

# **Assessment of the Quality of Outpatient Diabetes Care in Health Facilities in Iganga and Mayuge districts, Eastern Uganda**

By

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## Abstract

**Introduction:** Good quality diabetes care contributes to improved patient outcomes through reduced risk of complications & death. However, information on the quality of diabetes care in Uganda is patchy particularly for rural settings. This study therefore assessed the quality of outpatient diabetes care in facilities in a rural setting and identified factors associated with the outcomes of care.

**Methods:** A cross-sectional study was conducted in 6 health facilities among 377 people with Diabetes aged 18years and above with known Diabetes for at least one year. Eight health workers that provide Diabetes care were also interviewed. Pre-tested tools were used to collect data on structural, process and outcome indicators of quality Diabetes care and other patient-related factors. Data was entered and analyzed using EpiData (v3.1) and STATA (v12) respectively. Quality of Diabetes care was summarized using descriptive statistics; while binary logistic regression, using stepwise forward selection was performed to determine predictors of the outcomes of care namely; glucose control, blood pressure control, chronic complications and client satisfaction. Ethical approval was given by the Higher Degree Research and Ethics Committee- School of Public Health.

**Results:** Overall, mean age of participants was 49.04 years (SD=11.7) with a median of 49years. Majority (62.1%) of participants were female. The median duration of Diabetes among clients was 4 years (IQR=2,7) and the most commonly reported comorbidity was hypertension (78.7%). Overall quality of Diabetes care with respect to structure, process and outcome measures was found to be 47.9%, 43.3% and 43.2% respectively. Optimal glucose control was noted in 56.8% of the clients; 49.3% had controlled blood pressure; 15.7% did not have any complication while client satisfaction with Diabetes care received was noted in 13.5% of the clients. Factors independently associated with the outcomes of Diabetes care were; glucose control [being on insulin therapy aOR=0.3(95% CI 0.16-0.49)]; blood pressure control

[being younger than 40years aOR=3.3(95%CI 1.37-7.89) and having any comorbidities aOR=0.2(95%CI 0.13-0.41)]; having chronic complications [being younger than 40years aOR=0.2(95%CI 0.04-0.68), having any comorbidities aOR=3.1(95%CI 1.36-7.13), being on insulin therapy aOR=3.5(95%CI 1.13-10.66), paying for any service aOR=6.7(95%CI 2.76-16.09) and not working aOR=0.2(95%CI 0.08-0.63)]; and client satisfaction [being on insulin aOR=4.3(95%CI 1.33-13.7) or combination therapy aOR=4(95%CI 1.31-12.26), having any comorbidities aOR=0.3(95%CI 0.12-0.78), being female aOR=3.3(95%CI 1.27-8.61), receiving two tests in a year aOR=0.1(95%CI 0.02-0.14) and using herbal medicines aOR=0.1(95%CI 0.02-0.92)]. The provision of and access to quality diabetes care were affected by stock outs of essential medicines and key diagnostic tools, inadequate numbers & training of human resource in quality Diabetes care and lack of affordability for tests & medicines.

**Conclusions:** The quality of Diabetes care provided in healthcare facilities in this rural setting is low. Being aged <40years was associated with better clinical outcomes while; poor outcomes of DM care were more likely among clients with co-morbidities and those on insulin therapy. Process-related factors mostly affected clients' satisfaction with diabetes care received. Health system-related factors were the major barriers to the provision of and access to quality Diabetes care.

**Recommendations:** The supply of key requirements for the delivery of quality diabetes care should be improved along with capacity building of health workers. The process of diabetes care delivery should be strengthened to optimize better outcomes among clients. Further research to establish most appropriate cost-effective quality improvement interventions for this setting should be done.