Access to Antenatal Care and Hospital Delivery among Haitian Migrant Mothers within Batey Communities in La Romana, Dominican Republic

Global Public Health Capstone | June, 2017
Chandler Ford, MS2

Quinnipiac
Frank H. Netter MD
School of Medicine
Conflict of Interest Disclosure

I have no conflicts of interest to disclose.
Background

• Sugar industry in Dominican Republic (DR) is the nation’s largest employer

• 1930’s notable increase Haitian migration to DR with entry into the sugar industry

• Early 20th century construction of temporary housing began

• Trafficking of Haitian laborers across the border is widely acknowledged

• Currently, the average worker works 10-12 hours, 6 days per week

• Wages paid are based on ‘piece rate’ amount of tons cut
Background continued

• Batey communities currently house thousands of Haitian migrant workers and their families

• Many bateyes lack potable water, electrical power and permanent healthcare infrastructure

• Without citizenship or legal documentation many families are unable to secure public assistance

• In 2015 the World Health Organization reported a maternal mortality rate of 92/100,000 live births in DR

• Maternal mortality rates and health metrics specific to bateyes remains unknown
Objective

Evaluate potential barriers related to prenatal care and labor and delivery experiences that may be associated with increased maternal mortality risk among Haitian migrant mothers residing in the bateyes.
Methods: Data Collection

• Conducted qualitative interviews among adult mothers living in the bateyes who experienced 1 live birth <3 years with the use of a translator

• Access to the population granted through Good Samaritan Hospital outreach clinics

• Interviews conducted after clinic visits and took place in a community center or in the participants home upon invitation

• Interviews subsequently transcribed
Methods: Interview

Dual-part survey consisting of 50 questions translated to Haitian-Creole or Spanish

- Examined barriers related to access to antenatal care and labor and delivery
- Assessed baseline level of antenatal care within the bateyes in comparison with World Health Organization (WHO) Antenatal Care Guidelines
- Evaluated prevalence of hospital and home births
Results: Population Demographics

- 68 participants from 16 bateyes surrounding La Romana Province
- Average Age: 25 years
- Average number of children: 3 children
- Preferred Language Spoken: Haitian-Creole (n=53)
- Self Identified Nationality: Haitian (n=45)
Results: Antenatal Care Outcomes
Maternal & Fetal Assessment: Anemia, Asymptomatic Bacteruria and Fetal Anomalies

Batey Maternal and Fetal Assessment Outcomes

- WHO: Full blood count testing or on-site hemoglobin testing to assess for anemia
- WHO: Urine culture for diagnosing asymptomatic bacteriuria (ASB) or urine Gram staining
- WHO: One ultrasound scan before 24 weeks of gestation to estimate gestational age, improve detection of fetal anomalies and multiple pregnancies
Themes: Access to Maternal and Fetal Assessments

• High rate of maternal access to serum and urine analysis commonly attributed to:
  • Low cost of testing
  • Availability of testing at all reported hospitals/clinics

• Slightly lower rate of maternal access to ultrasonography commonly attributed to:
  • Higher cost of ultrasound testing
  • Availability of ultrasonography limited to select hospitals/clinics
  • Distance to site with ultrasonography capacity
Nutritional Intervention: Dietary Counseling and Supplementation

**Batey Nutritional Intervention and Supplementation Outcomes**

- **WHO:** Counseling on increasing daily protein to reduce low-birth-weight neonates

- **WHO:** Daily oral iron and folic acid supplementation with 30-60 mg iron, 0.4 mg folic acid

- **WHO:** Intermittent oral iron and folic acid supplementation with 120 mg iron and 2.8 mg folic acid, once weekly in populations with anemia
Themes: Access to Nutritional Counseling and Supplementation

• 47% (n=32) reported initiating prenatal vitamin use during their second trimester

• Second trimester initiation most commonly attributed to:
  • Delayed date of confirmed pregnancy
  • Inconsistent availability of vitamins from local provider
  • Distance to pharmacies
  • High cost of prenatal vitamins
## Gestational Age at First Confirmed Pregnancy Test

<table>
<thead>
<tr>
<th>WHO Guideline: 2.5 months</th>
<th>Batey Outcome: 4.5 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

### 1st Trimester
- Care ideally initiated by 10 weeks gestation
- Baseline evaluation of maternal health status
- Identification of higher risk pregnancies
- One visit recommended

### 2nd Trimester
- Ongoing assessments of maternal and fetal health
- Tracking of gestational weight gain
- Early fetal abnormality ultrasound screening
- Two visits recommended

### 3rd Trimester
- Group B Streptococcal testing
- Repeat Rh status, hemoglobin and hematocrit
- Assessment of fetal presentation
- Five visits recommended
Results: Hospital Delivery Prevalence
Batey Outcomes: Prevalence of Hospital Births

RESULTS: BIRTHING LOCATION

- 62 participants (91%) delivered in a hospital setting
- 45% (n=28) women gave birth at Salud Publica, Public Hospital in La Romana
- 54% (n=34) women traveled over 1 hour on the day of their delivery
- Most frequently reported mode of transportation was motorbike or public bus
MAP: BATEY PROXIMITY TO UTILIZED HOSPITALS
Themes: Hospital Preference

- Majority reflected preference towards hospital births due to improved “safety during delivery”
- Majority reported choosing hospital delivery setting prior to onset of labor
- Cost and distance were the leading factors that influenced specific hospital selection
- Reported cost varied greatly depending on hospital, intervention, and health insurance status
Batey Outcomes: Prevalence of Home Births

- 6 participants (9%) delivered at home
- Attributed their choice on delivery location to:
  - Sudden, unanticipated onset of labor despite prior decision to give birth in hospital (n=4)
  - History of home births (n=3)
  - No preference (n=2)

- Birthing attendant
  - Physician (n=1)
  - *Femsage*, Haitian midwife (n=2)
  - Family members (n=3)
Discussion

Strengths:

• Novel study conducted among resource limited migrant population
• Qualitative approach explored open-ended maternal experience
• Current health promoter system offers infrastructure to strengthen maternal health education and surveillance

Limitations:

• Convenience sample
• Only generalizable to women living in the bateyes surrounding La Romana
• No recent, validated baseline data on maternal health in the bateyes
• Responses were de-identified and not matched to medical records
Conclusion

- Observed discordance with specific WHO recommendations
- Barriers to access most commonly included geographic location and cost
- Warrants interventional studies addressing barriers to early initiation of prenatal care and access to supplementation in pregnancy
- Next Steps:
  - Continued research agenda (Kachenta Descartes)
  - Planned distribution of collaborative tri-fold pictorial prenatal education pamphlet
Acknowledgements:

Elizabeth Brownell, PhD, MA
Connecticut Children’s Medical Center

David R. Hill, MD
Rebecca Zucconi, MD

Stephanie Batson, BS, MS3
Dylan Levy, BS, MS4
Wendy Sewack, M.Ed.
Frank H. Netter MD School of Medicine
Quinnipiac University

Neededje Deetjien
Moises Sifren Juan
The Good Samaritan Hospital, La Romana DR
COMMUNITY MIGRANT MOTHERS

Participant portraits