

Does the Under-diagnosis of Gestational Diabetes Mellitus (GDM) in Liberia Affect the Rate of Maternal Mortality in Country? A Mixed Methods Study of Maternal Interventions in Liberia



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Liberia: a brief background

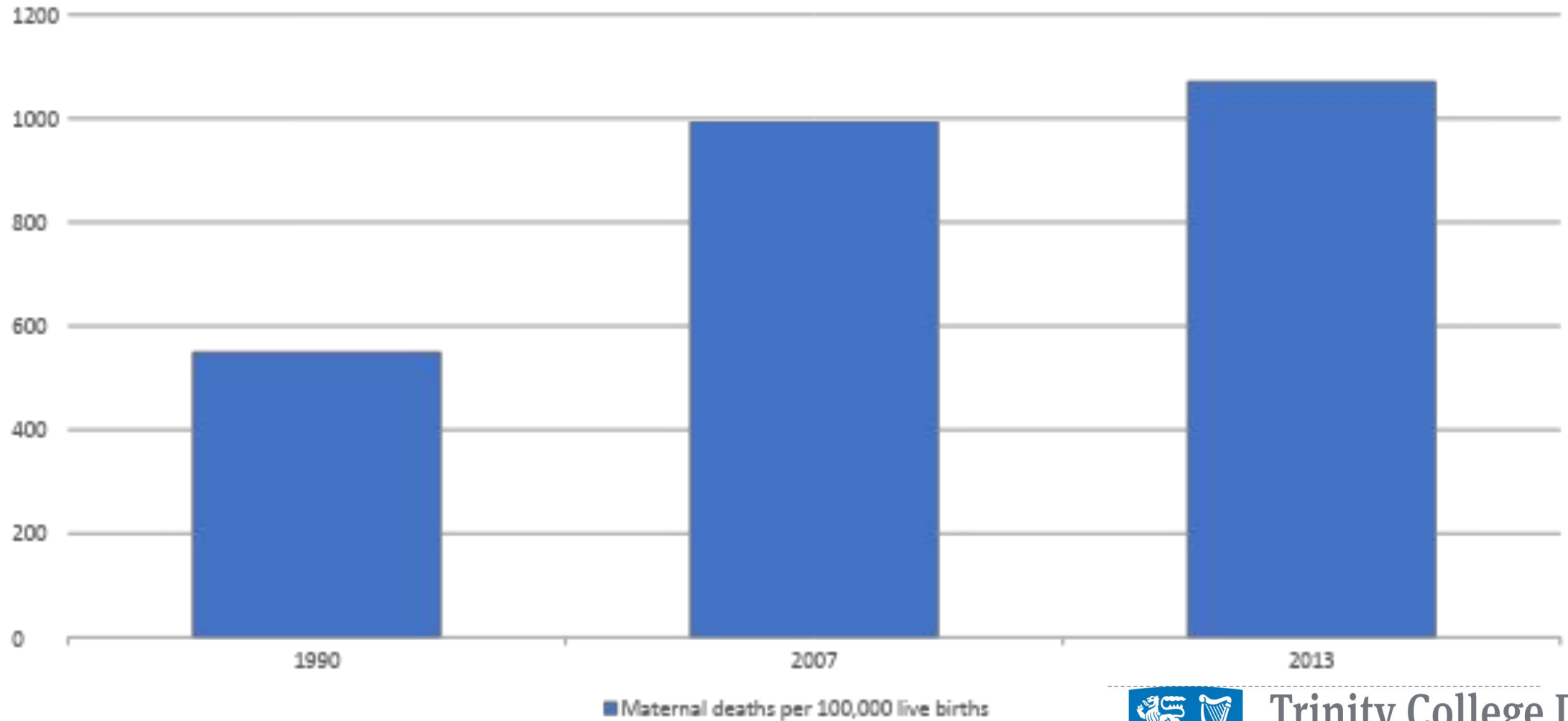
- Population: 4.7 million people
- Employment – 3.9% (Vulnerable employment – 79.5%, Informal employment – 79.9%)
- Poverty levels: absolute poverty – 59.0%, extreme poverty – 16.5%
- Literacy levels – 35.3%
- Urban population – 47%
- Maternal population more than 5km from Health facility: 40%
- Health facility delivery – 56%
- Out-of-pocket payment on maternal health – 47%
- National Prevalence of GDM - unknown

Sources: Liberia Household Income and Expenditure Survey (2016), RMNCAH (2016-2020)



