How Do Hospitals Deliver Safe, Effective and High Quality Care?

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Over the years there have been several methods to assess whether care given in a hospital setting is safe. As healthcare scandals have occurred such as in Bristol paediatric heart surgery [1], or general care in Mid Staffordshire NHS Trust [2] both healthcare regulators and service providers have desired improved methodology to assess not only safety, but also the effectiveness and quality of care provided to patients and their families. This chapter will review how hospitals that are recognised for safe, effective and high quality care have done so, and how their lessons are shared to the wider healthcare community.

It is important to understand what the terms safe, effective and high quality mean in the context of a healthcare setting:

Safe Safe means that people are protected from abuse and avoidable harm (abuse can be physical, sexual, mental or psychological, financial, neglect, institutional or discriminatory abuse) [3]. Emphasis is placed on the system of care delivery that prevents errors; learns from the errors that do occur; and is built on a culture of safety that involves health care professionals, organizations, and patients [4].

Effective Effective means that people's care, treatment and support achieves good outcomes, promotes a good quality of life and is based on the best available evidence [3]. Effective also has meaning relating to how an organisation uses its resources to provide safe and effective care, the appropriate use of inputs (staff, equipment and medicines) at the lowest cost (economy) to achieve the best mix of high quality outputs (patients receiving treatment) [5].

High Quality Quality is a more nebulous concept in the healthcare setting in that it is the overarching feature that encompasses other indicators of care. The World Health Organisation (WHO) defines quality as: "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" [6].

Combining the above definitions it can be considered that safe, effective and high quality care is when a patient receives the best evidenced treatment, without complications, efficiently through quicker recovery and shorter lengths of stay using appropriate resources.

Historically hospital safety was judged through crude markers such as mortality rates; these assumed homogeneity within healthcare organisations and could offer false assurance from favourable results. However variation in mortality

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rates cannot be ignored, as they might indicate unacceptable variation in healthcare and avoidable mortality, but they also cannot be reliably used to judge the quality of healthcare, based on current evidence [7]. This view was echoed by Sir Robert Francis "it is in my view misleading and a potential misuse of the figures to extrapolate from them a conclusion that any particular number, or range of numbers of deaths were caused or contributed to by inadequate care" [2].

Following the publication of Sir Bruce Keogh's report into care at 14 failing NHS trusts [8], the Care Quality Commission began examining in depth all NHS acute and specialist trusts across a range of metrics. This review summarised in the report "The state of care in NHS acute hospitals: 2014–2016" [3], is the most comprehensive examination of a healthcare system yet and is able to describe at service and organisational levels what safe, effective and high quality care looks like.

The CQC inspections involved a review of eight key services:

- Urgent and emergency services
- Medical care
- Surgery
- Critical care
- Maternity and gynaecology
- Services for children and young people
- End of life care
- Outpatients and diagnostic imaging

Each service was rated against the metrics of Safe, Effective, Caring, Responsive and Well Led, the ratings being on a four point scale, Outstanding, Good, Requires Improvement and Inadequate. These ratings are aggregated to provide an overall hospital rating as in Table 4.1.

The ratings provide a snapshot in time of the quality of care at core service, hospital and trust level [3].

It can be seen that the CQC inspections uncover variable practice within the same organisation, so even hospitals rated outstanding overall may have areas rated as requiring improvement.

The inspections when aggregated also provide new information regarding patient safety; Fig. 4.1 shows the relationship between CQC ratings and financial performance.

It can be deduced that hospitals rated as outstanding often do better financially than hospitals rated as providing at a lower level. The hypothesis for these findings is that hospitals that provide safe and effective care do not have the financial burden for prolonged lengths of stay and additional diagnostics, care and treatments when harm occurs.

The CQC inspections concluded that there was commonality between organisations that performed well, this can be summarised in Fig. 4.2.

In practice all six features are closely interrelated and each requires aspects of the others to succeed.

