

An overall review of the global efforts towards the assessment of the quality of primary health care

Birinci basamak sağlık hizmetlerinin kalitesinin değerlendirilmesine yönelik küresel çabaların genel değerlendirmesi

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ABSTRACT

The quality of health care has been the subject of research for many years. However, the studies have mostly focused on the problems of clinical medicine, and relatively little work has been done on the quality of primary health care. As the health systems around the world are faced with social, economic, and demographical challenges, countries started to lean towards primary health care which can adapt and respond to an ever-changing world. Quality primary health care is shown to provide accessible, affordable, comprehensive, continuous, coordinated and people-centered care in the community. It plays an important role in ensuring equity in health, reducing morbidity and mortality, optimizing efficient use of resources, achieving better health outcomes, and improving the health of populations. Over the past decades, quality improvement has received increasing attention as a systematic approach guided by scientific evidence-based data; and is regarded the crucial component of health systems strengthening. The global health community has made concrete efforts to improve the quality of health care across primary, secondary and tertiary levels of health systems. Several organizations have developed frameworks and quality indicators to be used as quality assessment tools, and countries have defined their own national frameworks, quality indicators and standards to assess the quality of primary health care. The current study aims to provide a chronological review of the global efforts towards quality assessment in primary health care.

ÖZ

Sağlık hizmetlerinin kalitesi uzun yıllardır araştırma konusu olmuştur. Bununla birlikte, çalışmalar çoğunlukla klinik tıbbın sorunlarına odaklanmıştır; birinci basamak sağlık hizmetlerinin kalitesi konusunda nispeten daha az çalışma yapılmıştır. Tüm dünyada sağlık sistemlerinin karşı karşıya kaldıkları sosyal, ekonomik ve demografik zorluklar sonucunda, ülkeler, sürekli değişen dünyaya uyum sağlayabilen ve yanıt verebilen birinci basamak sağlık hizmetlerine yönelmeye başlamışlardır. Kaliteli birinci basamak sağlık hizmetlerinin toplumda erişilebilir, karşılanabilir, kapsamlı, sürekli, koordine ve insan merkezli bakım sağladığı gösterilmiştir. Sağlıkta hakkaniyetin sağlanmasında, hastalık ve ölüm oranlarının azaltılmasında, kaynakların en verimli şekilde kullanılmasında, daha iyi sağlık sonuçlarına ulaşılmasında ve toplumların sağlığının iyileştirilmesinde önemli bir rol oynamaktadır. Kalite iyileştirme yaklaşımı, bilimsel kanıta dayalı verilerin rehberliğinde sistematik bir yaklaşım olarak, son on yıllarda giderek artan bir ilgi görmüş ve sağlık sistemlerinin güçlendirilmesinin önemli bir bileşeni olarak kabul edilmiştir. Küresel sağlık camiası, sağlık sistemlerinin birinci, ikinci ve üçüncü basamak düzeylerinde sağlık hizmetlerinin kalitesini iyileştirmek için somut çabalar göstermiştir. Çeşitli kuruluşlar kalite değerlendirme aracı olarak kullanılmak üzere çerçeveler ve kalite göstergeleri geliştirmiş; ülkeler birinci basamak sağlık hizmetlerinin kalitesini değerlendirmek için kendi ulusal çerçevelerini, kalite göstergelerini ve standartlarını tanımlamıştır. Bu çalışma, birinci basamak sağlık hizmetlerinde kalite değerlendirmesine yönelik küresel çabaların kronolojik olarak değerlendirilmesini amaçlamaktadır.

INTRODUCTION

The health systems globally face challenges due to social, economic, and demographical changes. Governments have the responsibility to provide the necessary measures regarding the health and social well-being of their people in line with the fundamental human right of “enjoyment of the highest attainable standard of health” (World Health Organization [WHO], 1946).

In developing countries, where health outcomes are low and there are persistent inequities in health status, around 5.7 to 8.4 million people annually die due to poor quality of care, which imposes annual costs of US\$ 1.4-1.6 trillion each year (WHO, 2007; Kruk et al., 2018). In this global context, where people’s needs and expectations converge, the quality of health care has been receiving increasing attention at the international level (Busse et al., 2019). High-quality care is regarded an

obligation of every health system to its users, and deemed fundamental to improve the health status of populations and achieve universal health coverage (UHC), which requires access to the needed, full-range essential health services without facing any financial hardship (Kruk et al., 2018; Busse et al., 2019; WHO, 2010b). Therefore, nations address quality health care as a public good consistent with the efforts towards UHC in order to achieve the desired health outcomes, patient well-being and financial survival (Busse et al., 2019; WHO, 2018b; Kruk et al., 2016).

Quality of Health Care

Quality, in general, has been defined as “value” (Feigenbaum, 1951); “conformance to specifications” (Gilmore, 1974); “fitness for use” (Juran et al., 1974); “conformance to requirements” (Crosby, 1979); “a predictable degree of uniformity and dependability at low cost” (Deming, 1982); “fitness for purpose” (Juran & De Feo, 2010), depending on whose perspective within which context is taken.

