Maternal Health and the Three Delays Model in Rural Guatemala
Examining Factors Affecting Maternal Health-Seeking Behaviours and Health Service Utilisation in Quiché

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Presentation Agenda

1. Background and Purpose
2. Theoretical framework
3. Methodology and Field site
4. Main findings and conclusions
1. Background and Purpose

Research Context, Premise, Research Question
• Over 40% of the population identifying as indigenous (Glei et al., 2003)

• Indigenous women account for 70% of all maternal deaths in the country (Summer et al., 2017)

• Social services weak and the health system seriously underfinanced

• Comadronas are the primary obstetric care-providers in rural areas
Maternal Mortality Ratio (deaths per 100,000 live births)

88 per 100,000  
National MMR

159 per 100,000  
Indigenous women MMR

192 per 100,000  
Quiché MMR
“In line with the Three Delays Model, how can we understand maternal health-seeking behaviours and health service utilisation as a function of socioeconomic and cultural factors, accessibility to healthcare services, and the quality of healthcare facilities, in the context of Quiché, Guatemala?”
2. Theoretical Framework

Thaddeus and Maine’s Three Delays Model
# Mayor Challenges in Rural Guatemala

<table>
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<tr>
<th>Phase I Delays</th>
<th>Phase II Delays</th>
<th>Phase III Delays</th>
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<tbody>
<tr>
<td><strong>Sociocultural Settings</strong></td>
<td><strong>Geographical Issues</strong></td>
<td><strong>Systemic Barriers</strong></td>
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<td>• 70% of births in Guatemala attended by <em>comadronas</em> in the home</td>
<td>• Poor public transportation infrastructure</td>
<td>• Urban areas host 25.7 skilled health workers, whist rural areas average 3, per 100,000 inhabitants</td>
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<td>• Gender dynamics emphasise agency of husbands and older relatives</td>
<td>• Frequently impassable roads</td>
<td>• Biomedical health facilities also tend to be largely concentrated in urban areas</td>
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<td>• Motorised vehicles are uncommon</td>
<td>• Medicine stockouts frequent rural Guatemala</td>
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3. Methodology

Research Design, Applied Methods
## Mixed-Methods Application

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<th>Surveys in communities</th>
<th>Interviews with healthcare workers</th>
<th>Ethnographic observational studies</th>
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<td>• 450 women from 20 rural communities in Chicamán, Quiché</td>
<td>• Semi-structured in-depth interviews with doctors, nurses, and other health facility workers</td>
<td>• Immersion into research context, studied both of working conditions of health facilities, as well as geographical and travel settings between communities and facilities</td>
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<td>• A team of 13 data-collectors conducted surveys over one week</td>
<td>• 34 participants over ten facilities</td>
<td>• Findings from observational studies were used to either; contextualise descriptive statistics, or annotated and included in the coding</td>
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<td>• Epi Info version 7.1.5 used to generate descriptive statistics</td>
<td>• Chain-referral and snowball sampling</td>
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<td>• NVivo12 used to transcribe and manually code relevant extracts from interviews, thematic categories according to Three Delays Model identified</td>
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4. Main findings and Conclusions

Phases of Delay, Three Delays Model extension
Husbands and mothers-in-law influence decisions to seek care, especially with younger mothers.

Knowledge of appropriate moments to seek healthcare services amongst communities is poor.

‘Shame’ over pregnancy.

**Phase I delays**

Deciding to seek care
Phase II delays
Accessing or reaching health facility

- Poor distribution of health facilities, therefore forcing long journeys
- Difficult roads between communities and facilities
- Expensive to travel
- Lack of own motor vehicles
Phase III delays
Receiving quality and efficient care

- Old infrastructure, poorly maintained facilities
- Medication distribution and supply leading to medical stockouts
- Fragmented system leading to disjointed supervision
- Understaffed facilities, poorly trained staff, no peer-to-peer training
Actionable Insights

in striving for more efficient and higher quality maternal care

- Health facility infrastructure
- Medication distribution and supply
- Supervision
- Staffing, capacity, and training
Schematic representation of the Phases of delay of the Thaddeus and Maine Three Delays Model (1994) from Knight and colleagues.
Suggested extension of the Three Delays Model, to include ‘Phase 0, delays in identifying need to seek care’. Based on model from Knight and colleagues (2013).
Thank you!

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