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Publication Date

2023-09-15


DOI


10.1093/heapol/czad083


Peer reviewed

A systematic review of population and patient perspectives and experiences as measured in Latin American and Caribbean surveys

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Received 2 February 2023

Submitted 8 September 2023

Revised 20 July 2023

Accepted on 11 September 2023


Published xx xxx xxx

Editorial Decision 24 August 2023

Embargo xx xxx xxx

Advance access publication date: xx xxx xxx

Abstract

High-quality health systems  must provide accessible, people-centred care to both improve health and maintain population trust in health services. Furthermore, accurate measurement of population perspectives is vital to hold health systems accountable and to inform improvement efforts. To describe the current state of such measures in Latin America and the Caribbean (LAC), we conducted a systematic review of facility and population-based assessments that included patient-reported experience and satisfaction measures. Five databases were searched for publications on quantitative surveys assessing healthcare quality in Spanish- or Portuguese-speaking LAC countries, focusing on the domains of processes of care and quality impacts. We included articles published since 2011 with a national sampling frame or inclusion of multiple subnational regions. We tabulated and described these articles, identifying, classifying and summarizing the items used to assess healthcare quality into the domains mentioned earlier. Of the 5584 publications reviewed, 58 articles met our inclusion criteria. Most studies were cross-sectional (95%), assessed all levels of healthcare (57%) and were secondary analyses of existing surveys (86%). The articles yielded 33 unique surveys spanning 12 LAC countries; only eight of them are regularly administered surveys. The most common quality domains assessed

were satisfaction (in 33 out of 58 articles, 57%), evidence-based/effective care (34%), waiting times (33%), clear communication (33%) and ease of use (31%). Items and reported ratings varied widely among instruments used, time points and geographical settings. Assessment of patient-reported measures through population- and facility-based surveys is present but heterogeneous in LAC. Satisfaction was measured frequently, although its use in accountability or informing improvement is limited. Measurement of healthcare quality in LAC needs to be more systematic, regular, comprehensive and to be led collaboratively by researchers, governments and policymakers to enable comparison of results across countries and to effectively inform policy implementation.

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Keywords:

Population surveys

quality of care

Latin America and the Caribbean

systematic review

patient-reported experiences

Key messages

- Countries in Latin America and the Caribbean are measuring health system quality; however, measurements need to be more systematic, regular and comprehensive.
- Although satisfaction is one of the most popular measurements used to assess health systems quality, it does not encompass the wide range of quality aspects that define high-quality care.
- Processes of care and quality impact measures are needed.
- Healthcare quality measurements need to be led collaboratively by researchers, governments and policymakers to enable comparison of results across years and countries and to effectively inform policy implementation.

Introduction

Access to healthcare alone is not enough to provide consistent care that effectively improves and maintains the health of individuals and communities; health systems also need to be of high quality and generate trust in the population they serve (Kruk *et al.*, 2018a). A 2018 study estimated that 8.6 million deaths per year in 137 low-income and middle-income countries were the result of inadequate access to high-quality care; of these, 5.0 million deaths were among those who accessed the health system and yet received poor-quality care (Kruk *et al.*, 2018b). The impact of quality on other health outcomes, such as adherence to medications, safety, better use of preventive services, healthcare use and ultimately trust in the health system, has also been reported (Doyle *et al.*, 2013; Bohren *et al.*, 2014).

Multiple frameworks for understanding and measuring healthcare quality have been developed in recent years, mainly based on the Donabedian triad of structure (inputs), processes and outcomes (Donabedian, 1988; 2005; Institute of Medicine of the United States, 2001; World Health Organization 2016a; World Bank, 2018). In 2018, the *Lancet Global Health Commission on High-Quality Health Systems in the Sustainable Development Goals Era* proposed a high-quality health system framework, highlighting the need to improve quality at the level of health systems to improve health and generate confidence and economic benefits (Figure 1). This framework includes a comprehensive set of domains (foundations, processes of care and quality impacts), in the context of equity, resilience, efficiency and people-centeredness, that should be assessed with a system-level approach in order to properly gauge the quality of healthcare services (Kruk *et al.*, 2017; 2018a; Kruk and Pate, 2020). Data may still be first collected at the local level, but to guide meaningful, lasting and system-wide reforms, data collection needs to be coordinated centrally, preferably country-led, integrated with data from other sectors and with a system thinking approach (Willis *et al.*, 2012; Kruk *et al.*, 2018a; Pan American Health Organization, 2022).