Table 4.1 An example of how the CQC rate a healthcare organisation

	Safe	Effective	Caring	Responsive	Well led	Overall
Urgent and emergency services	Good	Good	Good	Good	Good	Good
Medical care	Good	Good	Good	Good	Good	Good
Surgery	Good	Good	Good	Good	Good	Good
Critical care	Good	Outstanding	Good	Good	Outstanding	Outstanding
Maternity and gynaecology	Good	Good	Good	Outstanding	Outstanding	Outstanding
Services for children and young people	Good	Good	Good	Good	Good	Good
End of life care	Good	Requires improvement	Good	Good	Requires improvement	Requires improvement
Outpatients and diagnostic imaging	Good	Not rated	Good	Good	Outstanding	Outstanding
Overall	Good	Good	Good	Good	Outstanding	Good

Adapted CQC ratings for Sheffield Teaching Hospitals NHS Foundation Trust [9]

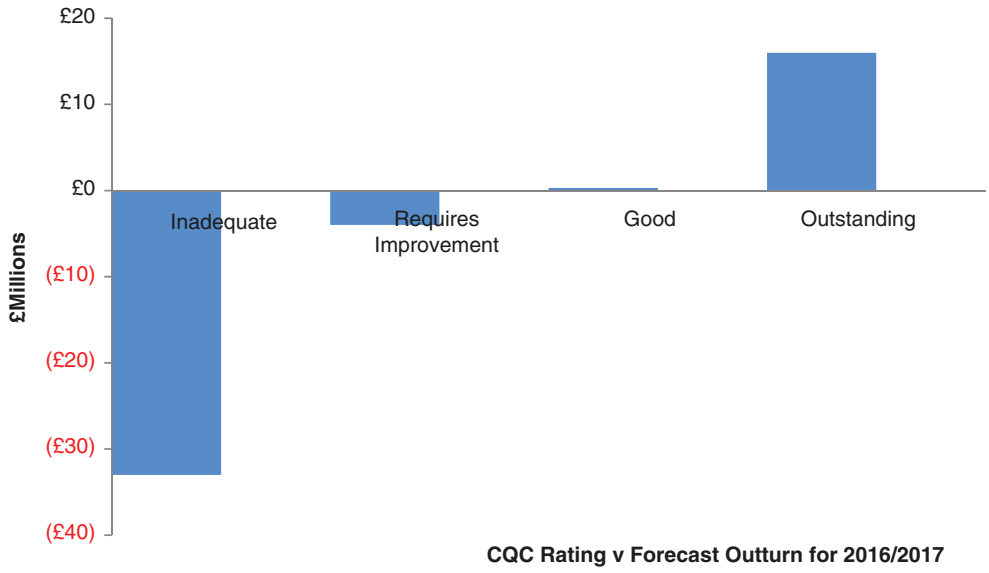
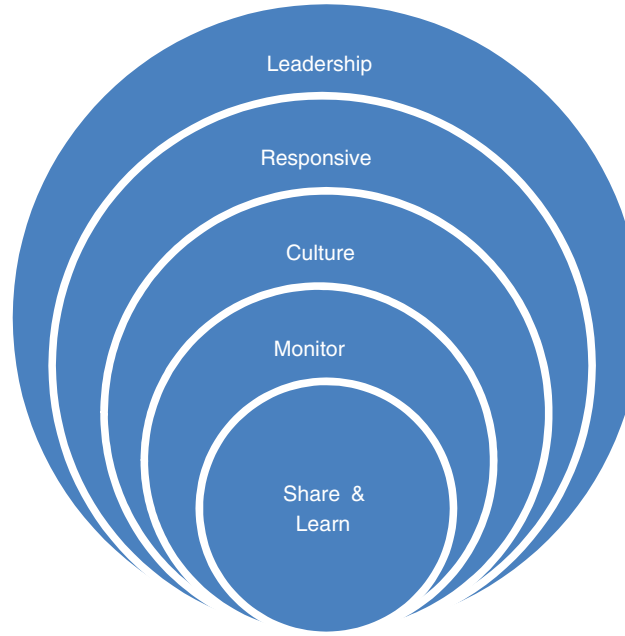


Fig. 4.1 The relationship between CQC ratings and financial performance of Healthcare Organisations. Adapted from The State of Care In NHS Acute Hospitals 2014–2016 [3]

Fig. 4.2 Features of a high performing organisation



Leadership

It is clear that for an organisation to provide safe, effective and high quality care there must be effective and visible leadership throughout the organisation. This starts at board level, and continues to all levels of the organisation. The board is responsible for ensuring:

- The quality and safety of health services.
- That resources are invested in a way that delivers optimal health outcomes.

