Assessment of Surgical Data Collection Systems in Five Primary Hospitals in Amhara, Ethiopia

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Methods

• Assessed data collection systems through review of Admission/Discharge, Operating Room, Anesthesia, Surgical Ward and Blood Bank registries
• Reviewed facility level data flow
• Graded each hospital’s data collecting systems for 10 surgical KPIs based on:
  1. KPI data elements are included in all the registries
  2. Key personnel with defined data collecting roles responsible for data entry
  3. Standardized HMIS data input validation system assessing consistency between patient level charts, registries & finalized KPI inputs
  4. Adherence & fulfillment of accurate KPI definitions in the finalized reporting forms

KPI’s that fulfilled all of the above 4 criteria were placed in the A category, those with 1 or 2 missing criteria were placed in the B category, and those missing 3 or more of the above criteria were placed in the C category.

Figure 1. Data flow from patient level data inputs to aggregate KPI’s reported from each facility to FMOH

Results

• Each hospital has a general reporting system for summative KPI forms reported from the HMIS to the FMOH (Figure 1)
• On-site evaluations revealed significant barriers to quality surgical data collection
• With the exception of Surgical Volume, each of the remaining 9 KPIs failed to fulfill the 4 set criteria (Table 1) with 36% in the B category & 54% of the KPIs in the C category (Figure 2)
• Reasons for poor surgical data collection include:
  o Lack of adequate training in data collection
  o Lack of standardized data collection systems
  o Ill-identified facility level roles & responsibilities
  o Varying applications of KPI definitions

Table 1. Assessment of KPI data collection system based on four criteria listed in “Methods” for the 5 hospitals in Amhara

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Figure 2. Categories of KPI data elements fulfilling the four set criteria.

Next Steps

This assessment of surgical data collection highlights the need for facility-level interventions through:
1. Education on the proper definition of each KPI
2. Proper identification of facility level roles and responsibilities
3. Clear step-wise model for data element collection relevant to each KPI (Figure 4)
4. Development of data validation system

Based on inputs from this assessment, PGSSC in collaboration with the FMOH has developed an 8 week data intervention (Figure 3)

Figure 3. Amhara Data Intervention Plan

8 Week Data Intervention:

Week 1: Data Analysis Workshop
Week 1-4: Interactive Training
Week 5: Data Analysis Checklist
Week 6: Data Analysis Workshop
Week 8: POMR model relevant data elements: 1. number of deaths prior to discharge & 2. number of surgical cases

Figure 4. POMR model relevant data elements: 1. number of deaths prior to discharge & 2. number of surgical cases

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