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# A model for measuring quality care

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## What is it?

Donabedian's (2005) three components approach for evaluating the quality of care underpins measurement for improvement. The three components are structure, process and outcomes. Measurement for improvement has an additional component – balancing measures.

Donabedian believed that structure measures have an effect on process measures, which in turn affect outcome measures. Together these form the basis of what is required for an effective suite of measures. The reality is that cause and effect are more complex, particularly within the NHS with so much variability in individual patients. The selection of relevant measures can be developed using [driver diagrams](#).

## When to use it

It is really important for improvement projects to have outcome, process, structure and balancing measures. It is not an either/or decision. Each of the different types of measures has a different purpose in determining whether the improvement project has had the desired impact.

**Outcome measures:** these reflect the impact on the patient and demonstrate the end result of your improvement work and whether it has ultimately achieved the aim(s) set. Examples of outcome measures are reduced mortality, reduced length of stay, reduced hospital acquired infections, adverse incidents or harm, reduced emergency admissions and improved patient experience.

**Process measures:** these reflect the way your systems and processes work to deliver the desired outcome. For example, the length of time a patient waits for a senior clinical review, if a patient receives certain standards of care or not, if staff wash their hands, recording of incidents and acting on the findings and whether patients are kept informed of the delays when waiting for an appointment.

**Structure measures:** these reflect the attributes of the service/provider such as staff to patient ratios and operating times of the service. These are otherwise known as input measures.

**Balancing measures:** these reflect unintended and/or wider consequences of the change that can be positive or negative. It is about recognising these and attempting to measure them and/or reduce their impact if necessary. An example of a balancing measure would be monitoring emergency re-admission rates following initiatives to reduce length of stay.

According to Donabedian, outcome measures remain the 'ultimate validators' of the effectiveness and quality of healthcare but can sometimes be difficult to define and have time lags.

Process measures are important in quality improvement as they describe whether or not clinical care has been 'properly applied' or if we are 'doing the things we say we should do'. From an improvement perspective, they make the important connection between behavioural changes and outcomes.

It is important to have both process and outcome measures as they connect the theory of change to your expected outcomes.

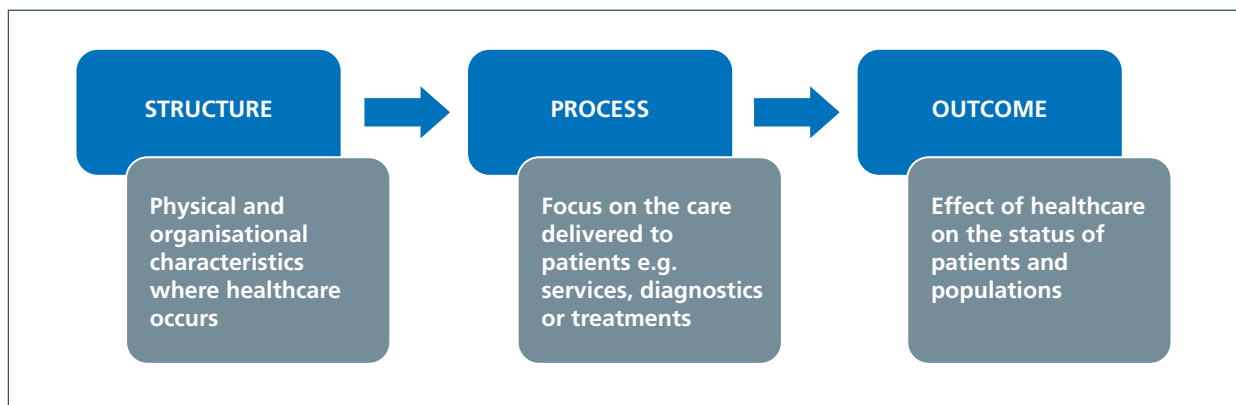
If you measure just outcomes, you cannot be sure the changes actually occurred in practice and therefore cannot link the improvements to outcomes.

If you measure just process, you cannot be sure if the outcomes have changed and the aim(s) achieved and therefore there is the risk that the process improved but the outcomes did not.

Alongside these, improvement projects should identify unintended consequences of change known as balancing measures – these can often be identified by listening to the sceptics and their concerns.

## How to use it

**Figure 1: The Donabedian model for quality of care**



## What next?

Measurement for quality improvement does not have to be complicated or result in many measures. Collecting a few measures over time and presenting the information well with [run charts](#) or [statistical process control](#) charts is fundamental to developing changes that not only have an impact but can be sustained and spread. This is a key component of the [seven steps to measurement for improvement](#).

## TIPS

Measurement can show us a number of important pieces of information:

- How well our current process is performing
- Whether we have achieved our aim(s)
- How much variation there is in our data and hence processes
- Whether a small test of change is having the desired impact
- Whether the changes made have resulted in an improvement
- Whether a change has been sustained.

## Additional resources

Donabedian, A (2005) Evaluating the Quality of Medical Care, *The Milbank Quarterly*, 83(4):691-729

Raleigh, VS and Foot, C (2010) *Getting the Measure of Quality: Opportunities and Challenges*, London: King's Fund