- In the accessibility and responsiveness of health services.
- That patients and the public can help to shape health services to meet their needs.
- That public money is spent in a way that is fair, efficient, effective and economic [10].

The CQC has found that in hospitals rated good or outstanding, the trust boards actively engaged with staff to determine how the organisation needed to improve. The composition and capabilities of the board have been shown to influence the ability of the board to engage with staff, and to encourage reporting and handling of patient safety issues [11]. Jones et al. state that boards with mature quality improvement (QI) cultures had strong clinical leadership and engaged staff and patients [12]. Moreover objective data presented to boards was enhanced by softer subjective data gleaned by clinical leaders from their encounters with staff in the clinical scenarios. These boards were also skilled in balancing short term external priorities with the needs of their own long term improvement initiatives [13]. There is increasing stress at executive level, with shorter tenures and increasing vacancies in trusts experiencing the most challenged levels of performance. Trusts rated as 'inadequate' by the Care Quality Commission had 14% of posts vacant, compared to only 3% in trusts rated as 'outstanding'. This has a knock on effect on staff who feel their leaders have less credibility, and also delays organisational progress [14]. Therefore consistent and lasting leadership at board level would seem important for an organisation to provide quality care.

Whilst leadership from the boards is essential, it is equally important that consistent leadership is in place at every level of the organisation. One reason given for the variability in quality within high performing organisations is poor leadership in certain areas. This leadership must be values-driven and coupled with a learning culture to provide high quality care [3].

Responsiveness

Responsiveness or agility in healthcare relates to the ability of an organisation to react and adapt quickly and successfully in the face of rapid change [15]. This may be in relation to a sudden influx of patients, changes in staff levels or national agenda items such as finance. Healthcare in general does not like change, and despite multiple efforts to improve, across the system there is inertia [16] and a reliance on previous experience to deal with times of stress.

Responsive health systems anticipate and adapt to changing needs, harness opportunities to promote access to effective interventions and improve quality of health services, ultimately leading to better health outcomes [17].

Responsiveness also means that services are organised to meet people's needs [18]:

- Services are planned for the population they serve;
- Care is coordinated with external agencies;
- Care is available when needed, without undue delay;
- Complaints and concerns are taken seriously and dealt with in a timely manner. Lessons are learnt from complaints

When services are designed to serve the population using them, they are more likely to provide a better patient experience which is associated with better health and financial outcomes [19].

Culture

Good leadership is the foundation for organisational culture. Baker [20] describes high performing international organisations whose leaders commit to building a professional culture that encourages improvement, patient engagement and teamwork. Organisations rated as outstanding by the CQC exhibited cultures that were open and honest, where staff were listened to

about safety concerns and the board sought the views of patients and staff in ways in which the organisation could improve [3].

In Sir Robert Francis's review of creating an open and honest reporting culture within the NHS, Freedom to Speak Up [21] he defines what good looks like in a safe culture as:

- Culture of safety—a move away from blame to just, where safety questions are asked and addressed and learning gained from the process.
- Culture of raising concern—A shared belief at all levels of an organisation in speaking up about concerns, and supporting those who do so.
- Cultures free of bullying—bullying inhibits the freedom to speak up and is counter to the concept of a just culture.
- Culture of visible leadership—authenticity of leaders at all levels in espousing the values and beliefs of the organisation is paramount to the nurturing of a safety culture.
- Culture of valuing staff—recognising the value in raising concerns and supporting staff leads to better staff engagement. NHS staff surveys have shown improved staff engagement leads to better patient outcomes and financial performance.
- Culture of reflective practice—allowing staff to reflect on issues, systems and learning from incidents.

