**Patterns and appropriateness of surgical referrals in Malawi**

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**Background**

Conditions amenable to surgery are a growing health burden in Malawi, particularly in rural areas where access to surgical care continues to be greatly inequitable. Quality district level health services and well-functioning referral networks for advanced care at higher level facilities are critical to ensure adequate access to life-saving surgery for rural populations. However, the current referral services in Malawi are weak and not well streamlined, leading to a sub-optimal utilisation of public resources.

**Aims and objectives**

The aim of this study was to examine surgical cases commonly referred to Queen Elizabeth Central Hospital (QECH) in Blantyre, the largest hospital in Malawi, to capture referral patterns and to identify inefficiencies in the referral system.

**Methodology**

Data on inter-hospital surgical referrals to QECH was collected prospectively during the period January 2014-December 2015, using patient charts in surgical wards. Referrals from all level hospitals were included. Self-referrals and patients sent by first line health services (i.e. health centres and community hospitals) were excluded. Descriptive statistics were calculated using SPSS. A representative sub-sample of 257 referrals (20% of the full study sample) was assessed for appropriateness and quality.

**Results**

QECH received a total of 1380 surgical referrals during the study period, with an average of 58 per month. 59% were male patients. 80% were referred by government district hospitals. The top three surgical conditions received were tumours (24%), gastrointestinal conditions (22%) and congenital abnormalities (11%). The analysis of appropriateness done on a sub-sample of cases (n=257) revealed that approx. 1 in 3 cases were referred unnecessarily. In the majority of these cases (n=85) the type and severity of the conditions could have been managed locally at the district hospitals and the referrals were not justified by special circumstances affecting service provision (e.g. lack of essential equipment, supplies or personnel). In over 80% of cases there was no communication with QECH prior to referral, and 41% of cases were misdiagnosed or had incomplete diagnoses by the referring clinicians. 40% of cases were not referred timely.

**Conclusion**

Referral process improvements, including better communication between referring and referral hospitals, are urgently required to improve access to timely surgical care for rural populations. This will lead to better utilisation of public resources and, ultimately, effectiveness and responsiveness of the wider health care system.