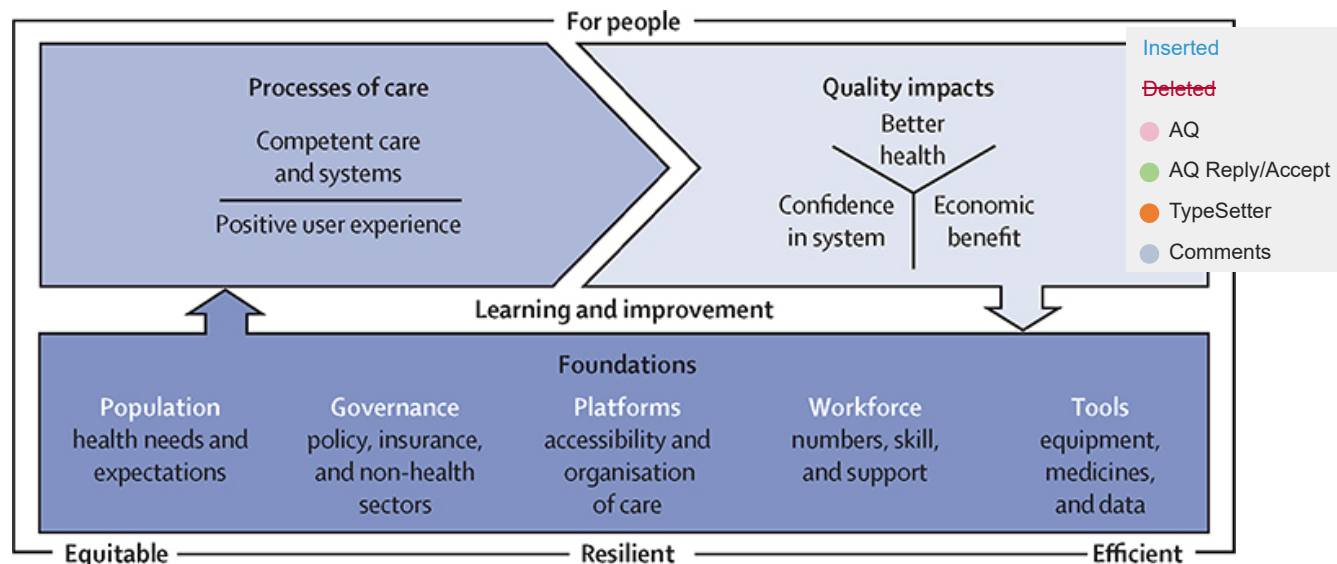


Figure 1. The high-quality health system framework from the ‘Lancet Global Health’ commission on high-quality health system in the Sustainable Development Goals [AQ78](#) era (Kruk *et al.*, 2018a)

When such national data are obtained, they can be used for benchmarking either within the country or with other countries. The value of comparable quality indicators has been highlighted in the literature: they promote accountability and transparency, provide insight into the efficiency of resource administration, drive quality improvement, allow monitoring of interventions if performed sequentially and ultimately provide invaluable feedback for policy-making (Kelley and Hurst, 2006; Lozano *et al.*, 2006; OECD, 2017; Marx *et al.*, 2018; Tavošchi *et al.*, 2022). Moreover, regional reports could be constructed, and lessons and experiences were shared across involved countries (OECD, 2017).

As inputs are not always correlated with good quality care, it is recommended that the focus of quality assessments, even if they are performed at a national level, should be on the processes and outcomes of care (Leslie *et al.*, 2017; Kruk *et al.*, 2018a). An increasingly relevant source of information on such dimensions is proposed to be patient-reported experiences and patient-reported outcomes because, even if they may be influenced by individual values, needs and expectations of care (Roder-DeWan *et al.*, 2019), they enhance systems’ accountability and governance (World Health Organization 2016, [AQ10](#)), promote people-centeredness and are correlated with improved healthcare utilization (trust), quality of provided services (processes, such as patient–physician communication) and better health outcomes (such as disease control) (Larson *et al.*, 2019; De Rosis *et al.*, 2020; Gibbons *et al.*, 2021).

Table 1. [Definition](#) of subdomains for patient-reported experience and outcome measures adapted from the high-quality health system framework

Domain	Subdomain	Definitions and notes
Quality impacts	Care uptake and retention	Care retention, intention to return and future use
	Health concern resolution	Resolution of health concern and improvement of health status after interaction with the system
	Recommendation	Recommendation of provider, services and facility to others
	Satisfaction	Satisfaction with visit, services, health facility and health system.
	Trust	Confidence or trust in provider, services, facility and system
Processes of care	Autonomy	Being involved in deciding on your care or treatment if you want to, having provider to ask permission before starting treatments or tests
	Choice of provider	Capacity to choose provider, to go to another place for health care if you want to
	Clear communication	Provider listens carefully, explains things so you can understand and provides time to ask questions
	Confidentiality	Medical history kept confidential, talks with providers kept confidential
	Continuity/integration	Ease of referral, providers knowing visit history or test results
	Dignity	Respect, kindness and courtesy