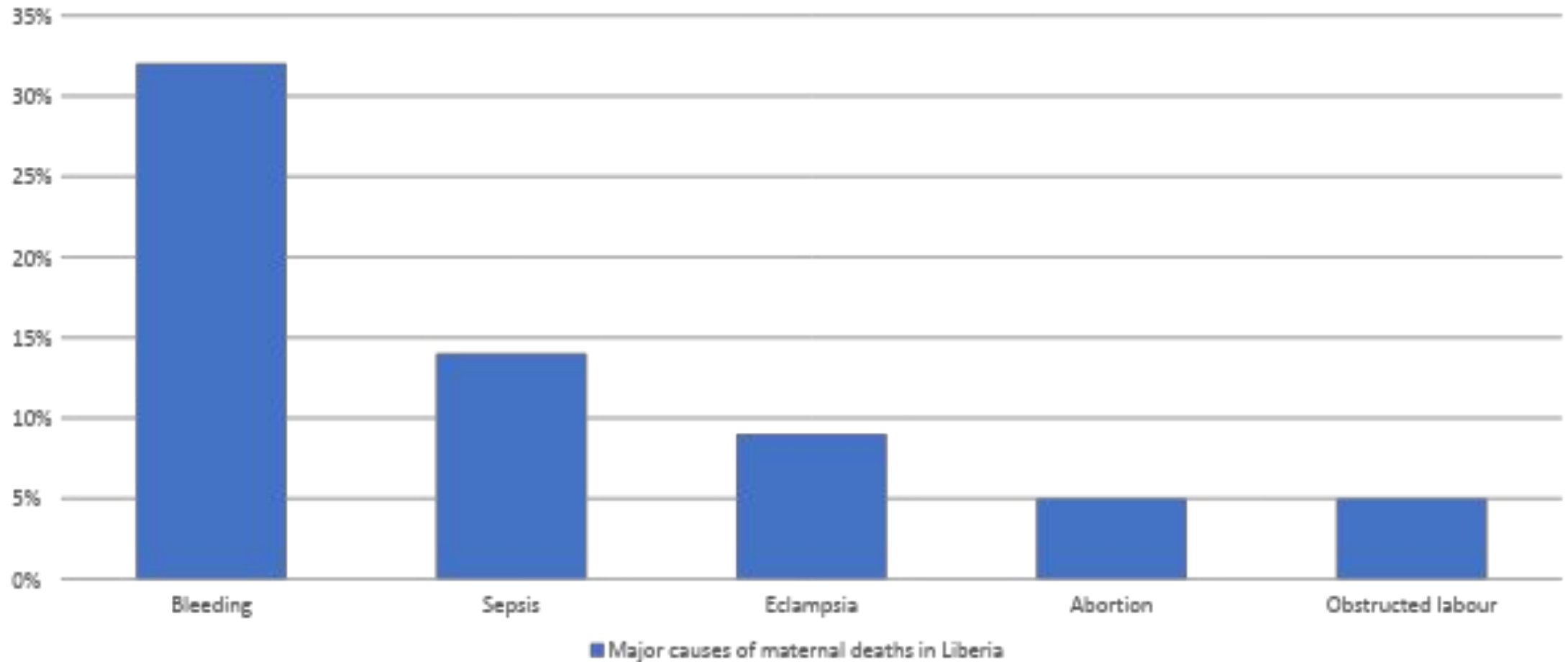
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Maternal health in Liberia



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Major causes of maternal deaths in Liberia



Source: Liberia 2017 Annual IDSR Bulletin, page 25



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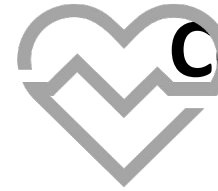
GDM and maternal health: evidence from research



Who is at Risk?

- >25 years
- Family History
- Obese people
- High fasting blood sugar levels
- Ethnicity (Black, Hispanic, Indian)

Sources: World Health Organization (2016); International Diabetes Federation (2018)



Complications of GDM

- Bleeding
- Hypertensive Disorders
- Obstructed labour
- Infection
- Sepsis



Research aims, objectives and methodology

- **Aim**
 - To map barriers and facilitators of GDM service provision in Liberia
- **Objectives**
 - Explore health system interventions in Liberia that addresses GDM
- **Methodology**
 - Convergent mixed methods design
- **Theoretical framework**
 - Walt & Gilson policy triangle framework
- **Research setting and population**
 - John F. Kennedy (JFK) Hospital, Liberia
 - JFK health workers, persons diagnosed of GDM, MOH health policy makers



Key findings: qualitative and quantitative data

Barriers to effective GDM Management

Facilitators to GDM Management in Liberia

- **Policy**
 - Lack of local evidence
 - Vague strategic focus
 - **Access**
 - Out-of-pocket expenditures
 - Lack of awareness
 - Socio-economic status
 - **Diagnosis**
 - Late symptomatic diagnosis
 - Kind of routine maternal interventions
 - GDM interventions not considered during management of maternal conditions
 - **Treatment**
 - Health system inefficiencies
- **Policy**
 - Free maternal healthcare policy
 - **Access**
 - Social protection package at JFK
 - **Diagnosis**
 - Specialists at JFK
 - **Treatment**
 - “Ground rounds” at JFK
 - Involvement of family in treatment plan



Research Conclusions

- GDM service provision not integrated and prioritized at maternal health facilities across the country
- There is a suspected under-diagnosis of GDM which may also contribute to maternal mortality in Liberia



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Recommendations

- Augment health facilities' records to include essential information that will capture GDM
- Policy makers to use international and regional evidence to advocate for GDM service provision
- Quick impact intervention study on GDM in the country in the meantime
- Liberian health system to conduct needs and capacity assessment for integration of GDM service provision at maternal health facilities across the country
- Future maternal health policies to include clearer GDM implementation strategy in national policy documents



Limitations and suggestions for further research

- **Limitations**

- Nature of maternal health data assessed
- Less inferential statistical analysis

- **Suggestions for further research**

- More detailed epidemiological research on GDM in Liberia



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Thanks for Listening
Q&A



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