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Patterns and appropriateness of surgical referrals in Malawi

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The authors declare no conflict of interest

Setting - Malawi

- Population 17+ ml, largely rural-based
- 1/3 of the population living with a condition requiring surgery and 24% of all deaths due to a surgically treatable condition*

Setting - Malawi

- First-line essential surgical care provided by 47 district hospitals
 - Central hospitals in main cities for advanced surgical care
...but only 0.43 specialists/100,000 population!
- ⇒ Quality district health services and functioning referral networks critical to ensure adequate access to life-saving surgery



Our study

Aim:

- to examine surgical cases commonly referred to the surgical unit of Queen Elizabeth Central Hospital (QECH), the largest tertiary hospital and medical teaching facility in the country
- to capture referral patterns and to identify any inefficiencies in the referral process

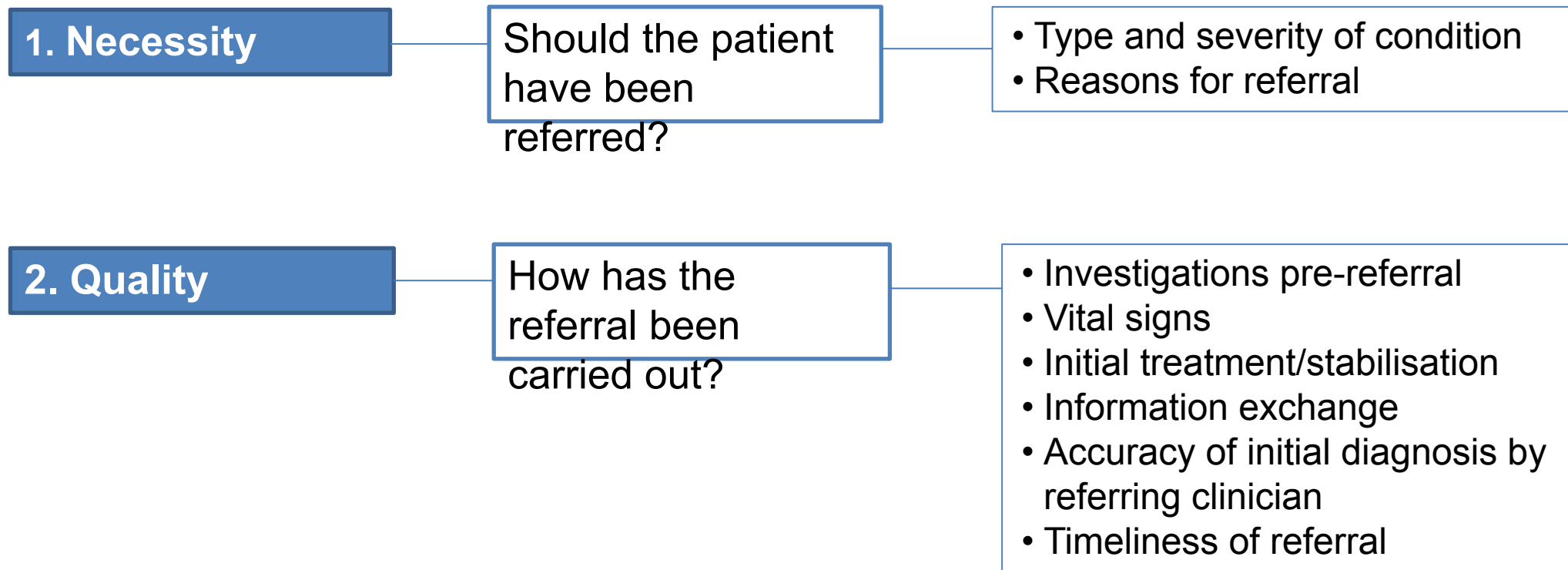
Conducted as part of wider COST-Africa project
(<http://costafrica.weebly.com/>)

Methods

- Prospectively collected data on inter-hospital referrals to QECH surgical unit during period Jan 2014-Dec 2015.
- Variables:
 - patient's demographics
 - medical history
 - investigations and initial treatment at sending hospital
 - circumstances leading to referral
 - characteristics of referral (type, transport, time, etc.)
 - final diagnosis and treatment at QECH