Domain	Subdomain	Definitions and notes
	Ease of use	Accessible hours of service, convenience and comfort of the environment (waiting area, facility cleanliness, accessibility for disabled individual toilet and hygiene areas and access to water and healthy food for in-stays), clarity of signage and information provided by administrative
	Evidence-based, effective care	Patient ratings of provider skill or knowledge, thorough examination, adequate duration of visit
	Non-discrimination	Equitable care for all patients
	Patient voice and values	Care in accordance with individual rights and values, for instance, having companion present and adequate social support. Culturally competent providers—language, values
	Privacy	Physical examinations conducted in privacy
	Safety	Medical errors or safe care
	Timely action	Time to get an appointment or receive referral/procedure (different to wait time at facility)
	Waiting times	Prompt attention during visits

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- Comments

Countries in the Latin America and the Caribbean (LAC) region have enacted broad policies to guarantee universal access to health care (World Bank, 2018) [e.g. the Unified Health System (SUS) in Brazil, the Comprehensive Social Security in Health (SGSSS^{AQ11}) in Colombia and the Comprehensive Health Insurance (SIS) in Peru] (Pérez-Cuevas *et al.*, 2017) in the context of a region with a transitional epidemiological profile, persistent inequities and remaining financial and organizational barriers (Macinko *et al.*, 2016; Cid *et al.*, 2021). There is increased access to health care, but it is not enough if quality is not ensured: patient-centeredness, continuity and coordination of care, timely access to health care and other processes of care indicators have a notable room for improvement in the region and have been shown to influence public opinion and confidence on the health system (Macinko *et al.*, 2016; Pérez-Cuevas *et al.*, 2017).

Moreover, the Coronavirus disease 2019 (COVID^{AQ12}-19) pandemic exacerbated these issues, where on top of the disruption of ‘access’^{AQ13} to healthcare services in various areas (e.g. non-communicable diseases and women healthcare services), disruptions in care ‘processes’, such as delayed or cancelled screening or treatments (timely action) or use of less effective treatments (evidence-based care), were also described (Bernabe-Ramirez *et al.*, 2022; Kruse *et al.*, 2022; Behera and Behera, 2023; Luciani *et al.*, 2023). However, some authors consider that the pandemic has also opened a window of opportunity to look for alternatives and explore the quality improvements and systemic changes the region highly needs; some positive aspects were seen (trust in vaccines and thus in health systems), while the challenges evidenced underscore the need for strengthening care processes and supply chain systems, together with the need of tackling the financial and organizational barriers previously described (Pérez-Cuevas *et al.*, 2017; Garcia Elorrio *et al.*, 2021; Schwalb *et al.*, 2022). This is why we believe that measurement of health systems’ quality that goes beyond the assessment of access to health care but that also explores the processes of care and quality impacts is vital to pinpoint and implement the changes needed in the region at a macro (system) level. We thus wanted to explore how these measures were being collected within the region, if this was done systematically and what was the room for improvement. Previous revisions on the matter in the region were not found.

