

Balancing measures or a balanced accounting of the (un)intended consequences of improvement interventions? Qualitative analysis of individual and focus group interviews and a Delphi consensus study with improvement experts

Abstract

Background:

Work to systematically improve the quality of healthcare has steadily grown in scope and scale, but it is increasingly recognised that improvements can have unintended consequences beyond their intended effects. More routine use of balancing measures to monitor these consequences has been proposed to support improvers to better evaluate the overall effectiveness of their work but very little information is available on how measures should be defined and implemented.

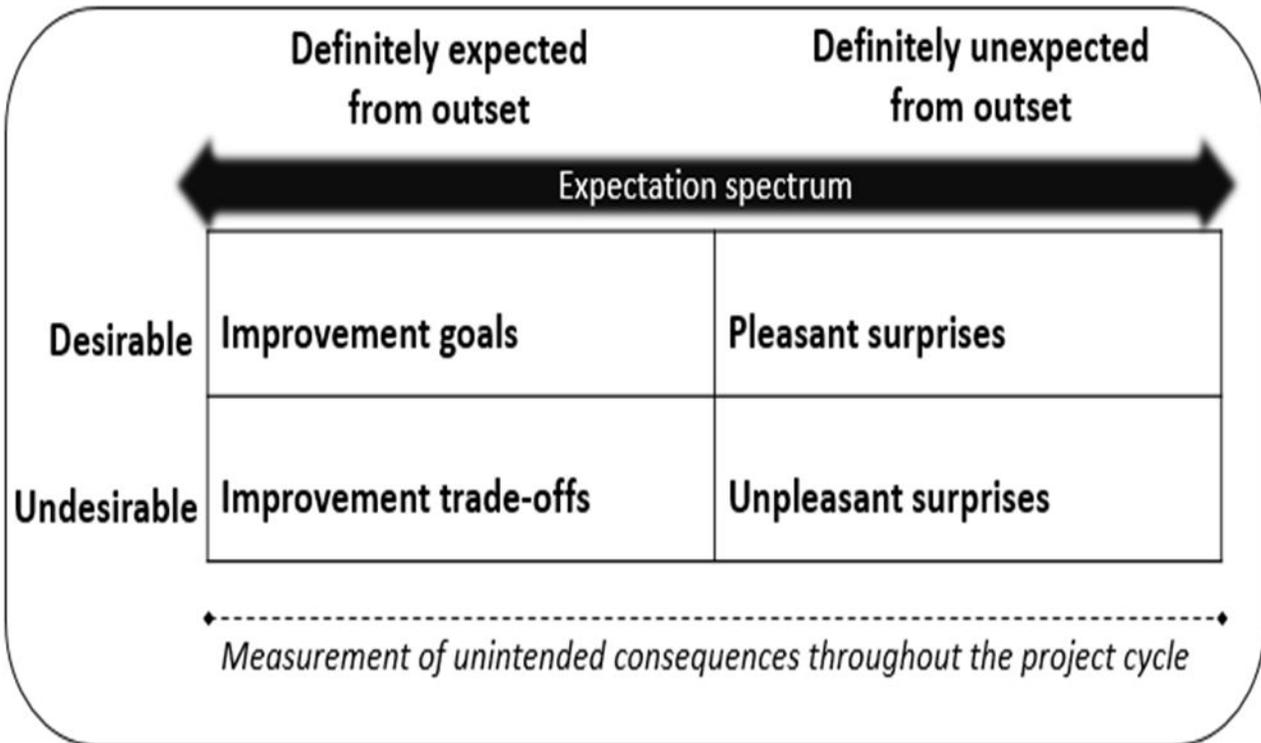
Methods

We conducted fifteen semi-structured interviews, two focus groups and a two rounds Delphi consensus study with improvement experts with the aim of exploring the purpose, design and use of balancing measures and subsequently formulate and refine a conceptual framework for considering all consequences of improvement activity.

Results:

Findings suggest that balancing measures are not limited to monitoring expected undesirable consequences (*trade-offs*), and can also be a process or outcome measure. Participants' accounts reflected a broader balanced accounting of the impact of improvement interventions, which include consideration of the extent to which certain consequences are desirable and expected when planning improvement.

Figure 2-Types of consequences of quality improvement projects¹¹



While offering a pragmatic way of including constructive sceptics and understanding legitimate concerns, the potential value of designing and implementing balancing measures has to be balanced against the cost of implementation in the wider context of overall measurement burden.

¹¹ Figure 2 describes the different types of consequences of quality improvement, based on their degree of desirability and predictability, prior and post implementation. For example:

- *The expected desirable* consequences are the initial **improvement goals** typically measured from the beginning as part of improvement projects.
- **Improvement trade-offs** are *undesirable* in nature and often *expected* from outset as an improvement compromise when benefits of initial goals are larger.
- *Unexpected* consequences with *desirable* outcomes may be thought of as **pleasant surprises** whereas *unexpected and undesirable* consequences are the **unpleasant surprises** of improvements efforts. Expectations may not be well-articulated from the outset or may vary across involved individuals, so any consideration of these unexpected consequences has to be done after improvement implementation.

Conclusions:

Balancing measures were deemed relevant and much-needed to describe how well current systems are working and what happens when changes are introduced. Extending the scope of existing improvement definitions, reinterpreting several existing key theories in the field and adding new empirical evidence, this paper provides a practical tool for understanding the broader balanced accounting of improvement impact and considering balancing measures when unintended consequences are identified in different contexts prior, during or after the improvement implementation.

Madalina Toma, research fellow², Tobias Dreischulte, research pharmacist³, Nicola Gray, programme manager and senior lecturer^{4,1}, Diane Campbell, associate director for patient safety⁵, Bruce Guthrie, professor of primary care medicine⁶

Authors affiliations:

Scottish Improvement Science Collaborating Centre, School of Nursing and Health Sciences, University of Dundee, 11 Airlie Place, Dundee, DD1 4HJ

² Tayside Medicines Unit, NHS Tayside, Dundee, UK

³ NHS Tayside, Nurses Residence, Room C3006, Ninewells Hospital, Dundee, DD1 9SY, NHS Tayside

⁴ Quality, Safety and Informatics Research Group, Centre for Primary Care and Population Research, University of Dundee, Kirsty Semple Way, Dundee DD2 4BF, UK

Keywords

Healthcare, Quality improvement, implementation, balancing measures, unintended consequences, expected, unexpected, desirable and undesirable consequences

Some previous iterations of this work are available at:

2

3

4

5

6

- Poster NHS Scotland (2016)
<http://nhsscotlandevent.com/sites/default/files/2016%20-%20NHSScotland%20Event%20-%200posters%20-%20S22%20-%20proofed%20-%20May%202016.pdf>
- Poster Healthcare Improvement Scotland 4th Annual Research Symposium: Mobilising evidence to drive improvement (2016)
[http://www.healthcareimprovementscotland.org/news_and_events/events/4th_annual_research_symposium.aspx?theme=mobile%20-%20prettyPhoto\[image_map\]/3/#](http://www.healthcareimprovementscotland.org/news_and_events/events/4th_annual_research_symposium.aspx?theme=mobile%20-%20prettyPhoto[image_map]/3/#)