Abstract

Design and methodology: Through a remote partnership with the on-site OBGYN and nurses, we conducted remote surveys (n=200) with pregnant mothers in Roatan, Honduras to understand regional, age, and biological trends in prenatal health. In addition, we conducted biweekly zoom meetings with the on-site coordinator, Nurse Peggy, to discuss updates to the facilities offered at the clinic as COVID-19 progressed.

Original data and results: Mothers participating in the survey had an mean age of 24.85 years, with 41.5% (83/200) of the participants as first-time mothers. 184 mothers had considered Clinica Esperanza as an option for birth, though 183 claimed they would be birthing at the local hospital. 38% (76/200) of the mothers were there for their first prenatal checkup, averaging at 17.304 weeks into their pregnancy. Looking specifically at first time mothers going in for their first checkup (29/83), their weeks into their pregnancy averaged higher at 18.913 weeks.

Objectives

- Determine target populations for educational, nutritional, and social public health interventions
- Determine geographic differences with prenatal data (weeks pregnant when first receiving prenatal checkup, age when pregnant, taking prenatal vitamins or classes, etc.)
- Determine if any attitudes surrounding Clinica Esperanza have shifted as COVID-19 spread across Roatan over the summer.

Methods

- Conducted 200 on-site surveys (by Clinic staff) with pregnant mothers scheduled for prenatal checkups at the clinic.
- Periodically met via zoom with Clinica Esperanza staff to understand the context of the changing health facilities available at the Clinic
- Coded answers to survey responses on Excel and R.
- Communicated with project team on overlap of projects and with delegation of tasks.

Results

The data described in Chart 1 is subject to some variability, as 19 of the 76 mothers going into their first checkup (6 of whom were first time mothers) did not know how many weeks pregnant they were. Additionally, one mother did not supply a geographic location, and was excluded from the data analysis in Chart 2. Chart 3 displays the percentage breakdown of types of mothers taking prenatal vitamins, with two mothers excluded. Overall, 77% (154/200) of the mothers received their prenatal vitamins from Clinica Esperanza.

Conclusion and Complications

Most mothers were taking prenatal vitamins (86.3%) and planned to give birth in a hospital or private-clinic (91.6%). For first-time mothers, the average 22.1 weeks into their pregnancy that they went in for their first prenatal checkup is a point of concern. A woman’s pregnancy is divided into trimesters: the first trimester is from week 1-12, and is widely considered the most important trimester for both fetal development and health of the mother. The first trimester is when most fetal body structure and organ development occur, and is when the mother’s own body is subject to major changes and fluctuations. Most birth defects and miscarriages occur in the first trimester, which is why the average first-time mother coming in for her first prenatal checkup when she is well into her second trimester is a point of concern for the clinic. However, our analysis showed that for some geographic locations, experienced mothers on average came in 1-13 weeks later than the average first-time mother in the same region. An educational intervention should therefore focus on the geographic areas where mothers come from, addressing the importance of receiving a prenatal checkup earlier in the first trimester to give all mothers the knowledge and tools to achieve better health outcomes for themselves and their babies.

This work is far from complete. My project team is currently working on running statistical significance tests to study the relationships between mother status, geographic location, and weeks pregnant when attending the first check up. Additionally, we plan to create a more comprehensive geographic display of prenatal data to visualize geographic differences in prenatal health markers (age of mother, weeks pregnant when first receiving first checkup, taking prenatal vitamins), so that planning can be made for a community-based educational intervention.

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