However, quality of health care is regarded as a difficult term to define due to its subjectivity, complexity, and multi-dimensionality as a concept. The distinct characteristics of health care, such as intangibility, heterogeneity and simultaneity, make quality of health care even more difficult to be defined and measured (Mosedeghrad, 2014; Aggarwal et al., 2019). The global health community has no universally common understanding of the term despite the vast literature regarding its significance. Early definitions were made by health professionals and researchers alone; however, the opinions and preferences of patients, the public, and other stakeholders are significant as well. Donabedian (1980) stated that ‘quality’ is not specific to health care, but rather used in various sectors, which explains the confusion regarding the concept of health care quality; and he provided a more specific definition to the term (Table 1). He distinguished three approaches to assessing quality: the structure (i.e. the settings where the health care is delivered); the process (i.e. methods, behaviours,

and strategies used in health care delivery), and the outcomes (i.e. measurable results regarding morbidity and mortality and patient satisfaction) (Donabedian, 1980).

The concept of quality has been on the agenda of health sector since as early as 19th century, starting with the basic sanitation and hygiene standards by Florence Nightingale and Dr. Ignaz Semmelweis that led to decreased morbidity and mortality (Sheingold & Hahn, 2014; Chun & Bafford, 2014). The Hospitalization Standardization Program launched in 1917 by the American College of Surgeons (ACS), used Codman’s ‘end result system’ to maintain minimum quality standards during surgical procedures; and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), founded in 1951, implemented a set of accreditation standards in late 1980s, reflecting Donabedian’s concepts (Chun & Bafford, 2014; Hines et al., 2020; Schyve, 2000).

In 1990, the Institute of Medicine has defined the quality of health care focusing on the broad set of health services in general, and on individuals and populations rather than patients (Institute of Medicine [IOM], 1990). In 1997, the Council of Europe defined health care quality, as part of the its recommendations for EU Member States, and emphasized the aspect of patient safety and diminishing the chances of undesirable results (Council of Europe, 1997). Although Donabedian’s classic approach to quality in terms of structure-process-outcome is well established, the concept of quality has expanded to cover contextual elements that clarify how process changes improve care (Peabody et al., 2006). The definitions by the European Commission in 2010 and WHO in 2018 specified the dimensions of health care quality as “effectiveness, safety and responsiveness or patient-centeredness including access, timeliness, equity and efficiency” (European Commission, 2010; WHO, 2018b) (Table 1).

Quality management in health care refers to the overall administration of the quality policies (Aggarwal et al, 2019). It has evolved in years, starting with quality

Table 1. Selected Definitions of Quality of Health Care

Donabedian (1980)	“the care which is expected to maximize an inclusive measure of patient welfare, after one has taken account of the balance of expected gains and losses that attend the process of care in all its parts”.
Institute of Medicine (1990)	“the degree to which health services for individuals and populations increase the likelihood of desired health outcomes, and are consistent with current professional knowledge”.
Council of Europe (1997)	“the degree to which the treatment dispensed increases the patient’s chances of achieving the desired results and diminishes the chances of undesirable results, having regard to the current state of knowledge”.
European Commission (2010)	“the care that is effective, safe and responds to the needs and preference of patients”.
WHO (2018b)	The care that is “safe, effective, people-centered, timely, efficient, equitable and integrated”.

control (QC), which refers to setting standards and ensuring that these standards are followed to confirm a product or service meets the requirements of its intended goal; then followed by quality assurance (QA), which uses QC tools to ascertain that the performance remained at the level of set standards (Klein et al., 2023).

The late 1980s introduced the health care sector to the two prominent models, i.e. the total quality management (TQM), which incorporates quality perspective to all the processes and practices in health care delivery (Alzoubi et al., 2019); and continuous quality improvement (CQI), which is an evolving and cumulative improvement of processes, safety, and patient care (O'Donnell & Gupta, 2022). Thus, the pursuit of healthcare quality has shifted from quality assurance to quality improvement (Klein et al., 2023), which refers to systematic, combined and continuous efforts and actions of all stakeholders towards measurable changes to standardize processes and structure for more effective, safe and patient-centered health services, better system performance and improved health outcomes (WHO, 2018c; Bowie et al., 2015).

In the recent decades, following its introduction as one of the six domains of health care quality by IOM, patient-centered care (also referred to as person-centered care) has become globally acknowledged. It is defined as "care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions"; and its dimensions of are identified as respect for patients' values, preferences, and expressed needs; coordination and integration of care; information, communication, and education; physical comfort; emotional support-relieving fear and anxiety; and involvement of family and friends (IOM, 2001). A patient-centered approach is considered to improve patients' rights, as all individuals have the right to be treated with dignity and respect when they are using health-care services; to improve health gain, as it is associated with improved health-care utilization, better compliance, recovery and health outcomes, patient satisfaction, reduced readmission rates and better seeking of follow-up care; and to support organizational learning, as patients can contribute through their assessment of non-clinical aspects of care and the care environment as well as their observations and experience with the care process (Groene, 2011; Larson et al., 2019; Bowie et al., 2015).

Assessing Quality of Care

The assessment of quality of care requires different approaches to its measurement due to the differing definitions and perspectives of a large spectrum of stakeholders, the specific challenges of individual

settings, and the diverse country experiences (WHO, 2018d). A series of tools and quality indicators (QIs) have been developed and integrated into national health systems over the past decades and also used by international organizations for cross-country comparisons (WHO, 2018a; Dudley et al., 2022). Quality indicators (QI) are referred to as quantitative, systematic, evidence based measures that provide information about the dimensions of quality, i.e. the effectiveness, safety and/or people-centeredness of care, to be applied to the 'structures, processes and outcomes' of care, and compared against the pre-established 'standards' (Dudley et al., 2022; Quentin et al., 2019). They are used to document quality, to set priorities, to facilitate quality improvement and to support patients' choices; thus, they enable the service providers, patients and policy-makers to make informed decisions (Schang et al., 2021; Kara et al., 2022).

