



EVALUATING EFFECTIVENESS MEASURING WHAT MATTERS WHEN RE-ORGANISING SERVICES

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1. Introduction

Improving the quality and safety of healthcare is a high priority internationally. However, when reorganising services it is often far from clear what should be measured to judge the success or failure of any change.

This paper examines how those contemplating re-organising services can make rational choices about what to measure to inform them whether changes have a beneficial impact. Although the example is based on one local community reorganisation, the general framework is applicable more widely.

2. Deciding what to measure when evaluating service change

Deciding what to measure is one of the most difficult issues for quality improvement programmes. The Safer Patients Initiative in NHS Tayside came with a set of measures created by the Institute for Healthcare Improvement,¹ but typically clinicians and managers are faced with reorganising services without ready made measures. Measuring what matters often requires considerable thought and planning.

Weaver's Triangle is one potentially useful framework for defining measures that matter.² From this perspective, service design and evaluation should start with a clear statement of the aim of the service, then define a set of outcomes (what the service is meant to deliver), which in turn define the set of planned activities (how the service is meant to deliver those outcomes). Measurable outcomes are therefore clear from the start, which is not the case when we more typically jump straight from aim to activities. Four points are important:

- In deciding what to measure, there is usually a cost and time trade off between 'ideal' and 'fit for purpose' measurement.
- If the planned activities are strongly linked to intended outcomes, then it is entirely reasonable to focus on measuring the outputs of those activities (proportion of people on warfarin with appropriate monitoring of INR, waiting times for appointment after referral with suspected cancer etc).
- If the link between activities/outputs and outcomes is less certain, then outcomes should also be measured if possible (admissions to hospital with over-anticoagulation

and bleeding, delays in cancer diagnosis etc).

- It is also useful to add a fourth layer to the triangle for 'plausible unintended outcomes'. Whatever we explicitly aim to change, we should always consider what might go wrong to try to make sure that it doesn't.



3. A Tayside example – “New models of care for community hospitals”

Aim: To widen access to community hospital beds and support NHS Scotland policy to shift the balance of care, by better integrating community hospitals into Tayside-wide pathways of care, but preserving “the best traditions of high quality general practitioner community hospital care and local access”.

Community Hospital work cannot be as standardised as the kind of ITU care targeted by the Safer Patients’ Initiative because the kinds of patients and problems being dealt with are more varied. However, that doesn’t mean that there aren’t useful measures of outcome and activity to measure during any reorganisation.

- The key outcomes on the top row of the second tier can be measured using SMR data on hospital admissions.
- Some of the key activities can be measured. For example, more effective discharge process can be assessed through patient and carer survey of its quality, or by measuring whether multidisciplinary teams have been appropriately involved. Other key activities like the organisation of medical cover may be difficult to measure, but can be assessed using more qualitative methods, or through proxies such as response time to request for medical review by the charge nurse.
- Some of the unintended outcomes are measurable including rapid transfer of inappropriate out-of-hours admissions and readmissions of patients with complex problems, but others such as the loss of continuity or personal care can only be indirectly assessed.

In this case, the aim of evaluation is to ask “Does this intervention improve our quality of care?” and a trial is clearly inappropriate. From a quality improvement perspective, then changes in patterns of admissions (the intended outcome) for each community hospital should be routinely monitored over time as the new model is implemented, with activities ideally being continually

