact child nutrition, child growth, and child well-being. Many children in Ecuador are severely affected by oral diseases, so we aimed to work with different communities within the country in attempts to evaluate the effectiveness of public health interventions developed by Dr. Sokal-Gutierrez.

Structure/Method/Design: The interventions focus on reducing child malnutrition and oral diseases by educating communities, distributing toothbrushes and toothpaste, and providing fluoride varnish. We additionally surveyed parents and screened for malnutrition and childhood caries. We referred those children that had severe tooth decay to dentists at the Ministry of Health to ensure appropriate treatment. Over the past four years, this project has worked with seventeen different indigenous Kichwa tribes in the amazon jungle and has seen hundreds of children aged 6 months to 6 years.

Outcomes & Evaluation: In 2011, 732 children participated and 80.7% had tooth decay with an average of 6.80 decayed teeth per child. Two years later 78% of 700 children still had some tooth decay, but the average number of decay per child decreased to 5.64. In 2011

and 2013, the percentage of children with severe mouth pain was 25.03% and 25.20%, respectively. Malnutrition rates were between 30-40% during these years as well. The percentage of children with tooth decay, malnourishment, and mouth pain are very high due to a collection of risk factors. These include a lack of knowledge, increased access to junk food, lack of necessary resources such as toothbrushes and toothpaste, and poor practices from both parents and children. We hope to minimize those risk factors and poor outcomes. Our primary analysis, however, will focus on examining the relationship between prevalence of early childhood caries and malnutrition on self-reported oral health outcomes and quality of life. We also partnered with the Ecuadorian USFQ dental and public health school and reached out to 200 more children aged 6 months to 15 years in mountainous communities with a similar interventional approach.

Going Forward: Even though we worked with specific populations, we believe malnutrition and tooth decay continue to be a problem for children all over developing nations and developed nations alike. As access to and consumption of unhealthy and sugary foods become increasingly common in developing nations, tooth decay and malnutrition rates will continue to rise and negatively impact child health rise unless successful interventions are developed to combat this.

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Livestock ownership and child stunting in Eastern Africa: an analysis of national survey data

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Background: Stunting in childhood (linear growth failure) has pervasive consequences that hinder not only individual development but impact population health and economic improvement. Rural areas shoulder an unequal burden of stunting, and One Health approaches may represent an innovative opportunity to addressing stunting in these areas. Livestock ownership may promote child growth by providing dietary diversity and wealth, or suppress it through zoonotic disease transmission, but the risk-benefit relationship is unclear. This study sought to evaluate whether national cross-sectional data show a relationship between livestock ownership and growth stunting.

Methods: This study was a regional analysis of the most recent Demographic and Health Survey cross-sectional datasets from three East African countries, including Kenya (2008-2009), Ethiopia (2011), and Uganda (2010), restricted to children under 5 years living in rural areas. We calculated a Tropical Livestock Unit (TLU) score, which combines multiple species of livestock into a single weighted measure to represent the amount of livestock owned. The association between family livestock ownership and stunting was assessed using a log-binomial model adjusted for wealth and region, and was stratified by diarrheal illness, animal-sourced foods, region within country, and wealth index to identify high risk subgroups.

Findings: This analysis included the households of 8720 children from Ethiopia, 2214 children from Uganda, and 4203 children from Kenya. Stunting was highly prevalent in each country, ranging from 23.4% in Kenya to 38.7% in Ethiopia. A TLU unit increase in livestock ownership was not significantly associated with stunting prevalence in Kenya or Uganda, but was associated with a 2% decrease in stunting prevalence in Ethiopia (Ethiopia- PR 0.98,