Staff engagement is a good mirror of the culture within an organisation and there is compelling evidence that quality of care, patient experience and mortality are directly related to staff engagement. Unfortunately the corollary of this is also true, where there is poor engagement, where staff do not feel valued, care suffers [22]. During the mid-2000's Mid Staffordshire NHS Foundation Trust had some of the lowest staff engagement scores in the NHS, a period associated with a lack of quality, safety and compassion. Conversely Salford Royal NHS Foundation which has been rated as outstanding in successive CQC visits has some of the highest staff engagement scores. There is no magic bullet to improve culture and staff engagement. However having a set of core values and beliefs which put the patient first, are led by the board and practised by all staff would seem to be important. The King's Fund [23] has suggested six building blocks that over time will help to improve and harness staff engagement:

- Develop a compelling, shared strategic direction
- Build collective and distributed leadership
- Adopt supportive and inclusive leadership styles
- Give staff the tools to lead service transformation
- Establish a culture based on integrity and trust
- Place staff engagement firmly on the board agenda

The ultimate test of a vision has to be whether it transcends the mission statement and enters the organisation's bloodstream—the rites, rituals, cultural norms and stories about 'how we do things around here'. In November 2014, staff at Wrightington, Wigan and Leigh NHS Foundation Trust wheeled a 77-year-old cancer patient into the hospital car park to say goodbye to the horse she had cared for for more than 25 years. For staff, the message from the story is clear: this is an organisation that really is trying, as it claims in its mission statement, to put patients 'at the heart of everything we do', and is giving staff the freedom and support to translate the vision into practice.

Case Study adapted from the King's Fund [23].

Sustaining and embedding QI initiatives and staff involvement into the organisations culture can be problematic. Several organisations have adopted varying methods to ensure that initiatives become "business as usual". The following are examples from NHS Employers [24] where sustained improvement has become ingrained within the culture of the organisation:

Sheffield Teaching Hospitals

Developed a Micro Systems Coaching Academy to support staff to improve in their workplace. The aims of the academy are:

- Build improvement capability into the workforce
- Maximise quality and value to patients
- Help multi-disciplinary front-line teams rethink and redesign services.

The teams are coached by staff trained in service improvement methodology to redesign their services.

Tees Esk and Wear Valley

This is a specialist mental health organisation and has a longstanding commitment to staff engagement and service improvement. It started out with a focus on Lean methods. It has a large number of staff trained in using quality improvement tools, and recently it has developed a local quality improvement system (QIS), which emphasises that staff know best. The aim of the QIS is to:

- Analyse existing practice
- Enable staff to determine what is changed and how
- Provide staff with tools to make change.

Ashford and St Peter's Hospitals NHS Foundation Trust

Be the Change programme was initially developed by junior doctors. The trust focussed on involving as many staff as possible in making small improvements in their own areas, with the aim being to build up a culture of improvement. It provided:

- The opportunity to share ideas for improvement
- The opportunity for frontline staff to become change champions
- Developmental opportunities.

Hundreds of postcards were submitted with ideas for improvement, and over 40 quality improvement projects were launched with a junior doctor and change champion leading each one. The top three projects received recognition by the executive team and support to full implementation. These and others examples demonstrate sustained quality improvement that becomes ingrained to the organisational culture.

Monitor

For an organisation to know it is safe and provides quality care it needs to measure and analyse its performance. It has already been stated that simple measures of an organisation such as mortality rates are crude and insufficient. So what should an organisation measure and monitor?

External inspections, such as those by the CQC provide a snapshot in time, but are an indication of how the organisation performs against a fundamental set of standards of safety and quality [25]. A high quality organisation must continuously monitor and learn to ensure patient safety and compassionate care. However in 2013 Berwick found "that most healthcare organisations at present have very little capacity to analyse, monitor or learn from safety and quality information" [26].

One approach developed in the UK was to design a framework for safety encompassing five domains [27]:

- Have we been safe in the past?
- Are systems and processes reliable?
- Is care safe today?

- Will care be safe in the future?
- Are we responding and improving?

This approach allows an organisation to assess and reflect on its past, present and future ability to provide quality care at organisational level. It relies on the ability to measure various indicators in each domain; however this can be problematic as most organisations do not collect the required data in a meaningful way. Furthermore NHS Trusts often rely on too few metrics to assure themselves on the quality of their services [3].

