Gilbert Abotisem Abiiro
Dr. sc. hum.

Preferences for micro health insurance (MHI) as a strategy to fill gaps in universal health coverage: A discrete choice experiment in rural Malawi

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Doktormutter: PD. Dr. Manuela De Allegri

Universal health coverage (UHC) has been challenged with difficulties in successfully extending coverage of prepaid health care financing systems to those working within the informal sectors of Low- and Middle-Income Countries (LMICs). Micro Health Insurance (MHI) represents one option for moving towards UHC within the informal sector. However, in sub-Saharan Africa (SSA), such reforms have often been implemented following a technocratic top-down approach with less attention paid to the perspective of rural communities on how such reforms should be designed.

This study explored context-specific gaps in UHC from the perspective of rural communities, and assessed their stated preferences and willingness to pay (WTP) for the attributes and attribute-levels of a prospective MHI scheme aimed at filling UHC gaps, and examined heterogeneity in preferences for the attribute-levels, using a discrete choice experiment (DCE). The study was conducted in two rural districts in Malawi; where free access to an Essential Health Package (EHP) has been endorsed as the main strategy for UHC.

The study adopted an exploratory mixed methods design, sequentially drawing on both elements of the qualitative and quantitative methodologies, to appropriately address the study objectives. The qualitative component informed by a literature review was used in the first phase of the study, to gather data on gaps in UHC and to elicit the relevant attributes and attribute-levels of MHI to construct the DCE. In the second phase, the DCE was designed and used to collect and analyze quantitative data on preferences for MHI.

Qualitative data was collected from 12 Focus Group Discussions with community residents and triangulated with 8 key informant interviews with health care providers. Respondents were selected through stratified purposive sampling. The data was tape-recorded, transcribed, coded and thematically analyzed. Six attributes were derived and used for the DCE design: unit of enrollment, management structure, health service benefit package, copayment level, transportation coverage and premium. Using prior parameters from a pilot study, a D-

efficient DCE design was constructed. With the aid of pictorial images, trained interviewers administered the DCE to 814 household heads and/or their spouses. Preferences for the attribute-levels were estimated from conditional and nested logit models and heterogeneity in preferences explored using mixed logit models.

The key findings from the qualitative component revealed that rural communities in Malawi were able to identify interrelated gaps in the various dimensions of UHC: population coverage, financial protection and access to services. The EHP has created a universal sense of entitlements to free health care in rural Malawi. However, uneven distribution of health facilities and poor implementation of public-private service level agreements, have led to geographical inequities in coverage. Affordability of medical costs at private facilities and transport costs were identified as the main barriers to financial protection. Gaps in financial protection were perceived to be triggered by supply-side access-related barriers in the public health sector such as: shortages of medicines, emergency services, shortage of health personnel and facilities, poor health workers' attitudes, distance and transportation difficulties, and perceived poor quality of health services.

The quantitative findings showed that, rural residents preferred a complementary MHI scheme to an opt-out scenario. This confirmed the qualitative findings on community awareness of gaps within the Malawian health system and hence their willingness to accept MHI as a strategy to fill those gaps. Community members were willing to trade-off cost attributes for benefits-related attributes as reflected in the relative importance of attributes, ordered as: transport, health services benefits, enrollment unit, premium, copayment, and management. The evidence on preferences and WTP for the specific attribute-levels, revealed that to maximize consumer utility and encourage community acceptance of MHI, potential MHI schemes need to cover all transport costs, offer a comprehensive benefit package, define the core family as the unit of enrollment, avoid high copayments, and be managed by a competent financial institution.

In conclusion, the preferences expressed by community residents for the specific MHI attributes directly reflected their perceived gaps in UHC within their local context. This confirms the need to always adopt integrated and bottom-up approaches to UHC reforms. The relevance of UHC reforms such as MHI will therefore depend on their ability to reflect context specific UHC gaps and community preferences. The successful implementation of this DCE complements emerging evidence, demonstrating the feasibility of DCEs among non-literate rural populations and within LMIC context.