CHAPTER 1

What is Quality?

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OVERVIEW

- Quality is the degree of excellence of something; how good or bad it is.
- Quality in healthcare describes the degree to which care is safe, effective and provides a good patient experience.
- Quality can be measured in terms of structures, processes and outcomes.
- Value-based approaches go beyond quality to consider population health outcomes and what really matters to patients.

What is quality?

Quality is an elusive concept, not helped by the way we commonly use the word in the English language. Quality can mean the extent to which something meets a standard or set of standards. So, healthcare may be of high or low *quality*. But it can also refer to a distinguishing characteristic or property possessed by something – among the *qualities* of this book for instance, is that it is brief and to the point – or even as a synonym for excellence; it is, of course, a *quality* publication. For the remainder of the book we will adopt the first of these as our general definition, that is quality as **the degree of excellence of something**; how good or bad it is.

This then, immediately raises a question about the dimensions of 'excellence' that we are interested in. What specifically in healthcare is important to us, that we would wish to set standards, measure and seek to improve?

Quality in healthcare

In 1999, the US Institute of Medicine published the first of a series of outputs from its project The Quality of Health Care in America. *To Err is Human* (Kohn *et al.*, 2000) was a wake-up call, full of shocking statistics about medical error and the disparity between the incidence of such errors and public perception of the infallibility of the healthcare professions. The follow-up publication, *Crossing the Quality Chasm* (Committee on Quality of Health Care in America, Institute of Medicine, 2001), was more forward looking and proposed a strategic framework for quality improvement in healthcare. Contained within the report is a statement of purpose for those who seek to improve healthcare quality: to bring about 'improved health, greater longevity, less pain and suffering, and increased personal productivity to those who receive their care'.

The Institute of Medicine went on to describe six 'aims', effectively domains that describe the areas to which we need to attend when considering the quality of healthcare (Figure 1.1). These are the extent to which healthcare is:

Safe: avoiding injuries to patients from the care that is intended to help them.

Effective: providing services based on scientific knowledge to all who could benefit, and refraining from providing services to those not likely to benefit.

Patient-centred: providing care that is respectful of and responsive to individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions.

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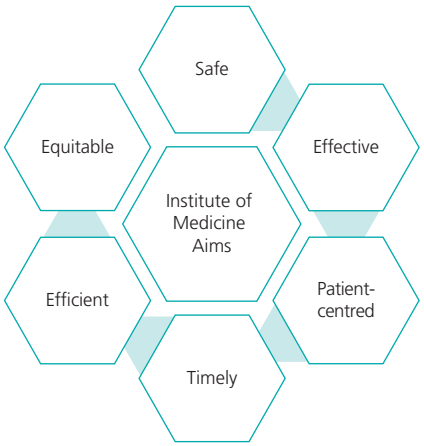

Figure 1.1 Six domains of healthcare quality. Source: Institute of Medicine.

Timely: reducing waits and sometimes harmful delays for both those who receive and those who give care.
Efficient: avoiding waste, including waste of equipment, supplies, ideas and energy.
Equitable: providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location and socioeconomic status.

Similar lists can be found throughout the world; indeed, the World Health Organisation adopts an almost identical definition of the quality of care: 'the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficient, equitable and people-centred' (WHO, 2016). And the NHS in England has a similar outlook on quality, namely that it should be safe, 'effective and provide a positive patient experience' (NHS, 2016).

Measuring quality

When it comes to assessing quality within the above domains, we have a number of options about what we choose to measure. Donabedian provides a useful conceptual model for examining services and evaluating quality of healthcare. According to Donabedian (1966), information about quality of care can be drawn from three categories: 'structure', 'process' and 'outcomes'.

Structure describes the context in which care is delivered. This might include the equipment used, the staff available and the buildings in which care takes place. Staffing ratios on wards are a structural measure of quality.

Process refers to the interactions between patients and staff, and between staff themselves, during the delivery of an intervention or an episode of care. An example might be the frequency that a deteriorating patient is reviewed.

Finally, *outcomes* are the manifestations of the effects of healthcare interventions on the health and well-being of patients and populations. This could include anything from institutional mortality rates to population-based measures of well-being.

Quality control, assurance and improvement

We have three further definitions to explore before proceeding: quality control, quality assurance and (the subject of this book) quality improvement.

Quality control is an internal process designed to compare the level of performance of a system against adopted standards or benchmarks. It should be continual, responsive and used by people closest to, and responsible for, the work. An example might be the repeated checking of results in the biomedical laboratory where statistical processes are used to monitor the reliability of machines and processes that produce patient blood results.

Quality assurance also evaluates performance; it is the planned and systematic process of gathering evidence to provide confidence that a system is meeting internal or external standards. Assurance is measured after the event. As an example of quality assurance in relation to the example given above, laboratory staff would periodically perform audits to check the number of errors occurring. This provides information on whether an acceptable level of safety is being achieved.

Quality assurance is an essential part of good governance, where boards or governing bodies will seek evidence-based 'assurance', rather than reassurance. Evidence commonly used by hospital boards as part of quality assurance processes includes achievement of nationally approved standards and targets, clinical incident reporting, patient surveys and number of complaints, staff surveys and mortality rate. This is often combined with the process of identifying good practice, as well as that which falls below standard, and the publication or dissemination of results. Similar information on care quality is also sought by commissioners and regulators resulting, in many instances, in a burgeoning assurance 'industry'.