QIs differ depending on what they measure, such as effectiveness, i.e. patients' health; safety, i.e. medical errors; and/or patient-centeredness, i.e. patient satisfaction; the function of the health system (preventive, acute, chronic or palliative care); or the target (payers, provider organizations, professionals, and/or patients) (Quentin et al., 2019). The most frequently adopted classification is by Donabedian, i.e. the structure, process and outcome indicators (Kara et al., 2022). Structural QIs assess the health care settings, such as the adequacy and/or existence of facilities and equipment; the number, availability and qualifications of medical staff and administrative structures; however, their relevance is somewhat low due to the difficulty of linking structure to outcomes. Process QIs are usually evidence-based and assess whether high-quality care is delivered during service provision and are related to better outcomes of care. Outcome QIs are more relevant to patients and also to payers as they assess the health services. (Quentin et al., 2019).

The recent discussion regarding the QIs is that while a number of indicators are widely used in health care, individual indicators can only measure some specific aspects of quality, whereas there is a need for measures that reflect the multidimensional aspect of health care quality. Composite indicators, as a blend of multiple individual indicators, are considered to better reflect the various aspects and dimensions of quality depending on a larger number of observations, and to review the quality of care as one single value (Schang et al., 2021; Kara et al., 2022).

Quality of Primary Health Care

The Alma Ata Declaration of the 30th World Health Assembly in 1978 defined Primary Health Care (PHC) as

the “essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination” (WHO, 1978). PHC, being the first point of contact to the health systems, is a “whole-of-society approach” to health which focuses on people’s needs and preferences, with an aim to ensure an equitable distribution of health and well-being at the highest level possible, and to bring a continuum of comprehensive, longitudinal, and integrated health services closer to individuals and communities (Macinko et al., 2009; WHO & United Nations Children’s Fund [UNICEF], 2018; van Weel & Kidd, 2018).

Due to the increasing prevalence of chronic illnesses that need long-term management and the rising public expectations regarding an alternative to expensive hospital care, many countries have laid emphasis on PHC (van Weel & Kidd, 2018; Arvidsson et al., 2021). Studies indicate that health systems with stronger and well-functioning PHC provide improved access to and coverage of services, have better health outcomes at a lower cost, ensure an improved and more equitable distribution of health in populations, and reduce avoidable hospitalizations and mortality than countries that rely on hospital services (Shi et al., 2012; Ramalho et al., 2019; Macinko et al., 2009). In short, PHC improves population health and lowers overall health care expenditure, thus improves how health systems perform (van Weel & Kidd, 2018).

However, there is no one universal model for PHC. It varies across countries, depending on the health policies, the organization and management of the health systems, the availability and allocation of funds, the availability of human resources, the multidisciplinary nature of service delivery and the structures (WHO, 2018d; Rezapour et al., 2022; Rifkin, 2018; Gervas & Fernández, 2006). The overall PHC quality, therefore, is defined as the outcome of the relationship between the environment of the health systems and the actions and relationships of individuals within these systems; all of which complicate assessing quality (Heath et al., 2009; WHO, 2018d).

The Declaration also highlighted the quality of care as a tool for improving the effectiveness of PHC services. Quality PHC is associated with increased access to services, decreased morbidity and mortality; reduced avoidable hospitalization, higher life expectancy and increased patient longevity; better health outcomes and equity in health at lower costs (WHO & UNICEF, 2018; Macarayan et al., 2018; Rocha et al., 2012; Arvidsson et al., 2021). Quality improvement is a core function

of PHC; and quality in PHC has a fundamental role in strengthening national health systems, as well as achieving the broader goals of UHC (WHO, 2018c; van Weel & Kidd, 2018).

Tools to Assess Quality in PHC

Over the past decades, the increasing emphasis on quality improvement in PHC has raised a global interest in measuring the quality and the outcomes of health care. A considerable number of tools, both national and international, have been developed based on scientific evidence and using pre-determined measurement tools, with the aim to measure and report quality in PHC from the perspectives of users, providers and systems, regarding its efficiency, equity and effectiveness (WHO, 2018a; Heath et al., 2009; Rocha et al., 2012; WHO & UNICEF, 2022; Papp et al., 2014).

At the turn of the century, the Johns Hopkins Primary Care Assessment Tool (PCAT) was designed to assess quality of PHC in the United States. Its four modules, namely the facility surveys, provider surveys, consumer/client surveys, and health system survey, aimed to assess accessibility, utilization, and continuity; comprehensiveness and coordination of available services; cultural competence, family-centeredness, and community orientation, from the perspective of users, providers, and systems. PCAT is also considered a reliable instrument for cross-cultural assessment of PHC as it has been adapted in a variety of languages and extensively used in several countries with different health systems (Shi et al., 2012; Rocha et al., 2012; Wang & Haggerty, 2019).

In 2001, the Organisation for Economic Co-operation and Development (OECD) has launched the Health Care Quality Indicator Project (currently the Health Care Quality and Outcomes Program) with the aim to develop a set of 17 QIs for international comparisons (Kelley & Hurst, 2006). As of 2021, a total of 64 QIs cover primary, acute, mental health, and cancer care, patient safety, and patient experiences (Organisation for Economic Cooperation and Development [OECD], n.d.).