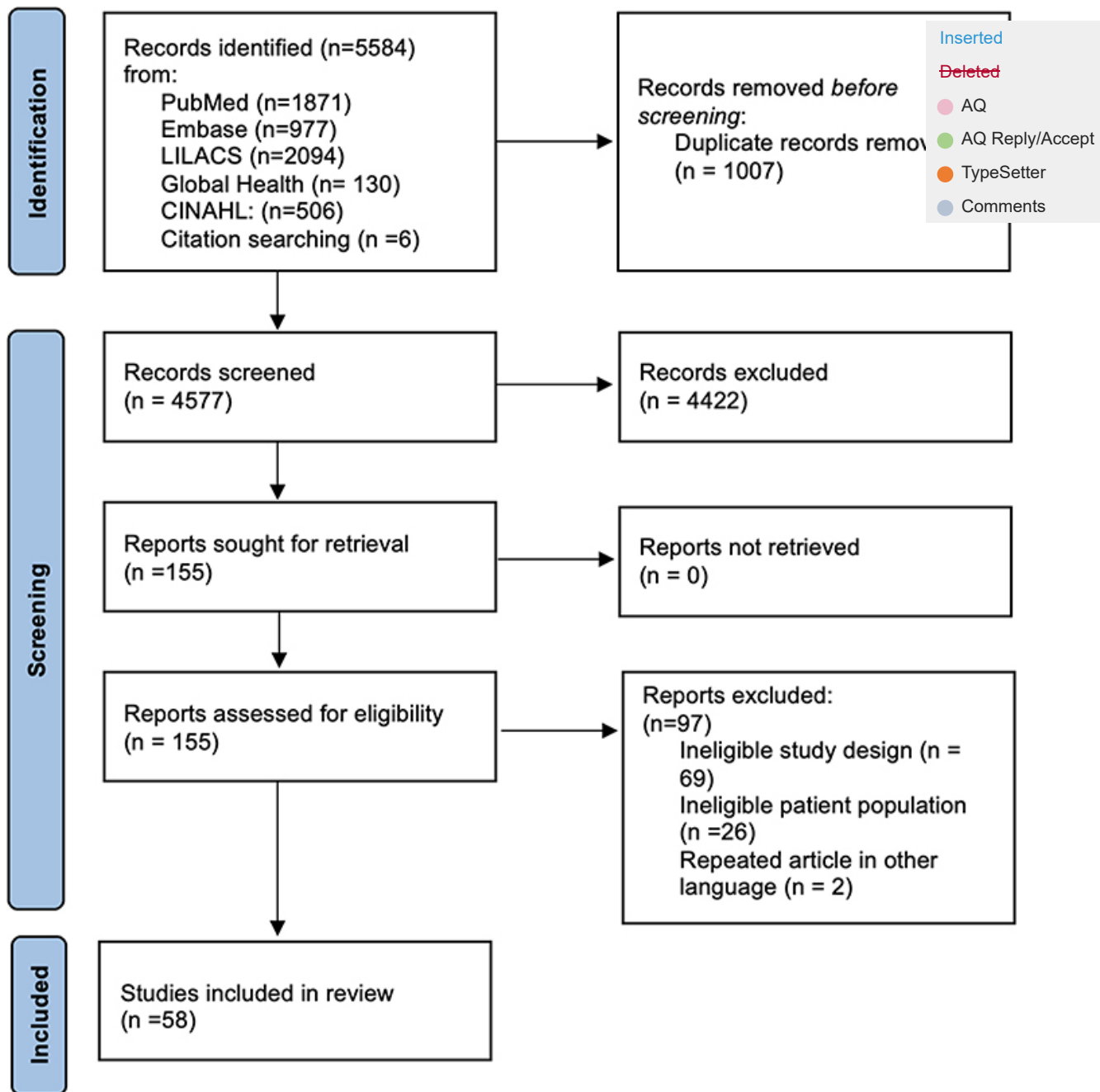


Figure 2. PRISMA flowchart of included studies AQ79

Data collection process

Data extracted from each eligible study included methods of sampling, surveys, study characteristics (name, sample size, year, country, design and administration), level and area of healthcare studied, healthcare quality domains assessed and healthcare quality outcomes. Authors from any included study or excluded conference abstract were not contacted for any additional unpublished data. We tabulated the total sample of published work for LAC, according to geographical location, survey characteristics, target population characteristics and healthcare quality domains.

Table 2. Characteristics of the articles included in the final analysis

Articles' characteristics	Total N = 58, n (%)
Data collection source	
Primary	8 (14)
Secondary	50 (86)
Study type	
Repeated cross-sectional	3 (5)

Articles' characteristics	Total N = 58, n (%)	
Cross-sectional	55 (95)	Inserted
Number of countries included per article		
Only one	51 (88)	Deleted
Two to three countries	1 (2)	● AQ
Four or more countries	6 (10)	● AQ Reply/Accept
Study sample size		
<1000	3 (5)	● TypeSetter
1000–10 000	25 (43)	● Comments
10 001–100 000	24 (42)	
>100 000	5 (8)	
Not shown	1 (2)	
Year of publication		
2005–15	17 (29)	
2016–21	41 (71)	
Type of patient		
Users of health systems	30 (52)	
Users and non-users of health systems	28 (48)	
Level of health care		
All ^a	30 (51)	
Primary level	23 (39)	
Tertiary level	1 (2)	
Primary and secondary	2 (4)	
Secondary and tertiary	2 (4)	
Place of care		
All ^a	18 (31)	
Ambulatory	23 (39)	
Ambulatory and emergency	9 (16)	
Ambulatory and inpatient	5 (8)	
Inpatient	1 (2)	
Emergency	1 (2)	
Emergency and inpatient	1 (2)	
Health service included		
All ^a	36 (63)	
Pharmaceutical services	4 (6)	
Breast cancer screening	2 (4)	
Emergency	1 (2)	
Cardiovascular diseases ^b	3 (5)	
Maternal and newborn health ^c	4 (6)	
Dental	6 (10)	
Immunization	1 (2)	

Articles' characteristics	Total N = 58, n (%)	
Mental health services	1 (2)	Inserted
Source of care (funding)		Deleted
Public and private facilities	41 (71)	AQ
Only public facilities	17 (29)	AQ Reply/Accept
Domains evaluated per study		TypeSetter
Only one domain	18 (31)	Comments
2–4	20 (35)	
5–7	14 (24)	
8–10	4 (6)	
11–12	2 (4)	

^a Considered when the study included all the types of services or areas or was not specified.

^bDiabetes, hypertension and/or dyslipidaemia care.

^cAntenatal, delivery, labour maternal and/or neonatal care [AQ81](#).

Objectives

We conducted a systematic review to identify nationally representative surveys performed in LAC that include patient-reported experience and satisfaction measures of processes of care and quality impacts. We sought to describe the quality domains most frequently reported and how they were measured and, finally, to examine how they were analysed, in order to identify LAC countries' efforts and gaps towards effective measurement of the quality of their health systems.

