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Understanding and measuring quality of care

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Understanding and measuring quality of care: dealing with complexity

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Abstract

Existing definitions and measurement approaches of quality of health care often fail to address the complexities involved in understanding the quality of care. It is perceptions of quality, rather than clinical indicators of quality, that drive service utilization and are essential to increasing demand. Here we reflect on the nature of quality, how perceptions of quality influence health systems and what such perceptions indicate about measurement of quality within health systems. We discuss six specific challenges related to the conceptualization and measurement of the quality of care: perceived quality as a driver of service utilization; quality as a concept shaped over time through experience; responsiveness as a key attribute of quality; the role of management and other so-called upstream factors; quality as a social construct coproduced by families, individuals, networks and providers; and the implications of our observations for measurement. Within the communities and societies where care is provided, quality of care cannot be understood outside social norms, relationships, trust and values. We need to improve not only technical quality but also acceptability, responsiveness and levels of patient–provider trust. Measurement approaches need to be reconsidered. An improved understanding of all of the attributes of quality in health systems and their interrelationships could support the expansion of access to essential health interventions.

Introduction

Policies to improve population health have often focused exclusively on the expansion of access to basic health services, to the neglect of quality of care. Efforts to increase the demand for priority interventions have implicitly assumed that the care available is of sufficient quality or that, with the expansion of coverage, quality will naturally improve.¹ However, such assumptions may be incorrect. There is growing recognition that people may be acting in a perfectly rational way when they avoid using health services of poor quality and that poor quality of care can be a barrier to universal health coverage independent of access.²

The aim of many strategies to improve health-care quality has been to ensure that essential inputs – e.g. technology, operational facilities, pharmaceutical supplies and trained health workers – are in place.³ Many such strategies have focused on the supply side and been designed to support the provision of services according to clinical guidelines.⁴ The acknowledgement that quality improvement approaches should be applied within patient-centred models of care is relatively recent.⁵

In this paper we seek to unpack complexities around quality of care and identify strategies for improving the measurement of such quality. An understanding of these issues could inform pragmatic strategies for the analysis and measurement of quality of care. We draw on research conducted in a variety of low- and middle-income countries and identify areas of inherent complexity that require further in-depth research. In doing so, we reflect on what is meant by quality of care and how perceptions and understanding of quality of care influence health systems and effect the measurement of quality.

We have identified and structured our discussion around six conceptual and measurement challenges. First is the recognition that, even though they may not reflect actual quality, perceptions of the quality of care are an important driver of care utilization. Second, a patient's experience of quality must be conceptualized as occurring over time. Third, responsiveness to the patient is a key attribute of quality. Fourth, so-called upstream factors – e.g. management at facility and higher levels – are likely to be important for quality. Fifth, quality can be considered as a social construct coproduced by different actors. Finally, there are substantial measurement challenges that require the adaptation and improvement of current approaches.

The classic framework on quality of care developed by Donabedian makes the distinction between structure, process and outcomes.⁶ More recently, the Institute of Medicine in the United States of America has unpacked the concept further and suggested that efforts to improve care quality should be focused around six aims: effectiveness, efficiency, equity, patient-centredness, safety and timeliness. We do not seek to propose a new framework for understanding quality. Rather, we highlight some key issues that deserve more consideration in debates about enhancing the accessibility and quality of care. Building on our experiences of doing empirical research in low- and middle-income countries, we present several insights that are complementary to existing, comprehensive frameworks of quality of care and may be absent from current debates.