In 2007, WHO defined a framework of six ‘building blocks,’ i.e. service delivery; health workforce; information; medical products, vaccines and technologies; financing; and leadership and governance, to describe the health systems (WHO, 2007). In 2010, WHO identified four groups of QIs and measurement strategies in order to monitor each of these building blocks. General service availability indicated the physical presence of service delivery that meets a minimum standard, such as the number of facilities, the health workforce, inpatient/outpatient visits relative to the total population.

General service readiness defined the general capacity of the health facilities, i.e. the collective availability of components, such as infrastructure, amenities, basic equipment and supplies, to provide health services. Service-specific availability referred to whether a specific service such as child health or family planning, is offered or not. Service-specific readiness defined the capacity of health facilities, in terms of presence of equipment, supplies, medicines and commodities, to provide this specific service (WHO, 2010a).

WHO also suggested that using a survey approach would reflect the generally accepted standards for health services and collect information on key health services whether all required elements are present to provide routine care (WHO, 2010a). Health facility assessment (HFA) surveys, as data collection instruments, are usually used to understand the supply side of PHC; to measure the process quality via direct observations and interviews; and to provide information for planning, monitoring, evaluation, and evidence-based policy-making (Macarayan et al., 2018; International Health Facility Assessment Network, 2008).

Service Availability Mapping (SAM) was developed by WHO to assess health facility service delivery at each delivery point with specific geo-coordinates; and to generate data on the availability and infrastructure of health services, and the resources of interventions and programs for strategic planning and management. Although SAM does not directly assess quality of care, it generates information about the readiness of facilities, using key informant interviews and a census of facilities via visits to each facility (WHO, n.d.; United Nations Population Fund [UNFPA], 2010, Macarayan et al., 2018).

The Service Provision Assessment (SPA) was developed by ICF International under the MEASURE DHS (Demographic and Health Surveys) project, funded by the U.S. Agency for International Development (USAID), and was launched in 1997. SPA collects information on service availability for a wide range of services; however, its focus is on reproductive, maternal and child care, while lacking measures for other primary care conditions. Its QIs have structural quality and process quality dimensions and uses a facility assessment, a questionnaire for health care providers, observations of patient visits, and exit interviews with these patients. It is considered a nationally representative, comprehensive, standardised dataset (Sheffel et al., 2018; WHO, 2015; DHS Program, n.d., Macarayan et al., 2018).

The World Bank launched the 'Service Delivery Indicators' (SDI) program in 2008. SDI Health Surveys, which are in-person and facility-based, introduced

innovative methodologies to measuring quality of health service provision using three questionnaires to capture health facility characteristics and resources, health care provider information such as their knowledge and competency, and patient experience, via one pre-announced facility visit and one unannounced surprise facility visit over the course of two days (World Bank, n.d.; Macarayan et al., 2018).

The 'Service Availability and Readiness Assessment' (SARA), was developed by WHO, in collaboration with USAID. It was built on SAM and SPA, and was launched in 2009. It was designed as a systematic survey to assess service delivery against standards using a questionnaire and a group of QIs regarding service delivery, i.e. the availability of human resources; infrastructure, such as the availability of basic equipment and amenities; essential drugs, diagnostic capacities, and the readiness of the facilities to provide basic health services (Sheffel et al., 2018; WHO, 2015; Macarayan et al., 2018).

The latest facility survey tool is the 'Harmonized Health Facility Assessment' (HHFA), developed by WHO, to provide an integrated assessment across all services rather than focusing on specific topics or programmes, and to meet the essentials of the UHC. As a comprehensive health facility survey, HHFA covers all key facility services and facility-level management systems, and provides reliable, objective information on the availability and the capacities of health facilities to provide the services according to the required standards of quality. It uses standardized indicators, questionnaires and data collection methodologies on service availability, service readiness, quality and safety of care, and management and finance (WHO, 2022).

With regard to the patient-centeredness approach, patient satisfaction surveys and exit interviews are included in some of the above-mentioned tools. Additionally, there are a number of survey tools available that measure the broad concept of person-centered care. The Consumer Assessment of Healthcare Providers and Systems Survey (CAHPS), a multi-year initiative by Agency for Healthcare Research and Quality that began in 1995 to better understand patient experience with healthcare, seeks feedback from patients on a range of healthcare services at multiple levels of the delivery system, such as their experiences with healthcare providers, care for specific health conditions, health plans and related programs, care delivered in facilities including hospitals and primary care settings (de Silva, 2014; The CAHPS Program, n.d.).

Additionally, many countries have defined their national QIs and standards, and national health care quality policy and strategy documents for PHC (Kontopantelis

et al., 2013; GbR Zentralstelle der Deutschen Ärzteschaft zur Qualitätssicherung in der Medizin, 2009; Royal Australian College of General Practitioners [RACGP], 2017; Grol, 2006; Huber et al., 2020; OECD, 2017; Helsedirektoratet, n.d.; Government of India, 2012; Australian Commission on Safety and Quality in Health Care [ACSQHC], 2021; Canadian Institute for Health Information [CIHI], 2016; WHO, OECD & World Bank, 2018). Systemic reviews and several studies in different countries have also presented varying QIs for PHC (Ramalho et al., 2019; Tabrizi & Gharibi, 2019; Simou et al., 2015; Norman & Danielsen, 2022; Pandit et al., 2015; Saric et al., 2021; Saxena et al., 2022).

