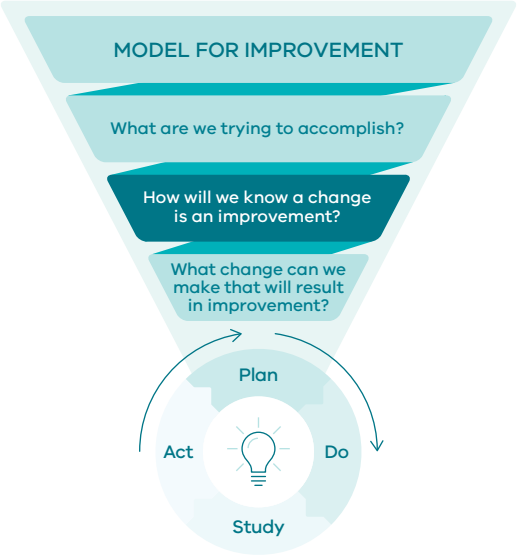
TOOL 13

Family of Measures

Overview

Measurement is an essential part of testing and implementing changes in any quality improvement project. Establishing measures answers the second question of the Model for Improvement, 'how will we know a change is an improvement?

When you're trying to make a change in a complex system, it's not enough to use a single measure to determine if you're driving improvement. Instead, you need to track a set of measures to really understand the impact of your changes on the many parts of the system. Improvement teams typically use a 'Family of Measures' that consists of three types of measures: outcome, process and balancing measures.



Outcome	Process Measures	Balancing Measures
• Directly relates to the aim statement • Should represent the voice/ experience of the consumer • Should have 1–2 outcome measures • Helps determine whether inteded outcomes are being achieved **Example:** % of patients being readmitted within 30days after surgery	• Helps to determine whether teams are doing the 'right things' to achieve the outcome measure(s) • Used to determine efficacy of change ideas • Should have 3-5 process measures • Helps to understand whether changes are having a positive or negative impact - can be an early indicator of an improvement in the outcome measure(s) • Acts as a pulse check assessment of the inner workings of the system **Example** % of patients who received post-surgical dischage bundle prior to discharge	• Helps to determine if the changes introduced in one part of the system are having unintended impacts on other parts of the system (either positive or negative) • Defined at the outset of the project and measured across the project lifecycle • Should have 1-2 balancing measures • Not directly related to the aim **Example** Average length of stay Average clinic waiting time

Figure 1: Types of measures

TOOL 13

Family of Measures Template

When you're trying to make a change in a complex system, you need to develop a Family of Measures that you will collect as data throughout the duration of your project to understand the impact of your changes.

Filling the below table with your measures can help ensure you've got the details you need to start.

Measure name	Operational definition	Data collection plan
Provide a logical name for your measure. Most measures contain the words 'number of', 'per cent of', or '___ rate'.	Define the measure in clear, specific terms. Indicate the type of measurement: count, percentage, time period, etc. If the measure is a percentage or rate, provide the numerator and the denominator used.	Explain how the data will be collected. • Who is responsible for collecting the data? • How often will the data be collected (e.g. hourly, daily, weekly)? • What should be included or excluded (e.g. should you include only inpatients or inpatients and outpatients)?
Outcome measures		
Measure name	**Operational definition**	**Data collection plan**
e.g. inpatient pressure injury rate.	e.g. total number of pressure injuries obtained during inpatient admission per 1000 occupied bed days.	e.g. export from VHIMs monthly, exclude all pre-existing pressure injuries.
Process measures		
e.g. per cent of inpatients assessed for pressure injuries.	e.g. numerator: total number assessed for pressure injury. denominator: total number of inpatients.	e.g. export assessment rates from electronic medical record monthly.
Balancing measures		
e.g. additional time spent conducting pressure injury assessment.	e.g. time spent conducting normal assessment vs comprehensive pressure injury assessment.	e.g. nurses to time and record 10 normal and 10 comprehensive pressure injury assessments over 1 week.