Clinical quality

Clinical quality of care relates to the interaction between health-care providers and patients and the ways in which inputs from the health system are transformed into health outcomes. The care provided should be effective, evidence-based and neither underused nor overused.⁷ The concept of clinical effectiveness tends to shift attention away from inputs such as a drugs and equipment and towards the process of care.^{6,8} While relatively easy to measure, the availability of inputs cannot generally be used in isolation to determine if a patient's health is likely to improve as a result of the care received.⁹ Clinical processes are directly attributable to the behaviour of health-care providers and their measurement can provide a critical starting point in the development of methods to improve care received by patients. Although health outcomes can be informative, they are only likely to be a crude measure of quality because of the inherent unpredictability in patients' responses to health care.⁹

Assessment of the clinical quality of care poses several conceptual and practical challenges. It requires a strong evidence base that can act as a benchmark against which to evaluate interventions. In high-income countries, treatments received can be compared with the treatments recommended in national guidelines. In many low- and middle-income countries, however, such guidelines are either not available or poorly enforced. Even when such guidelines are present, the evaluation of what constitutes the overprovision of care is not clear-cut and requires careful judgement. Although harmful care should to be distinguished from unnecessary care, such categorization can be difficult in practice. Care for a single patient may be provided over the course of numerous interactions by a large team of health professionals. In such circumstances, measurement of the quality of care often focuses on a small number of distinct interventions with proven efficacy.

There are several well-known practical challenges to the assessment of the clinical quality of care. For example, it may not be possible to observe the interactions between patients and their physicians and, when they are possible, such observations can generate bias through the Hawthorne effect, i.e. health-care providers change their behaviour when observed.¹⁰ In low- and middle-income countries, medical records are often poorly maintained and may not reflect actual practice. The use of so-called undercover or standardized patients in the assessment of clinical care may be deemed unethical,¹¹ is generally limited to non-invasive conditions¹² and is not a practical solution to the routine measurement of quality.⁹ Despite these challenges, an influential literature on the clinical quality of care in low- and middle-income countries is emerging.^{2,13}

Perceived quality

Attempts to improve the quality of care have often been underpinned by a biomedical understanding of quality – i.e. the conceptualization of a gold standard of quality guided by clinical guidelines – that can lead to a narrow focus. Provider practices tend to vary despite the existence of accountability procedures and guidelines.¹⁴ Interventions may not be implemented as intended or easily accommodated within established models of care.¹⁵ Clinical quality is important for patient outcomes but perceptions of the quality of care – which may not correlate with actual quality – are likely to be the key drivers of utilization.^{16,17} Patients may also find it difficult to evaluate the quality of care because they lack their physician's medical expertise and training.^{18,19}

In South Africa, a key motivating factor in patients' travel to access health services – including travel across borders – was found to be the patients' perceptions of the quality of health services.²⁰ Patients may sometimes believe an ineffective and unsafe treatment to be good, even when they have access to effective and safe treatments. In Malaysia, for example, many cases of hypertension seek ineffective and unsafe treatments from traditional practitioners.²¹ Perceptions of the quality of care are based on a mix of individual experience, processed information and rumour. In Uganda, perceptions of the quality of the care that was locally available were found to have persuaded many women to seek maternal care away from their local area – apparently regardless of the availability of transportation and the distances involved.²² In Bangladesh, despite a nationwide expansion in the network of health facilities, facility-based deliveries remained rare and most women still attempted to give birth at home or, in the case of complications, at distant periurban health centres that the women believed to offer care of higher quality than that available at the community facilities closest to their homes.^{23,24} Patients' trust in services has been shown to be an important element of perceived quality.²⁵

Perceptions of the quality of care may relate entirely to non-clinical factors. For example, criminalized or marginalized populations – e.g. some ethnic or sexual minorities – may judge the quality of care only according to the extent that the care environment is non-discriminatory or supportive.²⁶ In Zambia, many patients considered public-sector clinics supported by one particular nongovernmental organization to be better than other public-sector facilities that apparently provided the same standardized package of care.²⁷

The effect of perceived quality is not limited to delivery models. Among remote rural populations in Armenia, there was disappointingly low participation in community-based

health-insurance schemes because the quality of the care provided by the schemes was perceived to be low. Despite the associated out-of-pocket costs, most people in the communities covered by the schemes preferred to use district-based dispensaries and hospitals – where they believed the quality of care to be higher than in the facilities covered by the schemes.²⁸ Although quality is a construct largely based on individual subjective perceptions, such perceptions are shaped by collective and traditional beliefs and peer influences. While improving or, at least, maintaining the actual quality of the care they provide, health systems need to address – and ultimately close – the gap between perceived and actual quality.

