**ATTRIBUTE DEVELOPMENT AND LEVEL SELECTION FOR A CHOICE EXPERIMENT ON CAPITATION AND FEE-FOR-SERVICE PAYMENT MECHANISMS**

Melvin Obadha1, Jane Chuma1,2, Jacob Kazungu1, and Edwine Barasa1,3

1Health Economics Research Unit, KEMRI | Wellcome Trust Research Programme, Nairobi, Kenya.

2The World Bank Group, Kenya Country Office, Nairobi, Kenya.

3Nuffield Department of Medicine, University of Oxford, Oxford, United Kingdom

**Correspondence:** Melvin Obadha, Health Economics Research Unit, KEMRI | Wellcome Trust Research Programme**,** P.O Box 43640 – 00100, Nairobi, Kenya. Tel: +254 721 868709 Email: [MObadha@kemri-wellcome.org](mailto:MObadha@kemri-wellcome.org)

# **Theme 5: Key methodological changes in health economics and policy analysis specific to Africa**

# **ABSTRACT**

**Background**: The use of stated preference elicitation methods such as discrete choice experiments (DCEs) have been gaining ground in the field of health economics. However, the validity of DCEs has been criticised. One of the main aspects that affects the validity of DCEs is the process used to develop attributes and select levels. Researchers have been vague on how attributes and levels for their DCEs have were developed. This has been due to the lack of a standardised process in attribute development and level selection. To bridge this gap, we set out to document the process followed in deriving attributes and selecting levels for a DCE to elicit the preferences of health care providers for the attributes of provider payment mechanisms in Kenya.

**Methods**: We used a four-stage process proposed by Helter and Boehler to report the steps followed in attribute development and level selection. The steps include; raw data collection, data reduction, removing inappropriate attributes, and wording of attributes. Raw data was collected by conducting a literature review and a qualitative study that entailed semi-structured interviews with 29 management team members in six health facilities.

**Results**: The literature review unearthed seven characteristics of capitation and fee-for-service that influenced health care provider behaviour namely; payment rate, adequacy of the payment rate to cover the cost of services, timeliness of payments, payment schedule, performance requirements, and complexity of accountability mechanisms. The qualitative study reinforced the literature review results by identifying five attributes that providers considered important namely; the predictability of the timing of payment disbursements, the predictability of amounts disbursed, the adequacy of the payment rate to cover the cost of services, complexity and burden of reporting and claims mechanisms, and autonomy over resources. Thereafter, data was reduced, classified, and summarised. Then, inappropriate attributes were removed considering criteria such as salience, plausibility, and capability of being traded. Finally, the attributes were worded appropriately which resulted in five attributes. These attributes were pretested in pilot study with 31 respondents. Four attributes made it to the final DCE. These included; payment schedule, timeliness of payments, payment rate, and, services covered (benefits package).

**Conclusion**: Rigorously reporting the process of attribute development and level selection increases the validity of discrete choice experiments in health economics. Researchers and choice modellers in all settings should always report the process used to derive their attributes.