Methods

Eligibility criteria

We defined inclusion criteria as (1) study conducted in LAC countries; (2) including participants from at least two different municipalities or districts from at least two regions within a country; (3) any observational design (survey) quantitatively assessing healthcare user's opinions/preferences/trust/experiences related to at least one of the following quality domains according to the *Lancet Global Health* Commission's High Quality Health System Framework ([Table 1](#) and [Figure 1](#)) ([Kruk et al., 2018a](#)): processes of care (continuity and integration, timely action, safety, evidence-based care, choice of provider, waiting times, patient voice and values, ease of use, dignity, privacy, non-discrimination, autonomy, confidentiality and clear communication) and quality impact domains (satisfaction, recommendation, trust, care uptake and retention and health concern resolution) and (4) published in English, Spanish or Portuguese. We excluded publications that were editorials, letters to the editor, commentaries, posters, abstracts, purely qualitative studies, those that reported results or opinions from healthcare workers and policymakers only and articles that evaluated populations from French-only- or English-only-speaking countries.

For the analysis, we did not include items related to access to healthcare services (including the physical or geographical accessibility component of ease of use), to medicines or to any specific preventive health intervention; reasons for not seeking care and reasons for not accessing care; items related to insurance or coverage and, finally, any item assessing affordability, specific amounts of money spent on care or unexpected costs of care.

Information sources

We searched five electronic databases to identify studies: PubMed, LILACS, Ovid Global Health, Ovid Embase and CINAHL using key words combined with the Boolean operators repeated in three languages (English, Spanish and Portuguese) and using a combination of terms related to healthcare quality assessment and LAC countries. Furthermore, we also reviewed the reference lists of included studies and searched the studies that could likely reach the review's inclusion criteria. The search was not limited by publication type. Inception date was January 2011 to focus on the most recent available data.