Quality as a process

There is a temporal dimension to both clinical and perceived quality. Although the Donabedian framework recognizes the importance of understanding the process of care,^{6,8} the quality of care may often be assessed in just a single encounter or illness episode. However, individual treatment for most diseases is not a one-off event but a succession of treatment episodes. Patients' perceptions of quality may develop over time, as the different attributes of the services available and their outcomes are revealed. Waiting times and staff attitudes may be perceived rapidly. However the patient's experience of clinical treatment, e.g. surgery, and its implications for subsequent care, e.g. frequent check-ups, and health outcomes, e.g. potential complications, may carry on developing over months or years. Patients may only become sensitized to the benefits of having a dedicated provider and effective follow-up after they experience the absence of such benefits. Easy-to-navigate pathways to care and continuity are critical to how patients perceive the quality of care and choose whether to continue treatment or not.²⁹ Long-term compliance is only likely if the patients involved consider their care to be of good quality. Such compliance is a particular challenge in the monitoring and treatment of chronic noncommunicable diseases and human immunodeficiency virus, especially for the under-resourced health systems of low- and middle-income countries.³⁰⁻³³

Responsiveness

While *The World health report 2000: health systems: improving performance*³⁴ defined responsiveness to people's non-medical expectations as a key health-systems goal, the relationship between responsiveness and quality has rarely been discussed. Although ability to book an appointment, confidentiality, privacy, respect shown by staff and waiting times are

not service attributes that are clinically necessary, they may all influence patients' perceptions and their willingness to return for – or adhere to – treatment. At a broader level, responsiveness involves respect for cultural needs and the preferences of specific patient groups – e.g. ethnic, gender and sexual minorities and migrants. The relationship between health workers and their patients often develops over time and multiple episodes of care. As levels of trust and mutual understanding increase, responsiveness and the patients' perceptions of the quality of their care often improve.³⁵

Although responsiveness to need is often consistent with good clinical practice, it represents an added layer in the patients' perceptions of quality. In one South African study, women appeared to have been given greater access to public maternity wards but it was the verbal abuse that the women often suffered on such wards that largely shaped the women's poor perceptions of the care that they had received.³⁶

Upstream factors

The patient–provider interaction is likely to be influenced by governance and management practices at national, subnational and facility levels. The results of studies in the United Kingdom of Great Britain and Northern Ireland and the USA have demonstrated the key importance of management in ensuring care of high quality.³⁷ In low- and middle-income countries, however, there appears to have been little consideration of the role of management practices – especially at district or facility level – in influencing the quality of care. There is increasing recognition that health professionals do not act in isolation and that governance, management and structural factors also determine the performance of health systems.^{38,39}

Even when frontline providers do have substantial discretion in their interpretation of regulations and freedom to adapt treatment protocols, their actions may still largely depend on upstream factors related to institutional capacity, legal sanctions and professional norms. A study of tuberculosis cases in Samara, in the Russian Federation, revealed that while entry to the care system was relatively easy and formally free and pharmaceuticals were highly subsidized, some cases from marginalized groups – e.g. former prisoners, migrants and people not registered with the authorities – still avoided treatment because of perceived discrimination, loss of social status and stigma.⁴⁰ Both behavioural and structural factors can be important when assessing perceived quality of care.

Quality as a social construct

Assessment of quality of care in low- and middle-income countries is frequently conducted at the individual level by using various tools – e.g. clinical observations, exit and in-depth interviews, extraction of medical records, role-playing vignettes and standardized patients, designed to assess both patients' experiences and technical quality. However, social networks influence perceptions relating to both health services and illness.⁴¹ Therefore, for a comprehensive investigation of the development of the general public's and patients' perceptions of the quality of care, we need to examine community and family values.

In many situations, patients may have responses to a health provider's actions and, similarly, providers may adapt their responses to patients to suit social norms.⁴² For example, a patient may be recommended a clinical investigation and they may either agree to be investigated – e.g. if the proposed investigation is offered by a provider trusted by the patient's social network – or they may exit the system and seek care elsewhere, e.g. from a more trusted traditional practitioner. Such responses may be considered as a social relationship that can happen in formal care settings, or elsewhere.

