Developing the Monitoring and Evaluation Pillar of Ethiopia’s National Surgical Plan: Saving Lives Through Safe Surgery

Laura Drown, Olivia Ahearn, Kaya Garringer, Katherine Iverson, Abebe Bekele, Atlibachew Teshome, Daniel Burssa
Presented research and activities was supported by the GE Foundation as part of the SafeSurgery2020 Project.
Ethiopia

• Second most populous nation in Africa
• Fastest growing economy in the region, but one of the poorest countries
  • Gov’t aims to reach lower-middle-income status by 2025
• Must consider ongoing instability, political upheaval, and civil unrest while working in country

Population: 102 million
Total GDP: 72 billion
Life Expectancy ~ 65 years
5 nurses & CBHS/10,000 pop.
1 physicians/14,000 pop.
0.54 surgeons/100,000 pop.
Saving Lives Through Safe Surgery (SaLTS)
2015—present
SaLTS Monitoring and Evaluation Pillar

Two strategies:
1. Hospital Assessment Tool
2. Key Performance Indicators
**1. Hospital Assessment Tool (HAT)**

- 363-question monitoring tool including questions across 7 domains
- Intended to be administered nationally every 2-5 years
2016-2018: HAT Administration

- **29 hospitals** assessed in **3 regions:**
  1. Tigray
  2. Amhara
  3. Southern Nations, Nationalities, and Peoples’

- Assisted by FMOH, RHB, Surgical Society of Ethiopia, Ethiopia Society of Anesthesiologists, Harvard PGSSC, & Jhpiego
## 2. SaLTS Key Performance Indicators (KPIs)

<table>
<thead>
<tr>
<th>Indicators Included in HPMI</th>
<th>Additional SaLTS KPIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delay for Elective Surgical Admission</td>
<td>Surgical Bed Occupancy Rate</td>
</tr>
<tr>
<td>Mean Duration of In-Hospital Pre-Elective Operative Stay</td>
<td>Rate of First Elective Case On-Time Theater Performance</td>
</tr>
<tr>
<td>Patient Satisfaction</td>
<td>Rate of Cancellation of Elective Surgery</td>
</tr>
<tr>
<td>Blood Unavailability Ratio</td>
<td>Emergency Surgical Access</td>
</tr>
<tr>
<td>Surgical Volume</td>
<td>Protection Against Catastrophic Expenditure</td>
</tr>
<tr>
<td>Surgical Site Infection (SSI) Rate</td>
<td>Surgical, Anesthesia, and Obstetric Provider Density</td>
</tr>
<tr>
<td>Anesthetic Adverse Outcome</td>
<td></td>
</tr>
<tr>
<td>Peri-Operative Mortality Rate (POMR)</td>
<td></td>
</tr>
<tr>
<td>Rate of Safe Surgery Checklist Utilization</td>
<td></td>
</tr>
</tbody>
</table>
National Indicator Training

• 2-day workshop for hospital CEOs from hospitals throughout the country

• Introduction to revised Hospital Performance Monitoring and Improvement indicators for mandatory collection, including nine SaLTS KPIs
Development and Modification of Clinical Registers

1. OR Scheduling Register
2. OR Register
3. Anesthesia Register
4. Surgical Ward Register
5. Inpatient Admission/Discharge Register
6. Referral Register
7. Surgical Site Infection Logbook
KPI Data Intervention

- **Aim:**
  - To develop local capacity around the collection, analysis, and reporting of surgical indicators
  - To implement a sustainable system for data collection
  - To study the feasibility of collecting and reporting SaLTS KPIs

**February—April 2018:** Amhara
- 5 primary hospitals

**May—July 2018:** Tigray
- 3 primary and 2 general hospitals
Timeline of Ethiopia Achievements and Next Steps

- **SaLTS Hospital Assessment Tool** developed and piloted
- National SaLTS M&E trainings provided to >600 surgical team members
- **15 KPIs** finalized in SaLTS Policy
- **National HPMI Training** on SaLTS KPIs
- SS2020 Tigray and Amhara Data Intervention
- SS2020 Implementation Playbook

- **Spring 2017**
- **Spring 2017**
- **Summer 2017**
- **Winter 2017**
- **Spring 2018**
- **Spring 2019**
Acknowledgements

• Ethiopian Federal Ministry of Health:
  • Samson Workineh
  • Andualem Beyene
  • Samuel Kidane
  • Robel Wondemagegnehu

• Surgical Society of Ethiopia:
  • Ephraim Teffera

• Ethiopian Society of Anesthesiologists:
  • Rediet Shimeles
  • Tariku Assefa

• Jhpiego:
  • Tigistu Ashengo
  • Abraham Mengistu
  • Teruwork Gultie
  • Ephrem Daniel
  • Medhanit Mekonnen

• Assist International:
  • Cheri Reynolds
  • Victoria McKitrick
  • Trevor Cook

• PGSSC:
  • Isabelle Citron
  • Swagoto Mukhopadhyay
  • Sehrish Bari
  • Joseph Incorvia
  • Mark Shrime
  • John Meara
  • Miseker Abate

• Additional Contributors:
  • Haftom Berhane
  • Yibrah Berhe
  • Reiye Esayas
  • Tadesse Teklit
  • Zebenaye Bitew
  • Bazezew Fekad
  • Mulat
  • Minwuyelet