Another approach gaining acceptance in the US and some European countries is to monitor what matters to the patient, based on the values based healthcare delivery (VBHCD) described by Porter [28]. In this methodology there is recognition that existing monitoring is generally of process compliance with guidelines or headline values such as mortality rather than the patient's experience. In contrast VBHCD measures outcomes across three tiers, specific to the disease or intervention at a patient level. For example below would be the outcomes for a hip replacement operation:

- Tier 1
  - Health Status achieved or retained
    - Survival (eg Mortality)
  - Degree of health or Recovery
    - Functional level achieved
    - Pain level achieved
    - Ability to return to work
- Tier 2
  - Process of recovery
    - Time to begin treatment
    - Time to return to physical activities
    - Time to return to work
  - Disutility of care or treatment process (eg diagnostic errors, ineffective care, complications, adverse effects)
    - Delays and anxiety
    - Pain during treatment
    - Length of hospital stay
    - Infection
    - Venous thromboembolism/ Myocardial infarction
    - Need for re-operation
- Tier 3 Sustainability of health
  - Nature of recurrences
    - Maintained functional level
    - Ability to live independently
    - Need for revision or replacement
  - Long term consequences of therapy
    - Loss of mobility due to inadequate rehabilitation
    - Susceptibility to infection
    - Regional pain

Adapted from Measuring Health Outcomes Michael Porter New England Journal of Medicine [29].

These outcomes can be compared locally, nationally or internationally as a driver for quality improvement.

Outcomes measurement has become a science in itself, national and international cooperation is required in order that consistent and comprehensive measurement is achieved globally.

This methodology will allow meaningful comparison to occur and rapid improvement be stimulated.

An international group has been established to develop and publish agreed outcome measurements, the International Consortium for Health Outcomes Measurement (ICHOM) [30].

However data is collected, it is clear that to provide high quality and safe healthcare an organisation must devote resource to continually monitoring and reacting to the services it provides. Using benchmarking in an open and transparent fashion against similar organisations locally, nationally and internationally can only drive up quality.

Sharing and Learning

One of the factors that differentiated hospitals rated as outstanding by the CQC from those rated as inadequate was the culture around how the hospitals dealt with safety concerns [3]. Unsurprisingly it appears that an organisation which listens to its staff, has an open and learning culture and learns from issues raised will provide better care to the population it serves. Authenticity

in organisational values and behaviours is critically important in developing this culture. In the NHS all staff have a duty to protect patients from harm [31], however staff may be inhibited from doing so if a blame culture exists. In addition some hospitals use incident reporting as a performance management tool which leads to investigation fatigue and overload of the systems, potentially leading to missed opportunities to learn from patient safety issues [32]. All NHS organisations must have a system for reporting near misses and harm, and should examine and assess if any learning should be gleaned from incidents. In addition in England and Wales there has existed since 2003, a National Reporting and Learning System (NRLS), which is a central database of patient safety incident reports. All information submitted is analysed to identify hazards, risks and opportunities to continuously improve the safety of patient care [33]. Information is passed back to all organisations in a monthly report to disseminate.

Italy has a relatively recent safety policy agenda; set up in 2008 the National Observatory on Good Practices for Patient Safety it is regarded as a model for international health organisations to emulate [25].

The National Observatory on Good Practices for Patient Safety is designed to:

- Address the heterogeneity of care across Italy's 21 regional healthcare systems in relation to patient safety issues.
- Identify and disseminate good practice to reduce poor health outcomes
- Evaluate implementation of good practice and respond to the feedback from the healthcare systems
- Understand the barriers for implementation
- Monitor compliance using questionnaires
- Promote ownership among professionals and healthcare systems (including patients and citizens).

By utilising improvement methodology (PDSA cycles) and a bi-directional approach the National Observatory has succeeded in implementing a national patient safety initiative that can be transferable across national and international healthcare systems.

Case study on National Observatory on Good Practices [25, 34].

Conclusions

No one hospital or organisation will have all the answers to providing the best quality, safe and effective care for the populations it serves. However the hospitals rated highest will have, to some extent, aspects of all the above factors ingrained into the way they operate. The challenges lying ahead of reduced staff levels (especially nursing), junior doctor's numbers and training, and the implications for BREXIT on the NHS will severely test the ability of organisations to function. Those who demonstrate the values espoused above have a greater chance of continuing to serve their patients with compassion in a safe and engaged environment.

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