Despite all the efforts and the tools developed, there still exist substantial challenges to assessing the quality of PHC. The globally developed, comprehensive and standardised facility surveys are sometimes contextually irrelevant to countries' PHC contexts. There is often a misunderstanding among the stakeholders of the term 'quality' in PHC and how to measure it. Quality assessment initiatives are often seen as projects rather than sustainable and longer-term approaches to develop PHC quality. National quality assessment strategies often overlook the local realities of PHC. There is a disintegration of efforts to formulate QIs that can be collected easily at all facilities and at relatively little cost between different levels of health systems. Also, the measurement gaps between policy-makers and providers operating in different facilities and environments present challenges. The assessments of PHC facilities have a much narrower focus and the measure indicators at the PHC level are not sufficiently integrated to the overall health systems quality assessments (WHO, 2018d; Macarayan et al., 2018).

CONCLUSION

Primary health care (PHC) is the first contact of people to any health system, and provides comprehensive care that meets the needs and preferences of individuals and communities. Studies suggest that health systems with a greater focus on PHC have better health outcomes and greater equity in health at lower costs; and high quality PHC is considered fundamental for achieving universal health coverage.

The quality of PHC can be assessed by using frameworks and QIs that cover the different aspects of PHC, i.e. structure, process, and outcome. Although QIs have limitations, they are useful as a starting point for decision-makers to assess, monitor and benchmark the quality of PHC, and to initiate, stimulate and support quality improvement if needed. Health facility assessment surveys can be used as data collection instruments from the perspectives of the users, providers and the health system, regarding the efficiency, equity

and effectiveness of PHC against the generally accepted and quality-oriented standards for health services. Regular and longitudinal patient-level assessments with patient-reported measures, which focus on patient views and collect information that only the patients can provide, measuring their satisfaction with care as well as experiences of care, can also be used in order to ensure an accurate assessment of patient-centeredness domain of quality.

Over the years, various health facility survey tools to assess the quality of PHC have been developed, both by the international organizations and also by countries at national level. The literature shows that the international frameworks are more systematic and comprehensive than the national ones, although they may sometimes be irrelevant to countries' PHC contexts. The PHC structures and processes vary across countries depending on the context of their health systems; and so does the conception of quality assessment in PHC. At times, multiple and uncoordinated facility surveys are conducted in countries, which produce results beyond compare and at a high cost. Furthermore, some facility surveys emphasize specific topics or programs rather than providing an integrated assessment across all services, thus ignoring some essential components of PHC. Therefore, it is suggested that countries should develop their unique national frameworks, which are pertinent with the strategies and goals of their health systems; and QIs should be appropriate and tailor-selected based on countries' health policies, the context and structure of the national health systems, demographic structures, resources, and priorities, and in accordance with the components and principles of PHC.

REFERENCES

- Aggarwal, A., Aeran, H., & Rathee, M. (2019). Quality management in healthcare: The pivotal desideratum. *J Oral Biol Craniofac Res.*, 9(2), 180-182. <https://doi.org/10.1016/j.jobcr.2018.06.006>
- Alzoubi, M. M., Hayati, K. S., Rosliza, A. M., Ahmad, A. A., & Al-Hamdan, Z. M. (2019). Total quality management in the health-care context: Integrating the literature and directing future research. *Risk Manag Healthc Policy*, 12, 167-177. <https://doi.org/10.2147/RMHP.197038>
- Arvidsson, E., Dahlin, S. & Anell, A. (2021). Conditions and barriers for quality improvement work: A qualitative study of how professionals and health centre managers experience audit and feedback practices in Swedish primary care. *BMC Fam Pract.*, 22, 113. <https://doi.org/10.1186/s12875-021-01462-4>
- Australian Commission on Safety and Quality in Health Care. (2021). National Safety and Quality Primary and Community Healthcare Standards. ACSQHC.
- Batalden, P. B., & Davidoff, F. (2007). What is "quality improvement" and how can it transform healthcare? *Qual Saf Health Care*, 16(1), 2-3. <https://doi.org/10.1136/qshc.2006.022046>
- Bowie, P., McNab, D., Ferguson, J., de Wet, C., Smith, G., MacLeod, M., McKay, J., & White, C. (2015). Quality improvement and person-centredness: A participatory mixed methods study to develop the 'always event' concept for primary care. *BMJ open*, 5(4), e006667. <https://doi.org/10.1136/bmjopen-2014-006667>