Quality improvement describes a systematic process to improve quality; areas are identified for improvement, the problem understood, solutions tested and the impact of any change evaluated and measured. An example might be improving waiting times to access a mental health service, reducing the length of stay and bed occupancy or reducing

medication error in the emergency department. There is no single definition of quality improvement, and no one approach appears to be more successful than another. Quality improvement, or QI for short, is explored in detail in the chapters that follow.

Theories of quality

For those wishing to explore the theories that surround the concept of 'quality' and its management we have provided signposts to some further reading. But before moving on it is worth pausing briefly to reflect on the work of a handful of significant and influential 'quality' thinkers:

Joseph Juran (1904–2008) was a passionate advocate for quality management both in the US and Japan. He is best known for his 'quality trilogy' distinguishing between quality planning, control and improvement, and his adoption and promulgation of the Pareto principle; that 80% of the problems are produced by 20% of the causes (see Chapter 8). Juran identified 10 steps to quality improvement and emphasised that if a quality improvement project is to be successful, then all quality improvement actions must be carefully planned out and controlled.

W. Edwards Deming (1900–1993) also made a significant contribution to the quality practices of the post-war Japanese and US manufacturing industries. Alongside ***Phillip Crosby*** (1926–2001) he is credited with being the father of Total Quality Management (TQM) and developed his own 14 principles of improvement. The culmination of his work was though his System of Profound Knowledge, which serves to highlight that if we really want to make improvement progress in the messiness of real world we need to consider four broad domains:

- appreciation of a system
- knowledge of variation
- theory of knowledge
- understanding of psychology.

Crosby, by contrast, in a forerunner of the Six Sigma Approach (see Chapter 4), focused his attention on what he termed the four *absolutes* of quality. For Crosby, quality is defined as conformance to requirements, not 'goodness' or 'elegance'; the system for causing quality is prevention, not appraisal; the performance standard must be zero defects, not 'that's good enough' and the measurement of quality is the price of nonconformance, not indices.

Finally, ***Kaoru Ishikawa*** (1915–1989) was a Japanese professor and innovator within the field of quality management and is known for a technique of causal analysis known as the fishbone or Ishikawa diagram (see Chapter 7). Ishikawa led much of the early thinking around quality control and was responsible for the concept of the 'quality circle', where groups of workers involved in similar tasks voluntarily come together regularly to engage in mutual problem definition and problem solving. Still in use today, the approach has led to the widespread adoption of many other participatory management practices.

From higher quality to better value

In recent years, there has been a shift in 'quality thinking' to the related concept of value. Value can be thought of as simply the quality of something divided by its cost. To increase value one either increases the quality or decreases cost, preferably both. However, a more sophisticated view on value, in relation to health, was introduced in 2006 by Michael Porter and Elizabeth Teisberg in their book *Redefining Health Care* (2006).

Porter and Teisberg argued that efforts to reform healthcare had been hampered by a lack of clarity about goals and that focusing too narrowly on individual dimensions of quality misses the point. In healthcare, the overarching goal must be about improving *value* for patients. Value in this instance is defined as the health outcomes that matter to patients, relative to the cost of achieving them. Improving value requires either improving *outcomes* without raising *costs* or lowering costs without compromising outcomes, or both.

Muir Gray (2015) suggests that a 'value-based' approach to providing services has three important elements:

- Allocative value: allocate resources to different groups equitably and in a way that maximises value for the whole population.
- Technical value: improve the quality and safety of healthcare to increase the value derived from resources allocated to particular services.
- Personalised value: base decisions on the best current evidence, careful assessment of an individual's clinical condition and an individual's values.

This concept is explored further in Chapter 14 in relation to sustainable approaches expand how value in healthcare can be conceived to include the measurement of health outcomes against environmental, social and financial impacts.

A related concept is that of the Institute of Healthcare Improvement's Triple Aim (2007), a framework that describes an approach to optimising health system performance, applying integrated approaches to simultaneously improve care, improve population health and reduce costs per capita. This approach goes one step further than the detail of Porter's values-based healthcare model and proposes that a population approach and co-production with

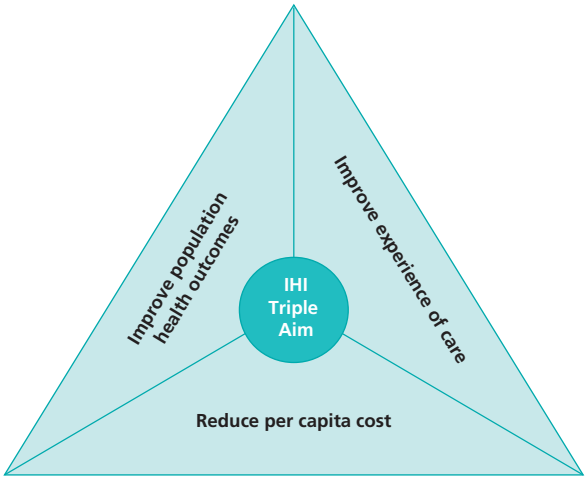

Figure 1.2 The triple aim of healthcare improvement. Source: Berwick *et al*. (2008).

stakeholders are essential to create value. The system of healthcare is considered in the round, describing the entire network of prevention, health and social care and focusing on the need and healthcare demand of entire populations. The goal of this coordinated collaboration is then to achieve an optimal outcome in terms of quality, health and costs; the triple aim. See Figure 1.2.

Conclusion

From improving patient safety, to ensuring high-quality care, to value-based approaches and realising the triple aim, there has been a growing sense that the successful health and healthcare systems of the future will be those that can simultaneously deliver excellent quality of care, at optimised costs, while improving the health of the populations that they serve. But to bring about these changes requires the skills, tools and mindsets of quality improvement which the remainder of our book will now go on to describe.

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Further reading and resources

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