Platforms for Delivery of Essential Surgery in LMICs

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Introduction

• Surgery is an essential public health service.
• We define 3 platforms for surgical care:
  • i) community facility or health centre – outpatient or limited in-patient
  • ii) first level or district hospital (50-200 beds) for up to 200,000 population
  • iii) specialist/referral facility – including specialist missions
• Procedures listed not exhaustive, but are only representative only
• All the procedures may be performed at higher levels
## Platforms for essential surgery

<table>
<thead>
<tr>
<th></th>
<th>Community facility &amp; Primary Health Centres</th>
<th>First level Hospitals (doctors with surgical expertise)</th>
<th>Specialist/ Referral hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dental</strong></td>
<td>Dental extraction, drainage of dental abscess, caries treatment</td>
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<tr>
<td><strong>OBGYN</strong></td>
<td>Normal Delivery</td>
<td>Caesarean section, tubal ligation, ectopic pregnancy</td>
<td>Repair of obstetric fistula</td>
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<tr>
<td><strong>General Surgical</strong></td>
<td>Drainage of superficial abscess, male circumcision</td>
<td>Repair of perforations, appendectomy, Hernia, bowel obstruction, hydrocelectomy, relief of bladder obstruction, colostomy</td>
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## Platforms for surgery cont’d

<table>
<thead>
<tr>
<th></th>
<th>Community facility &amp; Primary Health Centres (Outpatient &amp; 24-hr Inpatient)</th>
<th>First level Hospitals (doctors with surgical expertise)</th>
<th>Specialist/ Referral hospitals</th>
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<tbody>
<tr>
<td>Trauma</td>
<td>Resuscuitation with BLS, Suturing of laceration, Management of non-displaced fracture,</td>
<td>ATLS, tube thoracostomy, fracture reduction; trauma laparotomy; debridement of open fractures; skin grafting</td>
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<tr>
<td>Congenital</td>
<td></td>
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<td>Repair of cleft lip and palate; anorectal malformations &amp; Hirschsprung’s disease, Shunt for hydrocephalus</td>
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<td>Visual impairment</td>
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<td>Cataract extraction &amp; lens insertion</td>
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Challenges

• Human resource
• Physical facilities
• Health care financing
Surgical manpower in LMICs

• Community nurse practitioner
  • Community clinics

• Medical Assistants, Physician Assistants
  • Health centres

• Surgical Technicians, Clinical Officers
  • Rural/district hospitals e.g. Mozambique, Tanzania

• Medical Officers
  • District hospitals e.g. Ghana
Surgical manpower ct’d

- Surgical training –
  - In-service for MOs
  - MS/MMed – 4 years
  - Member - 3 years
  - Fellow – 5+ years
- Ghana College of Physicians model since 2003
- In-country certification
- About 300 medically qualified OBGY/general surgeons trained in 11 years
Local outreaches
Concluding remarks

• Inadequate surgical services in LMICs linked to poor facilities, manpower shortages and their mal-distribution

• To increase access and improve outcomes most surgical procedures should be performed in first level facilities

• Middle level *surgical and anaesthetic* manpower are required, while efforts are made to train more surgeons

• Highly qualified surgeons are needed to provide further training and support for middle level practitioners

• Short term missions must be linked to training for sustainability

• Country specific solutions must be fashioned out
References

• Prof Charles N Mock, MD\textsuperscript{a}, Prof Peter Donkor, MD\textsuperscript{b}, Prof Atul Gawande, MD\textsuperscript{c}, Prof Dean T Jamison, PhD\textsuperscript{d}, Margaret E Kruk, MD\textsuperscript{e}, Prof Haile T Debas, MD\textsuperscript{f}, for the DCP3 Essential Surgery Author Group. Essential surgery: key messages from Disease Control Priorities, 3rd edition. \textit{Lancet} 2015 Feb 4 \textit{Epub} 2015 Feb 4 doi:10.1016/S0140-6736(15)60091-5