- Busse, R., Panteli, D., & Quentin, W. (2019). An introduction to healthcare quality: defining and explaining its role in health systems. In: R. Busse, N. Klazinga, D. Panteli, & W. Quentin, (Eds.), *improving healthcare quality in Europe: Characteristics, effectiveness and implementation of different strategies*. (Health Policy Series, 53). World Health Organization.
- Canadian Institute for Health Information. (2016). *Primary Health Care in Canada: A Chartbook of Selected Indicator Results*. Canadian Institute for Health Information.
- Chun, J., & Bafford, A. C. (2014). History and background of quality measurement. *Clin Colon Rectal Surg.*, 27(1), 5-9. <https://doi.org/10.1055/s-0034-1366912>
- Council of Europe. (1997). *The development and implementation of quality improvement systems (QIS) in health care. Recommendation No. R (97) 17 and explanatory memorandum*. Council of Europe.
- Crosby, P. B. (1979). *Quality is free: The art of making quality*. McGraw Hill.
- Deming, W. E. (1982). *Out of the crisis*. Center for Advanced Engineering Study, Massachusetts Institute of Technology.
- de Silva, D. (2014). *Helping measure person-centred care: Evidence review*. The Health Foundation. <https://www.health.org.uk/sites/default/files/HelpingMeasurePersonCentredCare.pdf>
- Donabedian, A. (1980). *The definition of quality and approaches to its assessment*. Michigan Health Administration Press.
- Dudley, L., Mamdoo, P., Naidoo, S., & Muzigaba, M. (2022). *Towards a harmonised framework for developing quality of care indicators for global health: A scoping review of existing conceptual and methodological practices*. *BMJ Health & Care Informatics*;29:e100469. <https://doi.org/10.1136/bmjhci-2021-100469>
- European Commission. (2010). *EU Actions on Patient Safety and Quality of Healthcare*. European Commission, Healthcare Systems Unit. European Commission.
- Feigenbaum, A. V. (1951). *Quality control: Principles, practice, and administration*. McGraw-Hill.
- GbR Zentralstelle der Deutschen Ärzteschaft zur Qualitätssicherung in der Medizin. (2009). *Programm für Nationale VersorgungsLeitlinien von BÄK, KBV und AWMF. Qualitätsindikatoren - Manual for Autoren*. Make a book.
- Gérvás, J., & Fernández, M. P. (2006). Western European best practice in primary healthcare. *European Journal of General Practice*, 12(1), 30-33. <https://doi.org/10.1080/13814780600757187>
- Gilmore, H. L. (1974). Product conformance cost. *Quality Progress*, 6(7), 16-9.
- Government of India. (2012). *Indian Public Health Standards (IPHS): Guidelines for Primary Health Centres Revised 2012*. Directorate General of Health Services Ministry of Health & Family Welfare.
- Groene, O. (2011). Patient centredness and quality improvement efforts in hospitals: rationale, measurement, implementation. *International Journal for Quality in Health Care*, 23(5), 531-537. <https://doi.org/10.1093/intqhc/mzr058>
- Grol, R. (2006). *Quality Development in Health Care in the Netherlands*. The Commonwealth Fund.
- Heath, I., Rubinstein, A., Stange, K. C., & van Driel, M. L. (2009). Quality in primary health care: a multidimensional approach to complexity. *BMJ*, 338:b1242. <https://doi.org/10.1136/bmj.b1242>
- Helsedirektoratet. (n.d.). *National Health Care Quality Indicators*. <https://www.helsedirektoratet.no/english/national-health-care-quality-indicators>
- Hines, K., Mouchtouris, N., Knightly, J. J., & Harrop, J. (2020). A Brief History of Quality Improvement in Health Care and Spinal Surgery. *Global Spine Journal*, 10(1S), 5S-9S. <https://doi.org/10.1177/2192568219853529>
- Huber, C.A., Scherer, M., Rapold, R., & Blozik, E. (2020). Evidence-based quality indicators for primary healthcare in association with the risk of hospitalisation: A population-based cohort study in Switzerland. *BMJ Open*; 10:e032700. <https://doi.org/10.1136/bmjopen-2019-032700>
- Institute of Medicine. (2001). *Crossing the Quality Chasm: A New Health System for the 21st Century*. National Academy Press.
- Institute of Medicine, Committee to Design a Strategy for Quality Review and Assurance in Medicare, & Lohr, K. N. (1990). *Medicare: A strategy for quality assurance: Volume 1*. National Academies Press.
- International Health Facility Assessment Network. (2008). *Health Facility Assessment. Working Paper Series. WP-08-107. MEASURE Evaluation*.
- Juran, J. M., & De Feo, J. A. (2010). *Juran's quality handbook. The Complete Guide to Performance Excellence (6th ed.)*. McGraw-Hill.
- Juran, J. M., Gryna, F. M., & Bingham, R. S. (1974). *Quality control handbook (3rd ed.)*. McGraw-Hill.
- Kara, P., Valentin, J. B., Mainz, J., & Johnsen, S. P. (2022). Composite measures of quality of health care: Evidence mapping of methodology and reporting. *PLoS ONE*, 17(5):e0268320. <https://doi.org/10.1371/journal.pone.0268320>
- Kelley, E., & Hurst, J. (2006). *Health Care Quality Indicators Project: Conceptual framework paper*. OECD Health Working Papers, No. 23. OECD Publishing. <https://doi.org/10.1787/440134737301>
- Klein, T. A., Seelbach, C. L., & Brannan, G. D. (2023). *Quality Assurance*. [Updated 2023 Mar 6]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. <https://www.ncbi.nlm.nih.gov/books/NBK557503/>
- Kontopantelis, E., Reeves, D., Valderas, J.M., Campbell, S., & Doran, T. (2013). Recorded quality of primary care for patients with diabetes in England before and after the introduction of a financial incentive scheme: A longitudinal observational study. *BMJ Qual Saf.*, 22, 53-64. <https://doi.org/10.1136/bmjqs-2012-001033>
- Kruk, M. E., Gage, A. D., Arsenault, C., Jordan, K., Leslie, H. H., Roder-DeWan, S., Adeyi, O., Barker, P., Daelmans, B., Doubova, S. V., English, M., Garcia-Elorrio, E., Guanais, F., Gureje, O., Hirschhorn, L. R., Jiang, L., Kelley, E., Lemango, E.T., Liljestrand, J., ..., Pate, M. (2018). High-quality health systems in the Sustainable Development Goals era: time for a revolution. *Lancet Glob Health*, 6(11), e1196-e1252. [https://doi.org/10.1016/S2214-109X\(18\)30386-3](https://doi.org/10.1016/S2214-109X(18)30386-3)
- Kruk, M. E., Larson, E., & Twum-Danso, N. A. Y. (2016). Time for a quality revolution in global health. *Lancet Global Health*, 4(9), E594-E596. [https://doi.org/10.1016/S2214-109X\(16\)30131-0](https://doi.org/10.1016/S2214-109X(16)30131-0)
- Larson, E., Sharma, J., Bohren, M. A., & Tunçalp, Ö. (2019). When the patient is the expert: measuring patient experience and satisfaction with care. *Bulletin of the World Health Organization*, 97(8), 563-569. <https://doi.org/10.2471/BLT.18.225201>
- Macarayan, E. K., Gage, A. D., Doubova, S. V., Guanais, F., Lemango, E. T., Ndiaye, Y., Waiswa, P., & Kruk, M. E. (2018). Assessment of quality of primary care with facility surveys: a descriptive analysis in ten low-income and middle-income countries. *Lancet Glob Health*, 6(11):e1176-e1185. [https://doi.org/10.1016/S2214-109X\(18\)30440-6](https://doi.org/10.1016/S2214-109X(18)30440-6)
- Macinko, J., Starfield, B., & Erinosh, T. (2009). The impact of primary healthcare on population health in low- and middle-income countries. *J Ambulatory Care Management*, 32(2), 150-171. <https://doi.org/10.1097/JAC.0b013e3181994221>
- Mosadeghrad, A. M. (2014). Factors influencing healthcare service quality. *Int J Health Policy Manag.*, 3(2), 77-89. <https://doi.org/10.15171/ijhpm.2014.65>
- Norman, R. M., & Danielsen, K. (2022). *Quality Indicators in General Practice in Selected Countries: A Scoping Review*. Norwegian Institute of Public Health.

