Introduction

Voluntary medical male circumcision (VMMC) reduces HIV acquisition and is widely considered cost-effective. However, demand side constraints result in sub-optimal efficiency in service provision: campaign-style VMMC programmes have site-specific fixed costs, and uptake among men with the highest HIV incidence (20-34 years) is low. A cluster randomised controlled trial was conducted to assess the effectiveness of a locally-adapted demand creation intervention in increasing uptake of campaign-delivered VMMC among men aged 20-34 in Tabora and Njombe. The intervention included messages targeting older men, peer promoters, age group-specific waiting areas, and information sessions for female partners, all of which address proximal factors previously identified as generally constraining demand (Fig. 1).2

Methods

Cost data were collected on surgical, demand-creation, supervisory and start-up activities across all clusters. The DMPPT 2.0 was used to estimate the number of HIV infections averted and related cost savings given the number of VMMCs per cluster. DALYs were calculated and used to estimate incremental cost-effectiveness ratios (ICERs).

Results

The intervention resulted in large increases in VMMC uptake. Client load varied across clusters and was higher in the intervention arms (480-1187 in Tabora; 218-500 in Njombe) than in the control arms (272-951 and 102-268, respectively).

Conclusions

Despite additional costs of tailored demand creation, demand increased more than proportionally. Mean costs per VMMC in the intervention arms were $61 in Tabora and $130 in Njombe, and in the control arms $70 and $193, respectively. Sites with higher uptake had lower unit costs, suggesting economies of scale (Fig. 2). More HIV infections were averted in Njombe (likely due to higher HIV incidence), in both control and intervention arms (102 and 164, respectively) than in Tabora (67 and 123, respectively) (Tab. 1). Once averted treatment costs were considered, cost-savings were observed in both regions, but were greater in Njombe. The intervention dominated the control in that it was both more effective and less costly (Fig. 3).

References