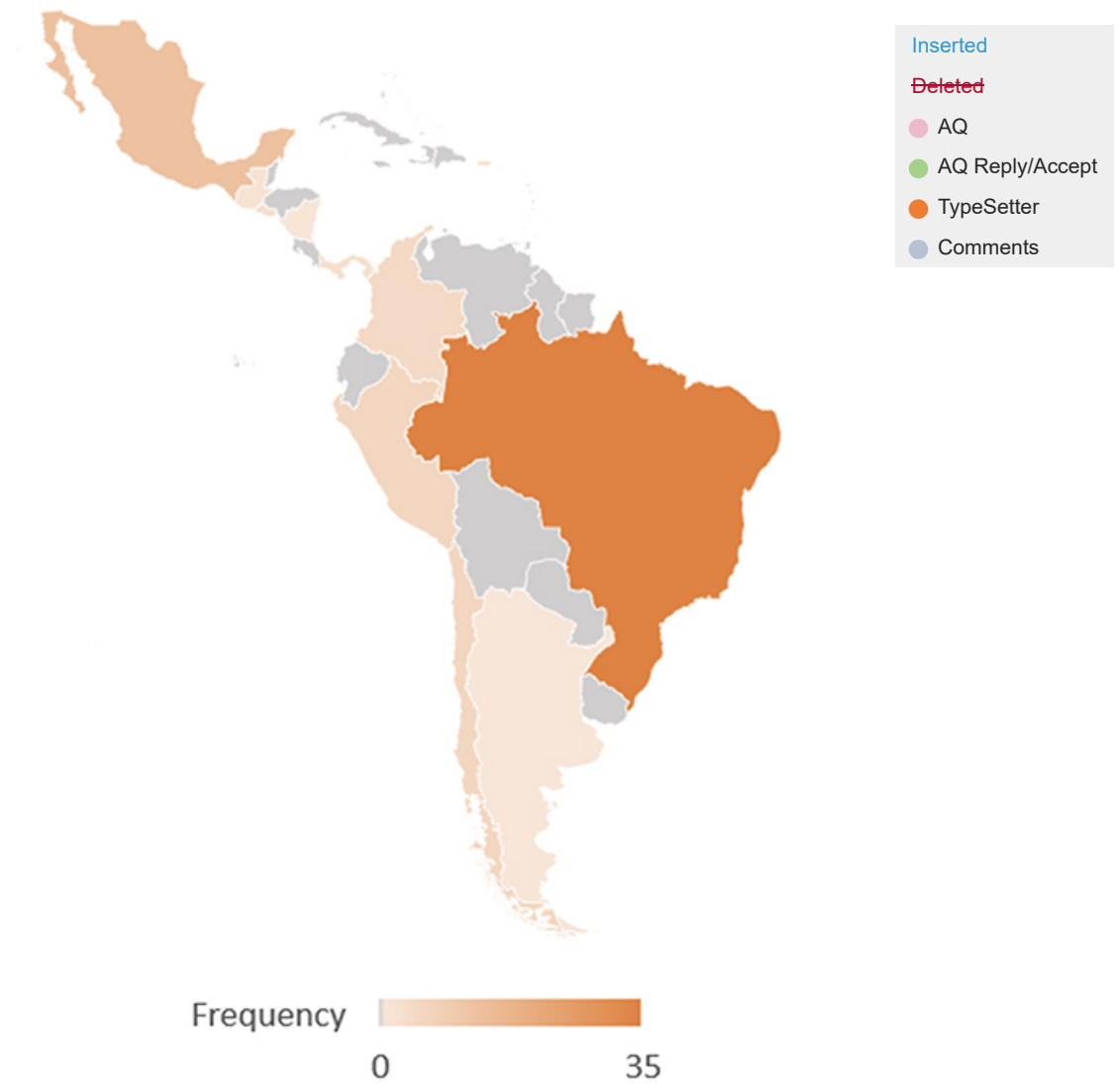


Figure 3. The number of publications on health quality surveys, per country in which the survey was performed. Countries (N° of publications): Brazil (35), Mexico (13), Chile (6), Peru (6), Colombia (5), El Salvador (4), Panama (3), Guatemala (2), Puerto Rico (2), Argentina (1), Honduras (1), Nicaragua (1).

Table 3. Characteristics of the surveys identified in the included articles in the final analysis

Surveys' characteristics	Total N = 33, n (%/N) AQ82)
Country of survey application AQ83	
Argentina	1 (3%)
Brazil	11 (33%)
Chile	6 (18%)
Colombia	1 (3%)
Guatemala	1 (3%)
Mexico	5 (15%)
Peru	5 (15%)
Puerto Rico	1 (3%)
Multinational	2 (6%)
Year of survey application	

Surveys' characteristics	Total N = 33, n (%n/N) (AQ82)	
2002–15	23 (70%)	Inserted
2016–21	10 (30%)	Deleted
Sampling method		
Population based	27 (82%)	AQ
Facility based	6 (18%)	AQ Reply/Accept
Administration		
In-person	27 (82%)	TypeSetter
Telephone	3 (9%)	Comments
In-person and telephone	3 (9%)	
Sample size		
<1000	2 (6%)	
1000–10 000	14 (43%)	
10 001–100 000	13 (39%)	
> 100 000	4 (12%)	
Periodicity		
One wave	19 (58%)	
2–4 waves	9 (27%)	
Yearly	5 (15%)	
Quality domains assessed		
Foundations and processes of care	8 (24%)	
Foundations and quality impacts	1 (3%)	
Foundations, processes of care and quality impacts	24 (73%)	

Search strategy

We used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines (Appendix AQ14 1). Two medical librarians performed the search of databases and exported the results into COVIDENCE (Veritas Health Innovation Ltd, Melbourne, Australia), a web-based screening and data extraction tool. The PubMed search strategy, including search terms and other details, is shown in Appendix 2 as an example of what was performed with the other databases.

Selection process

Before exporting data to COVIDENCE, duplicates were removed in Endnote x9 (Clarivate, Philadelphia, PA, USA) reducing the initial list of 5578 citations to 4577 citations. Six independent screeners performed a title/abstract review with a separate screener to resolve ties. The full texts of the selected abstracts were then reviewed and screened by two independent authors with a third author to resolve ties to identify the articles that would be included. Finally, two reviewers extracted data independently and in duplicate from each included study. The data entries were compared, and any disagreements were resolved by a third author (Figure 2). All the abstracts and full texts were screened and reviewed in the language in which they were published.

Synthesis methods

The identified variables used to assess healthcare quality in each article were classified into the domains of processes of care and quality impacts as defined earlier. The frequency with which each domain was included was presented with percentages of articles, identifying how they were operationalized and if they were considered as dependent or independent variables. Main results or relevant data elements were mapped to each of these domains and summarized where possible.

Additional data collection

To complement the information obtained from the included articles, we performed a web search to identify material published in reports and similar documents related to the specific surveys mentioned in the articles. We assessed the frequency with which each of the surveys

were administered and any plans for ongoing administration as well as full details on sampling and administration methods. We also performed informal consultations with local public health officials from LAC countries to identify any additional survey from the region.

Results

Study selection

We identified in the search 5584 articles, and after removal of the duplicates, we were left with 4577 studies which were screened, 4422 were excluded based on the title and abstract review, leaving 155 for full-text review. Of these, 58 articles were in Portuguese, three in Spanish and the rest in English. The remaining full-text articles were excluded for having an inappropriate design (69) and an ineligible patient population (26) and because they were duplicate articles in different languages (2) (Figure 3).

