MODULE 4: Quality Improvement Tools and their Application in KQMH

Presentation Unit 4.3: Tools for Continuous Quality Improvement and their Application

Part 3: Process Mapping
Unit Objectives

- Develop and analyze a process map
Content

• Definition of a process
• Process mapping defined
• Benefits of process mapping
• List of related terms / tools
• Process mapping nomenclature / symbols
• Steps in process mapping
• Steps in process map analysis
What is a process?

- A series of steps
- Carried out in a sequence
- Creates value
- Provides service
- Makes a product / contributes to an outcome
Process Mapping

• What is process mapping?
Process Mapping

• Simply put, it is a way of visualizing all the steps that make up a process.

Adapted from IHI
Benefits of process mapping

- Streamlines work processes
- Defines and standardizes processes
- Promotes deep understanding
- Spotlights on waste & non-real work
- Builds consensus
- Promotes staff contribution

Adapted from IHI
Process map

• Related terms / tools
  — Flow chart / diagram
  — Causal loop diagram
  — Value stream analysis
  — Swim lane diagram (matrix / group flow diagram)
  — Others?

Adapted from IHI
**Nomenclature**

A Rectangle indicates that an **activity** is being performed. A description is usually displayed inside the rectangle.

A Diamond represents a **decision point** in the process. Usually a question is displayed inside the decision symbol. Possible answers to that question then form exit routes from the diamond.

A Document symbol represents a **document** that is either an input or an output of a process. A description of the document is displayed inside the symbol.

A Terminal symbol identifies the “**Start**” or “**End**” of a process.

Adapted from IHI
Nomenclature (contd.)

- Arrows represent the **direction of flow** for a process.
- A Cylinder represents a **database**.
- A Half Oval symbol represents a **point of delay** or **wait** in a process.
- A **Connector Symbol** is used to show a branch or extension of a flow diagram.

Adapted from IHI
Process Type Diagram

Patient Delays in Emergency Department

- Patient leaves for lavatory
- Room not cleaned or restocked
- Previous patient still in room
- Backlog of patients waiting for admission
- Process too long
- No beds

- Patient Registers
- Wait for triage
- Triage
- Wait for Room
- Wait for MD
- Delays seeing MD in ER

- Sudden surge of patients
- Reduced staff (lunch or break)
- Patient has difficulty communicating
- Triage nurse needed elsewhere in ER
- Patient does not speak English
- MD busy with admitted patients
- MD doing paperwork
- MD cannot find patient

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Process mapping techniques

1. Conventional model
2. Unconventional models
    Walk through a patient journey
    Follow a patient
    Be a patient
    Picture of time and resources required by a single patient
    Review patient pathway —mapping your last 10 patients using files and other records
    Getting patient perspectives
    Care pathway analysis tool—simulation software
Conventional process mapping

1. Define the process
2. Assemble the right team (multi-disciplinary)
3. Agree on use and level of detail
4. Walk the process beginning with identifying and labeling start and end events
5. Discuss and map current process
6. Validate with colleagues / peers

Adapted from IHI
Beware…

Drawing intricately detailed flowcharts can exhaust the quality improvement team’s time, energy and resources!

Adapted from IHI
Process map analysis (contd.)

- Time – How long?
- Space – Where did the step take place?
- Human Resources – Who did it?
- Geography – How far is the journey?
- Financial resources – What is the cost and to whom?

Adapted from IHI
Process map analysis (contd.)

• How many steps are in the process?
• Examine the order of the steps in the process – are they ideally placed?
• How many transfers occur in the process?
• Where do delays occur in the process?
• Can you identify known bottlenecks in the process?

Adapted from IHI
Process mapping skills

1. Two levels of skill for the coach / facilitator
   • Working with Improvement Teams
     o Looking at the practical, seeing the big picture
     o Identifying key gaps, challenge areas, bottlenecks

2. Skills of the Improvement Leader
   • Understanding the role of time, flow, waste, etc.
   • Data — how the process map reveals the data needed to improve
   • Current vs. Ideal process maps
Process mapping exercise: Mrs J.O. case study

Divide yourselves into 6 groups:

• Each group should choose 1 person to be the secretary

• Together in your groups, map / draw the processes flow chart to describe the process of care Mrs J.O received at:

  ➢ 1st ANC visit at Huduma HC (Group 1 & 2)
  ➢ District Hospital (Group 3 & 4)
  ➢ Maternity at Huduma HC (Group 5 & 6)

Adapted from IHI
Exercise (contd.)

• Spend time as a group analysing the process.
• Make notations on the map indicating key learning, important constraints.
• Time permitting, begin to think about how you would redesign this process (possibly draw an idealized map).

Adapted from IHI
What do process maps reveal?

- Unnecessary delays
- Unnecessary steps and handovers
- Duplication of effort / wastage
- Things that don’t make sense / not logical
- Likely bottlenecks, hotspots or constraints

Adapted from NHS