

Improving Diabetes Service Delivery in Ghana: The Health and Economic Benefits of Non-Pharmaceutical Interventions

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Presentation Outline

- Research Problem
- Research Aim and Objectives
- Service Provider Interviews
- Review of Decision Analytical Models
- The ABM model
- Experiments

■ Research Problem



Increasing diabetes burden in LMICs and Ghana



Poor diabetes treatment adherence and outcomes



SDG 3: **UHC & NCDs** and WHO Global Diabetes **Targets**



Ghana: **Policy** for the **prevention and control** of chronic NCDs

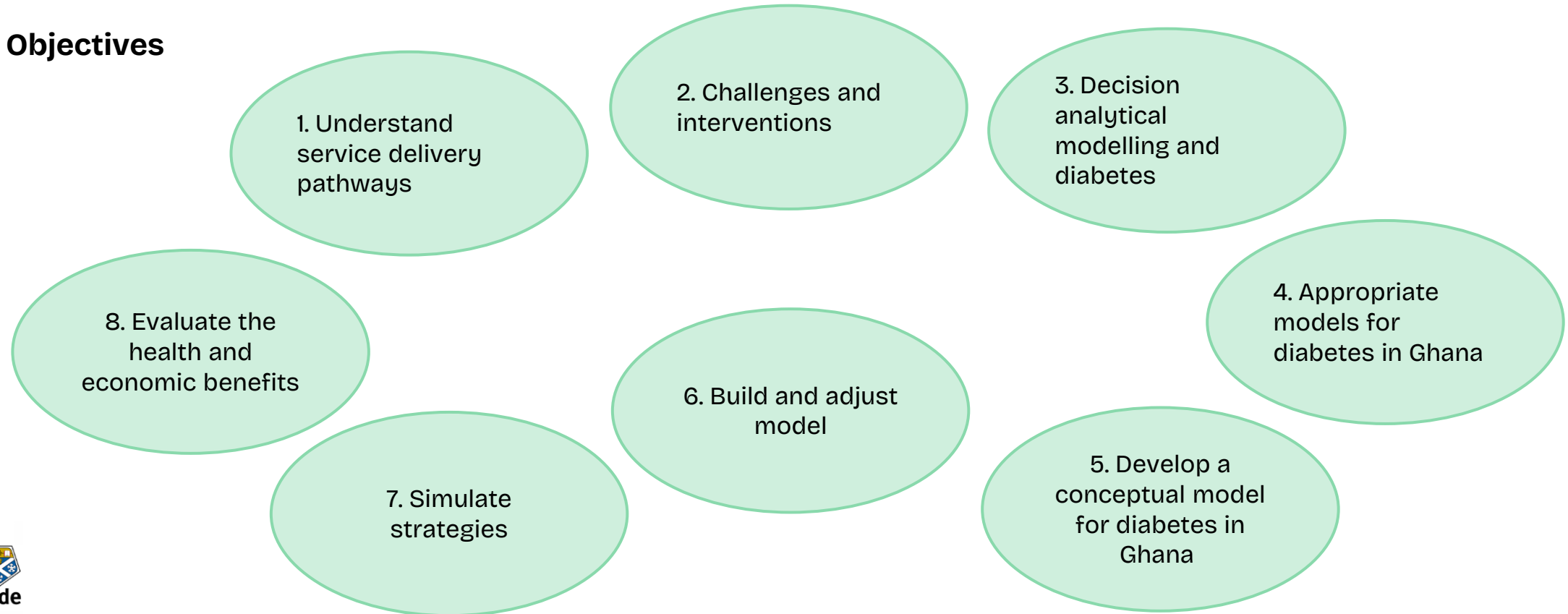


Need for **evidence** to support **resource allocation decision making** to control diabetes

■ Research Aim & Objectives

Aim: to develop methodologies to answer how the Ghanaian health system can deliver effective and sustainable diabetes care that improve health and economic outcomes for individuals and government

Objectives



Findings: Service Provider Interviews

18 interviews on diagnosis, treatment, monitoring and referral (Tagoe et al., 2023)

Analysis: inductive and deductive

Key Findings

Service organisation and delivery pathway

Service provider and patient behaviours

National insurance policies and medicine policies

Findings: Decision Analytical Models

Systematic review of 23 peer-reviewed papers conducted in LMICs (Tagoe et al., 2022)

Key Findings


SD, DES, ABM and hybrids models viable but rarely used

ABM suitable for modelling patients' treatment behaviour and outcomes


The potential of institutional policies and interventions that fall outside the health system

Model validation and transferability are important to increase uptake of decision analytical models in LMICs


■ The ABM Model: Procedures




Build a Conceptual model (ODD Protocol)




Programmed the **Conceptual Model**



Model Verification
(bottom-up, regression testing, debugging)



Model Validation
(face validation and cross validation)




Data Source (national surveys, GBD, NHIS, service provider interviews)


Experiments: Scenarios

 0. No intervention

 1. NHIS coverage for all patients

 2. Interv. 1 & 100% available diabetes medicines

 3. Interv. 1 & 10% increase in healthy diet consumption in community

 4 Interv. 3 & 100% available diabetes medicines



Thank You!

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Ideas

Questions

Suggestions

Opportunities

Collaborations

Reference:

Tagoe, E. T., Nonvignon, J., van Der Meer, R., Megiddo, I., & Godman, B. (2023). Challenges to the delivery of clinical diabetes services in Ghana created by the COVID-19 pandemic. *Journal of Health Services Research & Policy*, 28(1), 58-65.

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