Study characteristics

Characteristics of the 58 articles are presented in Table 2 and detailed in Appendix 3; publications increased from 17 (29%) in the first half of the study period (2005–15) to 41 (71%) from 2016 to 2021. Most studies were secondary analysis of existing survey databases (86%), and the most common study design was cross-sectional (95%). Most of the publications evaluated only one country (88%), with Brazil ($n = 35$) and Mexico ($n = 13$) being the most studied (Figure 3). While the majority assessed all levels of health care (51%), several studies assessed only primary care (39%). Similarly, when looking at the source of care, there were studies that assessed solely publicly funded care (29%), while none assessed private care alone.

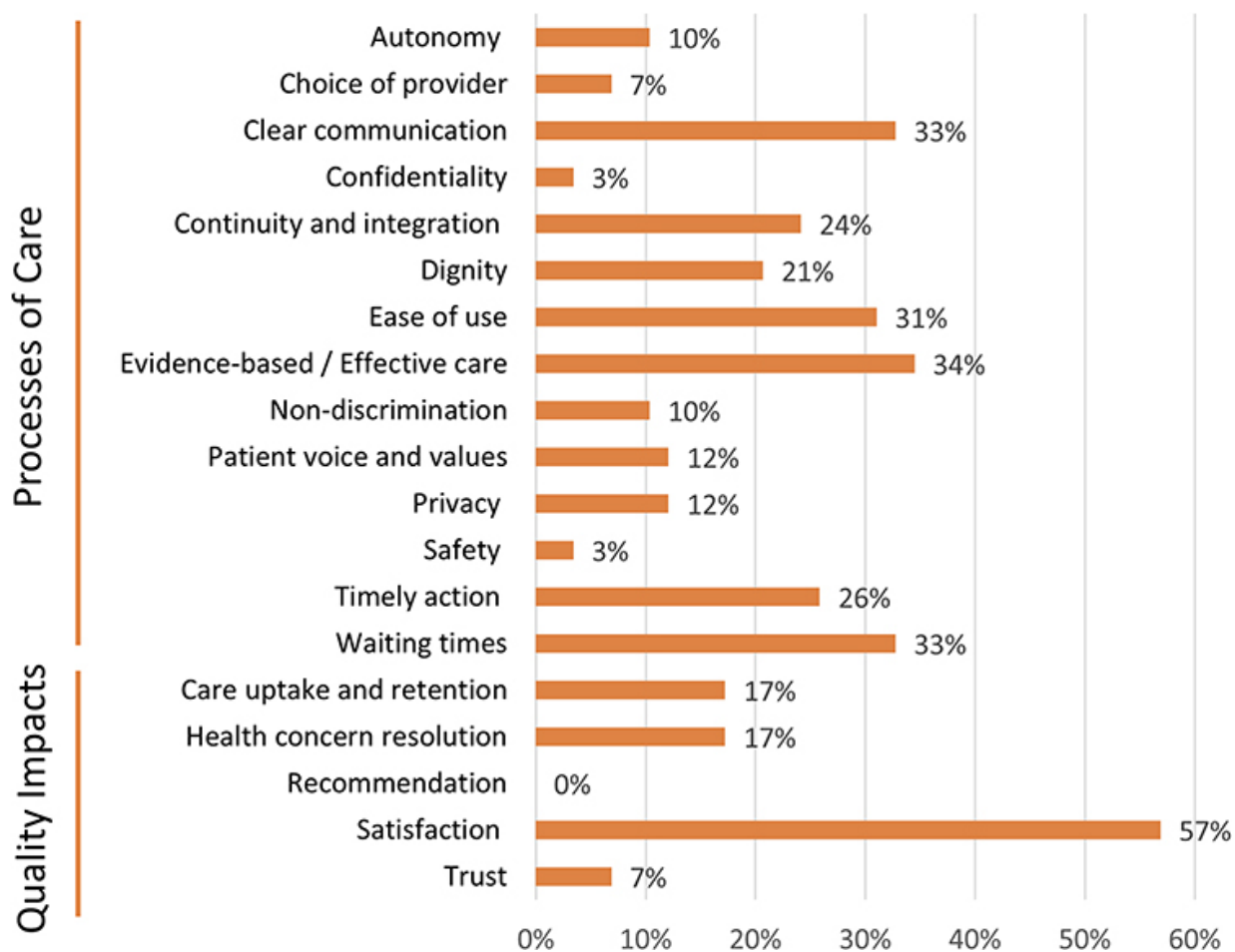


Figure 4. Quality domains identified in the included articles ($n = 58$)