- O'Donnell, B., & Gupta, V. (2022). Continuous Quality Improvement. StatPearls. <https://www.ncbi.nlm.nih.gov/books/NBK559239/>
- Organisation for Economic Cooperation and Development. (2017). OECD Reviews of Health Systems: Costa Rica. Organisation for Economic Cooperation and Development.
- Organisation for Economic Cooperation and Development. (n.d.). Health Care Quality and Outcomes Indicators. <https://www.oecd.org/health/health-systems/health-care-quality-outcomes-indicators.htm>
- Pandit, A. P., Kulkarni, M., & Sonik, S. (2015). Achieving quality in primary health care. *J Nat Accred Board Hosp Healthcare Providers*, 2, 37-40. <https://doi.org/10.4103/2319-1880.174346>
- Papp, R., Borbas, I., Dobos, E., Bredehorst, M., Jaruseviciene, L., Vehko, T., & Balogh, S. (2014). Perceptions of quality in primary health care: Perspectives of patients and professionals based on focus group discussions. *BMC Fam Pract.*, 15, 128. <https://doi.org/10.1186/1471-2296-15-128>
- Peabody, J. W., Taguiwalo, M. M., Robalino, D. A., & Frenk, J. (2006). Improving the quality of care in developing countries. In: D. T. Jamison, J. G. Breman, A. R. Measham, et al. (Eds.), *Disease control priorities in developing countries*. (2nd edition., Chapter 70). The International Bank for Reconstruction and Development / The World Bank.
- Quentin, W., Partanen, V. M., Brownwood, I., & Klazinga, N. (2019). Measuring healthcare quality. In: R. Busse, N. Klazinga, D. Panteli, & W. Quentin, (Eds.), *Improving healthcare quality in Europe: Characteristics, effectiveness and implementation of different strategies*. (Health Policy Series, 53). World Health Organization.
- Ramalho, A., Castro, P., Goncalves-Pinho, M., Teixeira, J., Santos, J.V., Viana, J., Lobo, M., Santos, P., & Freitas, A. (2019). Primary health care quality indicators: An umbrella review. *PLoS ONE*, 14(8):e0220888. <https://doi.org/10.1371/journal.pone.0220888>
- Rezapour, R., Letaief, M., Khosravi, A., Farahbakhsh, M., Ahmadnezhad, E., Azami-Aghdash, S., & Tabrizi, J. S. (2022). Primary health care quality assessment frameworks: State of the art review. *Health Scope*, 11(3):e126407. <https://doi.org/10.5812/jhealthscope-126407>
- Rifkin, S. B. (2018). Alma Ata after 40 years: Primary Health Care and Health for All-from consensus to complexity. *BMJ Global Health*, 3:e001188. <https://doi.org/10.1136/bmjgh-2018-001188>
- Rocha, K. B., Rodriguez-Sanz, M., Pasarín, M. I., Berra, S., Gotsens, M., & Borrell, C. (2012). Assessment of primary care in health surveys: a population perspective. *European Journal of Public Health*, 22(1), 14-19. <https://doi.org/10.1093/eurpub/ckr014>
- Saric, J., Kiefer, S., Peshkatari, A., & Wyss, K. (2021). Assessing the Quality of Care at Primary Health Care Level in Two Pilot Regions of Albania. *Frontiers in Public Health*, 9:747689. <https://doi.org/10.3389/fpubh.2021.747689>
- Saxena, A., Ramamoorthy, V., Rubens, M., McGranaghan, P., Veledar, E., & Nasir, K. (2022). Trends in quality of primary care in the United States, 2007–2016. *Sci Rep.*, 12, 1982. <https://doi.org/10.1038/s41598-022-06077-y>
- Schang, L., Blotenberg, I., & Boywitt, D. (2021). What makes a good quality indicator set? A systematic review of criteria. *International Journal for Quality in Health Care*, 33(3):mzab107. <https://doi.org/10.1093/intqhc/mzab107>
- Schuyve, P. M. (2000). The evolution of external quality evaluation: Observations from the Joint Commission on Accreditation of Healthcare Organizations. *International Journal of Quality in Health Care*, 12(3), 255-258.
- Seelbach, C. L., & Brannan, G. D. (2023). Quality Management. StatPearls. <https://www.ncbi.nlm.nih.gov/books/NBK557505/>
- Sheffel, A., Karp, C., & Creanga, A. A. (2018). Use of Service Provision Assessments and Service Availability and Readiness Assessments for monitoring quality of maternal and newborn health services in low-income and middle-income countries. *BMJ Global Health*, 3:e001011. <https://doi.org/10.1136/bmjgh-2018-001011>
- Sheingold, B. H., & Hahn, J. A. (2014). The history of healthcare quality: The first 100 years 1860–1960. *International Journal of Africa Nursing Sciences*, 1, 18-22. <https://doi.org/10.1016/j.ijans.2014.05.002>
- Shi, L., Pinto, D. M., & Guanais, F. C. (2012). Measurement of Primary Care: Report on the Johns Hopkins Primary Care Assessment Tool. Inter-American Development Bank.