Figure 1: Weaver’s Triangle

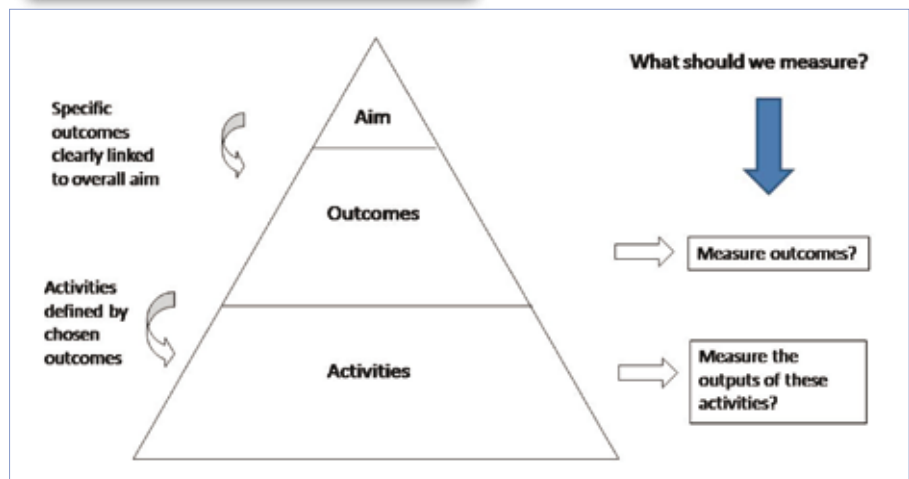
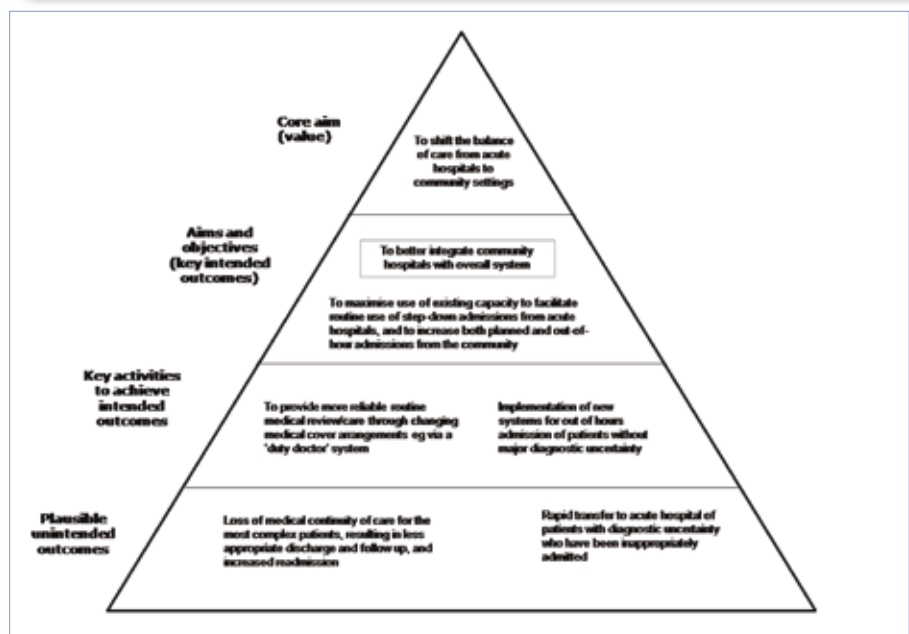


Figure 2: Weaver’s Triangle modified to include plausible unintended outcomes



improved in a cyclical step-by-step process focused on improving the chosen outcomes, and with as much measurement or other assessment of unintended outcomes as possible.

Conclusion

Deciding what to measure to evaluate service re-organisation is rarely easy, but it is useful to be clear about the outcomes that the change is intended to achieve from the start, rather than focusing too rapidly on the activities that will be changing and forgetting to measure outcomes. Additionally, careful thought about what might go wrong (including asking sceptics and cynics) will identify the most obvious unintended outcomes for measurement and monitoring.

References

1. Institute for Healthcare Improvement. *The Health Foundation Safer Patients Initiative* <http://www.ihl.org/IHI/Programs/StrategicInitiatives/SaferPatientsInitiative.htm>. Boston: Institute for Healthcare Improvement, 2008.
2. *Evaluation Guide 12: intensive interventions with young people*. Edinburgh: Effective Interventions Unit, Substance Misuse Division, Scottish Executive Health Department, 2004.