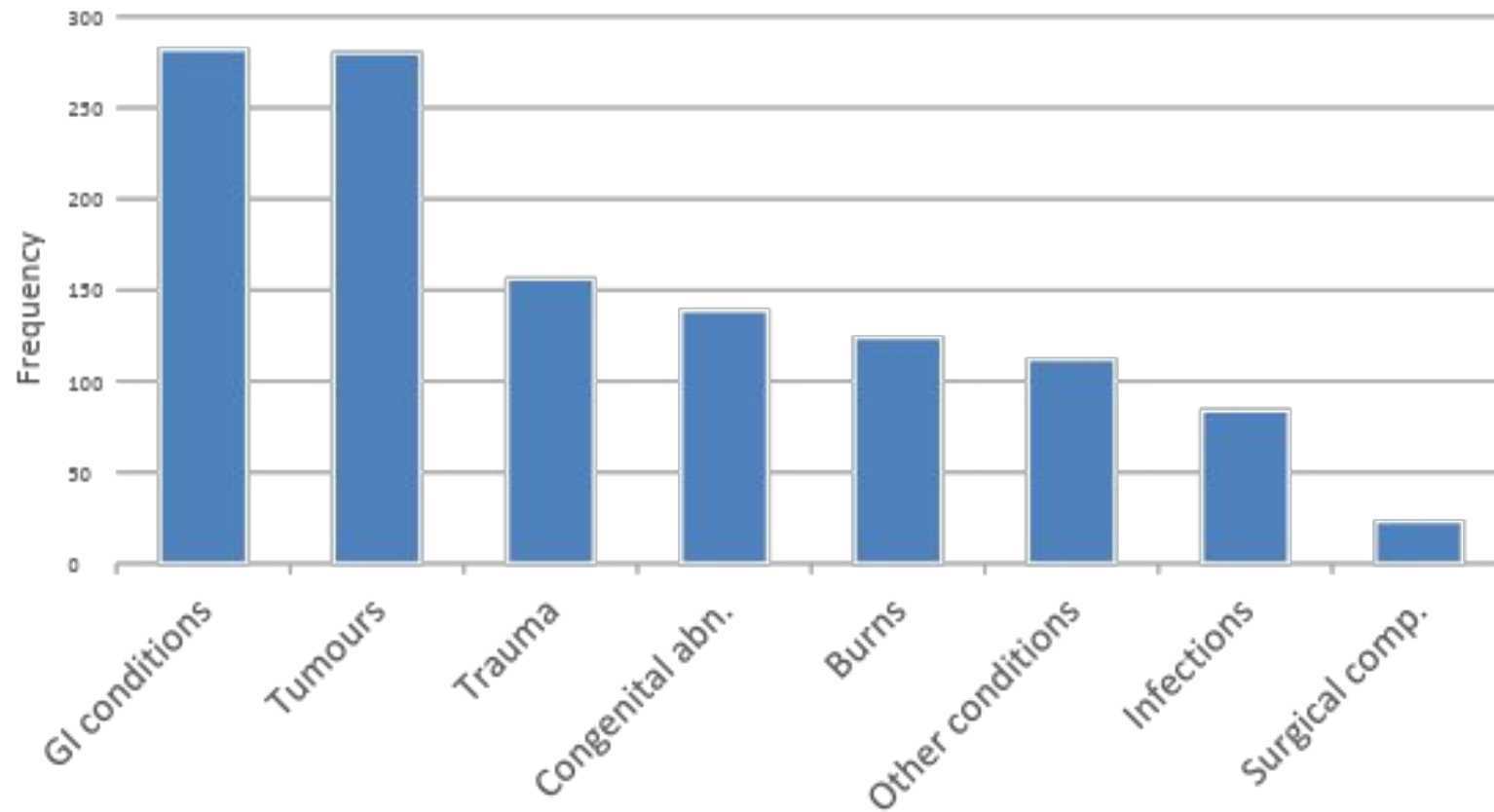
Analysis of appropriateness

Sub-sample of 255 referrals reviewed by two surgical specialists and a third independent assessor to determine appropriateness, based on:



Results

- 1317 surgical cases referred to QECH surgical unit during the study period, average 53/month (SD=19)
- Majority male patients (62%)
- Sample median age 30 years (IQR: 8, 47) but large share of paediatric cases (29%)



Results

- Approx. 1 in 3 referrals not necessary (83% from district hospitals)
- All admitted at QECH, median length of stay 6 days (IQR: 3,13)
- Poor quality across 4 out of 6 indicators:

Inadequate investigations
(80% of cases)

Incomplete patient vital signs
(85% of cases)

**Inadequate initial treatment/
stabilisation**
(2/3 of cases)

**Incorrect/
incomplete diagnosis**
(41% of cases)

No communication with QEC
(82% of cases)

Timeliness
(39% poor)

Conclusions

- Clear indication of inefficient utilisation of resources for both the sending hospitals and QECH.
- Referral process improvements urgently required for better utilisation of public resources and to ensure effectiveness and responsiveness of the wider healthcare system.



Thank you

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