- Simou, E., Pliatsika, P., Koutsogeorgou, E., & Roumeliotou, A. (2015). Quality indicators for primary health care: A systematic literature review. *Journal of Public Health Management and Practice*, 21(5):E8-E16 <https://doi.org/10.1097/PHH.000000000000037>
- Tabrizi, J. S., & Gharibi, F. (2019). Primary healthcare accreditation standards: A systematic review. *Int J Health Care Qual Assur.*, 32(2), 310-320. <https://doi.org/10.1108/IJHCQA-02-2018-0052>
- The CAHPS Program. (n.d.). Agency for Healthcare Research and Quality. <https://www.ahrq.gov/cahps/about-cahps/cahps-program/index.html>
- The DHS Program. (n.d.). SPA Overview. <https://dhsprogram.com/methodology/Survey-Types/SPA.cfm>
- The Royal Australian College of General Practitioners. (2017). *Standards for General Practices*. 5th ed. The Royal Australian College of General Practitioners.
- The World Bank. (n.d.). Service Delivery Indicators: Health. Health Service Delivery Indicators | World Bank.
- United Nations Population Fund. (2010). Service Availability Mapping (SAM). <https://www.unfpa.org/resources/service-availability-mapping-sam>
- van Weel, C., & Kidd, M. R. (2018). Why strengthening primary health care is essential to achieving universal health coverage. *CMAJ*, 190(15): E463-E466. <https://doi.org/10.1503/cmaj.170784>
- Wan, T. T. H., & Connell, A.M. (2003). Total Quality Management and Continuous Quality Improvement. In: T. T. H. Wan, & A. M. Connell (Eds.), *Monitoring the Quality of Health Care*. (pp. 143-158). Springer. https://doi.org/10.1007/978-1-4615-1097-0_12
- Wang, W., & Haggerty, J. (2019). Development of primary care assessment tool-adult version in Tibet: Implication for low- and middle-income countries. *Prim Health Care Res Dev.*, 20,e94. <https://doi.org/10.1017/S1463423619000239>
- World Health Organization & the United Nations Children's Fund. (2022). Primary health care measurement framework and indicators: Monitoring health systems through a primary health care lens. World Health Organization and the United Nations Children's Fund.
- World Health Organization and the United Nations Children's Fund. (2018). A vision for primary health care in the 21st century: Towards UHC and the SDGs. World Health Organization and the United Nations Children's Fund.
- World Health Organization, Organisation for Economic Co-operation and Development, and The World Bank. (2018). *Delivering Quality Health Services: A Global Imperative for Universal Health Coverage*. World Health Organization, Organisation for Economic Co-operation and Development, and The World Bank.
- World Health Organization. (1946, April 7). Constitution of the World Health Organization. <https://apps.who.int/gb/bd/PDF/bd47/EN/constitution-en.pdf?ua=1>
- World Health Organization. (1978). Primary Health Care: Report of the International Conference on Primary Health Care. Alma Ata, USSR, 6-12 September 1978, World Health Organization.

- World Health Organization. (2007). Everybody's business — Strengthening health systems to improve health outcomes. WHO's framework for action. World Health Organization.
- World Health Organization. (2010a). Monitoring the Building Blocks of Health Systems: A Handbook of Indicators and Their Measurement Strategies. World Health Organization.
- World Health Organization. (2010b). The World Health Report: Health systems financing; the path to universal coverage. World Health Organization.
- World Health Organization. (2015). Service Availability and Readiness Assessment (SARA): An annual monitoring system for service delivery. Reference Manual Version 2.2. World Health Organization.
- World Health Organization. (2018a). Global efforts in measuring quality of care. World Health Organization.
- World Health Organization. (2018b). Handbook for national quality policy and strategy-A practical approach for developing policy and strategy to improve quality of care. World Health Organization.
- World Health Organization. (2018c). Improving the quality of health services: tools and resources: Turning recommendations into practice. World Health Organization.
- World Health Organization. (2018d). Quality in primary health care: Technical series on primary health care. World Health Organization.
- World Health Organization. (2022). Harmonized health facility assessment (HHFA): Quick guide. World Health Organization.
- World Health Organization. (n.d.). Improving Service Availability Mapping (SAM): Data Use and Dissemination. World Health Organization.