**Appendix 1 Sampling Procedure for formative study**

We used a multistage cluster sampling design. At the first stage, we generated a list of all districts in the region that had received VMMC outreach services from MCHIP in the last 12 months. One district from each region was selected purposively into the study. In each selected district a list of all sites that had offered VMMC outreach campaign in the last twelve months was generated. We stratified the sites by residence (rural, urban).

In the second stage, we randomly selected one rural site and one urban site from each stratum to participate in the study. In the third stage, a list of all sub-villages/streets in the selected rural and urban sites was generated. Three sub-villages were selected randomly to participate in the study. The sub-village/mtaa leaders were then asked to develop a list of residents aged 18+ years who were then invited to meet the study team. When they presented, they were assessed for eligibility and consented if they were eligible and agreed to participate in the study. Some of these participants took part in the participatory group discussions (PGD) while others took part in the DCE or both. Circumcision status was not a criterion for selection.

The teams also visited the health facility and listed the names and telephone contacts of all men who were circumcised in the previous seven weeks and aged 20-34 years at the time of circumcision from the VMMC register. The aim was to select circumcised participants for in-depth interviews (IDI). From the list, four individuals were randomly selected, with two additional potential participants listed as a reserve in cases of refusals or unavailability. These potential participants were contacted and invited to talk to the study team at a convenient location. When the potential participants presented at the location, we provided information about the study, and we assessed the participant's comprehension. The individuals were then requested to provide consent if they were willing to take part in the study. We acknowledge and thanked anyone who refused to participate and replaced them with one of the participants in the reserve in the list. The men who consented for study participation were interviewed and then requested to bring in other men who were aged 18+ years for DCE. Again, circumcision status was not a criterion for participants referred by their peers.

This procedure continued until we reached 325 participants.

**Sample size determination**

Due to lack of optimal method for determining DCE the sample size, we determined the sample size using a method suggested by Johnson and Orme55 that the sample size required for the main effects depends on the number of choice tasks (t), the number of alternatives (a), and the number of analysis cells (c) according to the following equation:

N

Therefore N>100 based on the calculations below:

Based on the aforementioned method, we got a sample size of 325 participants which would yield reasonably precise estimates of utility levels, given the use of 16 choice tasks, two active alternatives, and a maximum number of levels within a single attribute of six. We continued recruitment until we reached this goal.