Perception of quality can also be shaped by power relationships in society. In a study in the Russian Federation, the women most likely to undergo pregnancy-related procedures were found to be the relatively young and poorly educated. Although such women were relatively poor and therefore found it particularly hard to pay for their care, they appeared to be given little choice – possibly because of their relatively low social status and inability to negotiate care that was commensurate to their needs.⁴³ Similar discrepancies between what health professionals felt would improve the quality of care for non-compliant patients and those patients' preferences and wishes were observed in a study of tuberculosis cases in India. In that study, the number of treatment choices offered was found to be positively correlated with social status.⁴⁴

Measurement challenges

In light of the above discussion, there is a case for taking a broader perspective when measuring quality of care. Although this has been recognized by the World Health Organization's monitoring framework for universal health coverage⁴⁵ – which considers effectiveness of treatment, patient safety, people-centredness and the level of integration of health services as key dimensions – the focus of recent assessments of the quality of care has been on indicators of health-service coverage.^{45,46}

We suggest that, for a comprehensive and detailed assessment of the quality of health services, both clinical and perceived quality of care need to be evaluated and then compared (Box 1). Alongside technical measures of quality, attention should be given to manifestations of quality – e.g. acceptability, cultural appropriateness and responsiveness. Strategies to improve clinical quality only have the potential to increase demand for care if the general public's perceptions of the quality of the care available also improve.

Any evaluation of the overall quality of care needs to consider a patient's experience of quality as a cumulative process. Changing patterns of illness and increasing numbers of treatment options mean that an increasing amount of health care involves a sequence of interlinked contacts – with a range of health professionals at different levels of the health system – over a lengthy period.⁴⁷ A patient's perceptions may vary widely as treatment follows diagnosis and follow-up follows treatment, with each stage potentially affecting the patient's subsequent choices. By measuring clinical and perceived quality at each key step in this continuum of care, it should be possible to generate a better, more nuanced understanding of how patients interact with health systems.

A growing body of work focusing on measures of patients' perceptions now exists. To understand these perceptions more holistically, qualitative methods need to become an integral part of quality assessments. In such assessments, theory-driven hierarchical models can be useful in generating propositions to guide empirical research or help deepen interpretation.⁴⁸ Mid-range programme theories⁴⁸ and open-box evaluations⁴⁹ have also been useful in examining why and how particular health programmes work. Although the measurement of indicators that are rapidly observed by patients seeking care – e.g. staff attitudes and waiting times – can be useful, it is important to delve deeper and study how upstream factors, such as management practices, matter – e.g. by influencing staff morale. Use of carefully selected proxies for quality of care and comparison of findings generated through different methods may help to inform pragmatic intervention strategies.

Finally, assessment of individual perceptions of the quality of care and examination of how such perceptions are routed in community, family and societal expectations, norms and values may offer a promising way forward. Perceived quality may correlate closely with the expectations and social status of the users themselves, the circumstances in which the users obtain care and/or the levels of community cohesion and resources that enable collective action. Although the inclusion of contextual variables and appropriate units of observation for

studying community and social group-level characteristics may be methodologically challenging, it is important for understanding individual choices and perceptions.

Conclusion

Recognition of the multifaceted nature of the quality of care is critical for scaling up priority health interventions. If uptake of health services is to be increased, we require not only better technical quality but also better acceptability and patient-centredness – across the continuum of care. Perceptions of quality are shaped by interconnected community, health-system and individual, factors. Moreover, quality of care cannot be understood fully without some appreciation of the social norms, relationships and values and trust within the communities and societies where care is provided.

Competing interests:

None declared.

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Box 1. Principles for measuring the quality of health care

- Measure aspects of care that go beyond technical quality, e.g. responsiveness, acceptability and trust
- Measure perceived quality and compare with clinical quality
- Measure quality at different points in the patient pathway through the health system
- Measure the immediate and upstream drivers of quality of care
- Measure collective and individually assessed quality and its relationship to power, social norms, trust and values