

Developing Measures for Improvement– A Brief Guide "If you cannot measure it, you cannot improve it"- Lord Kelvin

Measurement is a critical part of quality improvement. Tracking measures over time enables you to identify the affect of the improvement work on the system. Without good measurement, you have no way of knowing whether the changes are having a positive or negative effect or no effect at all. However, for measures to be useful, they need to be carefully developed. This brief guide provides some hints to developing measures for improvement.

<i>Measure Types</i>			
<p>Baseline</p> <p>refers to the system before any changes are implemented, e.g. the starting point that will be used as the basis for comparison</p>	<p>Process</p> <p>refers to how the system works, e.g. how healthcare is provided</p>	<p>Outcome</p> <p>refers to the results (the final product), e.g. the health status</p>	<p>Balance</p> <p>refers to whether the improvement changes lead to unintended consequences in other parts of the system</p>
<p>EXAMPLE: If the aim of your improvement plan is to increase the accurate recording of Aboriginal and Torres Strait Islander status by 50% within six-months:</p> <ul style="list-style-type: none"> • Baseline measures include the number of patients whose ethnicity is recorded as 'Aboriginal and Torres Strait Islander' (e.g. 20) from the total number of patients whose ethnicity has been recorded (e.g. 500). These numbers can be represented as a fraction (20/500) • A process measure may be the number of general practices submitting data on ethnicity at baseline and each month • An outcome measure may be the total number of patients with 'Aboriginal and Torres Strait Islander' ethnicity recorded • A balance measure may be the time taken to ascertain, and record, ethnicity status 			
<i>Denominator and Numerator (Please refer to the example baseline measure above)</i>			
<p>The numerator is the top part of the fraction (20) and the denominator is the bottom part of the fraction (500)</p>	<p>The numerator represents how many parts of the whole are being considered (in this case Aboriginal and Torres Strait Islander patients whose ethnicity has been recorded), while the denominator represents the total number of parts that comprise the whole (e.g. the total number of patients whose ethnicity has been recorded). A percentage can then be calculated for comparison (in the example, $20/500 = 4\%$ of the population whose ethnicity has been recorded as 'Aboriginal and Torres Strait Islander').</p>		
<i>Defining the Data</i>			
<p>It needs to be: available, collectable, and respond to improvement activity</p>	<p>To show improvement and to be comparable, ideally data need to be represented as percentages rather than whole numbers. This enables comparison between data of different sample sizes or totals, e.g. practices with different patient population numbers.</p>		

Assessing the Measures

Reliability

A measure is reliable when it produces similar results under consistent conditions (for example, an individual's weight)

Validity

A measure is valid if it measures what it is intended to measure

Responsiveness

A measure is responsive if it has the ability to detect change when it has occurred

Surveys

- Surveys can be a useful tool to gain information, such as the 'user experience' (for example, patient satisfaction with waiting times to see a GP). If using surveys, it is important to consider whether they yield information that is useful for quality improvement. This often requires the use of simple surveys that can be regularly administered (e.g. survey on waiting times conducted every month to see if small changes are having an impact)
- It is advisable to use pre-validated surveys, where possible, as they enable you to gain more insight with fewer questions and better results, assuring the reliability and validity of new surveys can be costly and time consuming
- If designing your own survey, decide which core measures you would like to see as graphs on qiConnect

Likert Scale

A Likert scaling is a bipolar scaling method, measuring either positive or negative response to a statement. This scaling method is recommended for satisfaction surveys.

On a scale of 1 to 10, with 10 being EXCELLENT and 1 being POOR, rate this workshop in the following areas (circle one number for each statement):

	POOR	EXCELLENT
Relevance to my job	1 2 3 4 5 6 7 8 9 10	
Amount of practice	1 2 3 4 5 6 7 8 9 10	

Considerations

- It is important to consider who will be administering the survey and the training and support that will be required. Additionally, the time it will take to collate and submit the data, and the person responsible for this work (e.g. Medicare Local staff or health service staff) will need to be considered
- Please try to implement, or support, "Protected Time" for data collection, collation and submission

Process for Selecting Measures

1. Consider your AIM

What is it you want to achieve or improve?

The data to be collected should directly relate to the QIP Aim or Topic Area. Consider the following:

- What are the measures for? Are they for front line teams in order to guide their improvement effort? Measures need to flow from those who are doing the work and need to be meaningful to the front line team
- Why are you measuring? (e.g. for improvement or to achieve another purpose?)
- Who are you measuring? (e.g. clinical or demographic characteristics of the population)
- Who will be collecting the data?
- How will they use the data?

2. List all possible measures

You may want to form a group to identify all possible measures. You will need to consider the membership of the group (e.g. if you expect to use clinical data, you may want to involve a GP)

Once you have listed all possible measures consider:

- Which of the measures relate to the topic area or aim?
- How easy will it be to collect the measure?
- Will the measure respond to improvement efforts?

3. Choose your measures

- Once you have chosen your measures consider:
- What is the best method of data collection? (The easiest method is ideal)
- Will you be sampling? (E.g. using a representative or a targeted group)
- How will you display the results?
- When will you collect baseline data, and what is the frequency of regular data collection?

4. Assess your choices

- Do you have a mix of measures?
 - ✓ Process
 - ✓ Outcome and
 - ✓ Balancing
- Have you described the denominator and numerator for each measure?
- Is the terminology clear / unambiguous (e.g. what does referral mean?)
- Are the measures:
 - ✓ Valid
 - ✓ Reliable and
 - ✓ Responsive