To: The Hiring Committee

Monitoring, Evaluation & Research Officer Position

Jhpiego Malawi

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A Proposal for Spatial Enablement of MER Systems to Overcome Data, Access, and Equity Challenges in MNCH Programming

1. INTRODUCTION

Jhpiego's mission to strengthen health systems and improve the delivery of care, particularly in Maternal, Newborn, and Child Health (MNCH), is critically dependent on robust Monitoring, Evaluation, and Research (MER) systems. Traditional MER approaches often face challenges in visualizing service gaps, understanding spatial determinants of health, and ensuring data is actionable for decision-making at all levels. This concept note outlines a strategy to integrate my expertise in Geographic Information Systems (GIS), drone technology, and data analytics to directly address these challenges, enhancing the effectiveness, efficiency, and impact of Jhpiego's programs in Malawi.

2. IDENTIFIED CHALLENGES & PROPOSED GEO-ENABLED SOLUTIONS

My review of the MER Officer role reveals key areas where spatial intelligence can provide a transformative advantage.Challenge from Vacancy Geo-Enabled Solution & My Relevant Skill.

Data Quality & Timeliness (DQA):

Ensuring accurate, complete, and timely data from facilities and communities.Automated Data Validation & Dashboards: Develop interactive, GIS-linked dashboards that automatically flag data inconsistencies (e.g., a facility reporting more deliveries than its catchment population can support). My

experience building real-time dashboards for NWRA and AgriSight can be directly applied to health data.

Understanding Access & Equity:

Identifying populations with limited access to MNCH services due to distance, terrain, or socio-economic factors.Spatial Access Modelling: Use GIS to model travel times to health facilities, factoring in roads, topography, and land cover. This identifies "cold spots" for targeted outreach. My work on Dzalanyama Forest change analysis and topographical surveying proves this capability.

Routine Data for Decision-Making:

Moving beyond static reports to dynamic, data-driven program management.Dynamic Data Review Platforms: Facilitate MER reviews using live maps that show program performance (e.g., FP uptake, antenatal coverage) by zone/district. This allows for rapid, targeted implementation adjustments. I am proficient in ArcGIS Online and web development for this purpose.

Capacity Building & Supportive Supervision:

Efficiently targeting mentorship and resources across widespread sites.Optimized Field Coordination: Use spatial analysis to create optimal travel routes for supportive supervision and DQA visits, saving time and resources. As a certified drone pilot, I can also propose using drones for mapping hard-to-reach catchment areas.

Documenting Best Practices & Research:

Providing compelling, visual evidence for abstracts, reports, and funding proposals.

Spatial Storytelling & Impact Visualization: Create high-quality maps and visualizations that powerfully communicate program impact, success stories, and research findings, as demonstrated in my portfolio and SBAPP national land cover work.

3. METHODOLOGY: INTEGRATING GIS INTO THE MER WORKFLOW

I propose a multi-phased approach to embed spatial thinking into the MER Officer's core responsibilities:

Phase 1: Data Integration & Basemap Development

Consolidate all facility and program data into a central geodatabase. Geocode all health facilities and community sites using GNSS receivers to ensure precise location data.

Phase 2: Spatial Analysis for Program Insight

Conduct analyses such as,Service Gap Analysis, Overlaying health facility locations with population density data.Resource Allocation Modelling: Guiding the placement of new resources or community health workers based on spatial need.Trend Analysis: Mapping disease or mortality clusters over time to identify emerging hotspots.

Phase 3: Dashboard Development & Capacity Building

Build user-friendly, web-based dashboards for the MER team, district health offices, and partners. Concurrently, I will train and mentor facility statistical clerks and MOH staff on interpreting and using these spatial tools, aligning with the role's capacity-building focus.

4. MY UNIQUE VALUE PROPOSITION

I am not just a GIS technician; I am a public health-minded spatial analyst who understands the programmatic cycle. My qualifications directly meet and exceed the requirements:

Technical Proficiency: Advanced skills in QGIS, ArcGIS Pro, Google Earth Engine, R-Studio, and PostgreSQL, ensuring I can handle any spatial data task.Data Science Application: Experience in machine learning for land cover prediction can be adapted to model health outcomes or predict service utilization patterns.Field Expertise: As a certified drone pilot and experienced data collector with KoboToolbox, I bridge the gap between high-tech analysis and on-the-ground reality.Proven Leadership & Communication: My role as SRC President and experience presenting to stakeholders like the Lilongwe City Council ensures I can effectively collaborate with interdisciplinary teams and build relationships with district-level staff

5. CONCLUSION

Jhpiego's work is vital to the health and well-being of Malawians. By integrating sophisticated geospatial analytics into its MER framework, Jhpiego can not only meet its current programmatic goals but also pioneer a new standard for data-driven health intervention in Malawi. My passion, skills, and dedication are

precisely aligned with this vision. I am confident that I can immediately begin contributing to your team, overcoming existing challenges, and helping to build a more resilient, equitable, and data-informed health system.

I am eager to discuss how we can partner to make this vision a reality.

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