Kidney Quality Improvement Partnership (KQuIP)

Introduction to QI what is it and what tools can be used to support it



In health care, quality improvement (QI) is the **framework** we use to systematically **improve the ways care is delivered to patients**. Processes have characteristics that can be **measured**, **analysed**, **improved**, **and controlled**. QI entails continuous efforts to achieve stable and predictable process results, that is, to reduce process variation and **improve the outcomes of these processes both for patients and the health care organization and system**. Achieving sustained QI requires commitment from the entire organization, particularly from top-level management.



Quality Improvement – What it feels like?





The NHS Change Model



- Plentiful supply of QI tools
 - Each add their own value
 - Common tools used:
 - Process map
- Driver diagrams
- Fishbone
- Plan, Do, Study, Act (PDSA cycles)



Process mapping is used to **visually demonstrate** all the steps and decisions in a particular process. A process map or flowchart describes the **flow of materials and information**, **displays the tasks associated with a process**, **shows the decisions that need to be made** along the chain and shows the **essential relationships** between the process steps.



QI – How to process map

1. Define and agree the process to be mapped

The objective is to get everyone's view of the issues and create:

»Problem Statement

»Target Statement

2. Identify and agree the metrics

Establish the Key Performance Indicators (measures) that will tell whether a process has improved

3. Identify a team and team leader

4. Map the current activities

Create a current state map, this is how the process currently runs. Record it as it is even if it is "not as it should be"



QI - How to build a map (2)

Use these simple questions to understand each step in the process



If you can answer all 6 questions about every step then you understand that step



QI – process map





- A driver diagram illustrates a "theory of change" that can be used to plan improvement activities.
- A visual display of a team's theory of what drives or contributes to achievement of a project aim
- Translates a high level goal into a logical set of related goals and sub-projects



QI - Driver Diagram Template





How many people have tried to make an omelette?





QI - MAGIC Driver Diagram







- For 45 mins start to develop your unit's process map **Or** driver diagram for needling/ cannulation
- Remember You will not complete this today
- Be prepared to feedback to the rest of the room







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Quality Improvement Measurement: Embedding and Using Data

Ron Cullen





Measurement for Improvement

- What is QI measurement
- Structure, process and balancing measures
- **Using run charts**



Measurement for Improvement





7 Steps of Improvement



- 1. Decide the Aim
- 2. Choose Measures
- 3. Define Measures
- 4. Collect Data
- 5. Analyse and Present
- 6. Review measure

7. Repeat 4-6



QI v Research Measurement

QI

- Follows practice, not individual patients
- Sample frequently and small often different patients
- Pragmatic what can I achieve
- **Complements everyday practice**
- Iterative develops in response to need
- Minimalistic

Research

- **C** Follows effect on individual patients
- Powered samples with infrequent measures
- Rigorous
- Eliminates bias form everyday practice
- Oictated and rigid
- Comprehensive



What are QI measures?

Specific

Defined

Measureable

Actionable

They will demonstrate change

Focussed

Related to objectives

Consistent

Application, but also sampling

Iterative

Develop and expand as you identify what you need to know



How do you identify your measures?

- What are you aiming to change?
- What do you need to know?
- What will tell you what has changed?
- What matters to patients?
- What are you going to put in to a graph?
- Short and long term measures

How will we know that a change is an improvement?



Outcome measures

- Focus on clinical outcomes
- Have we made things better for patients?
- 6 The ultimate aim
- Often take time to demonstrate results
- Selection bias
- Historically not patient centred





Process Measures

- What has changed in practice?
- Have you changed your processes?
- Assumes process change will lead to positive results
- Often provide faster results







Balancing Measures

- Identify any unintended consequences
- Generally negative
- Ensure you detect the full consequences of change





Run Charts





Benefits of Run Charts

- They help improvement teams formulate aims by depicting how well (or poorly) a process is performing.
- They help in determining when changes are truly improvements by displaying a pattern of data that you can observe as you make changes.
- Control of the second secon



Interpreting run charts

- **G** Four Rules to interpret a Run Chart
- Rule One Shift
- Rule two Trend
- Rule Three Runs
- Rule Four Astronomical



Interpreting run charts – Rule 1 SHIFT

6 or more plots





Interpreting run charts – Rule 2 TREND

5 or more points in same direction





Interpreting run charts – Rule 3 RUNS too many/too few plots





Interpreting run charts – Rule 4

ASTRONOMICAL





Applying Context to your Results Annotations – data labels



"THINK KIDNEYS"

Finally

- **C** Review your measures:
- Is there anything you want to change?
- Is there anything you want to add
- What challenges might you experience in collecting your measures?
- How could you overcome these?
- How are you going to engage your staff in measurement and the results?