Surveys' characteristics

From the 58 selected articles, 33 different surveys from 12 LAC countries were identified (see Appendix 4 for survey details). Most surveys were cross-sectional, and more than half (58%) were performed just once (Table 3). Only eight surveys from four countries ('Brazil, Chile, Mexico and Peru') continue to be administered regularly. The distribution of surveys was uneven by country, with 11 surveys from Brazil but zero surveys found for most of the countries in the region. Notably, after consultation with public health experts from LAC countries, we identified three more surveys, from two countries, which were regularly administered, but were not found in published articles: (1) the Estudio Nacional de Calidad de la Atención de los Servicios de Salud del Instituto Mexicano de Seguridad Social from Mexico (Mexican Institute of Social Security's National Study of Health Services Quality), which was previously known as ENSAT (as described in Appendix 4) (Instituto Mexicano del Seguro Social, 2022), (2) the Encuesta Nacional de Calidad de Vida from Colombia (National Survey of Quality of Life) (Departamento Administrativo Nacional de Estadística, 2019) and (3) the Encuesta de la Evaluación

de los Servicios de las Entidades Promotoras de Salud (Survey for the Evaluation of the Services from the Health Promoting Institutions) also from Colombia ([Ministerio de Salud y Protección Social de Colombia, 2022](#)).

The most frequently used survey as a data source for secondary analysis was the Brazilian National Health Survey (Pesquisa Saúde). Most of the surveys were in-person surveys (81.8%), with a population-based sample strategy (81.8%) and included measures of care and quality impact measures (72.7%). All the surveys identified evaluated some aspect of health system foundations.

Some of the recognized efforts to assess quality were initiated by multinational independent study groups to obtain standardized and comparable measures among LAC countries (i.e. the Primary Care Access, Experience and Coordination Survey, adapted from the Commonwealth Fund International Public Opinion Health Policy Survey, and the independent survey adapted from the Organization Household Survey: Access to and Use of Medicines) ([Emmerick et al., 2013](#); [Macinko et al., 2016](#); [Dobova et al., 2016](#); [Pérez-Cuevas et al., 2017](#)), while most surveys were developed and administered by governments or publicly funded institutions. Neither of the two research groups that evaluated multiple countries together used nationally developed instruments as data sources; instead, they used adapted instruments.

Health system quality domains assessed

Of the 58 included studies, 18 addressed one quality domain, whereas the others included a combination of more than one. The most evaluated subdomains were satisfaction (57%), evidence-based/effective care (34%), waiting times (33%), clear communication (33%) and ease of use (31%), while the least evaluated domains were recommendation (0%), confidentiality (3%), safety (3%), trust (7%) and choice of provider (7%) ([Figure 4](#)). Those articles that included only one subdomain evaluated mostly satisfaction ($n=5$ articles) and non-discrimination ($n=4$ articles) ([Appendix 3](#)).

In terms of analysis, quality measures were commonly evaluated as dependent variables (89.7%), determined by sociodemographic factors including age, sex, country region, skin colour, socioeconomic level or source of care (public versus private) ([Table 4](#), [Appendix 5](#)). Differences in the ratings of quality could be found in all the included articles among such categories, although statistical tests to verify the significance of such differences were not performed in all cases. Quality measurements were considered independent variables in 43.1% of the articles, as predictors of other quality domains sought by our review, such as satisfaction ([Soto-Becerra et al., 2020](#)) or evidence-based effective care ([Leniz and Gulliford, 2019](#)), or as predictors of quality impacts such as healthcare utilization ([Núñez and Chi, 2013](#)), self-rated health ([Guanais et al., 2018](#)) or access to medicines and other services ([Oliveira et al., 2011](#); [Emmerick et al., 2013](#)).

The way of measuring each quality domain varied widely among authors, countries and years, which can be appreciated in the ample variety of items and questions used, shown in [Table 4](#) and [Appendix 5](#). In addition, sometimes authors used a single item per domain, while in other cases they used several different items per domain, as it can be observed, for example, in one article that assessed continuity and integration by using four different items ([Seixas and Freitas, 2021](#)). Scales and nominal binary variables were often used, while for the ease of the analysis, categorical variables, ordinal variables and scales were frequently dichotomized or categorized ([Appendix 5](#)). Two studies used distinct measurement approaches: in one article, the participants were instructed to prioritize a set of varied health system improvements (including assigning budgets) ([Núñez and Chi, 2021](#)), and, in another study, vignettes were used to adjust the quality ratings obtained and define 'nontechnical healthcare quality' ([Geldsetzer et al., 2018](#)). Authors frequently grouped items into categories based on their own quality frameworks [e.g. 'Accommodation' or 'Acceptability' ([Álvares et al., 2017](#))], while, in some cases, items evaluating a quality domain were included in a category named after another domain [e.g. an item assessing 'dignity' was included in a category named 'patient-provider communication quality' in [Calo et al. \(2014\)](#)].

Due to this variability of methods and items, it was methodologically challenging to compare, contrast and summarize the results. Quality ratings differed across sociodemographic variables determined by each study.

Table 4. Quality domains assessed

Domains	Number of items identified	Content	Example items
Processes of care			
Autonomy	As independent variables: 2 As dependent variables: 7 Included in 6 articles (Gouveia et al., 2005 ; Calo et al., 2014 ; d'Orsi E et al., 2014 ; Geldsetzer et al., 2018 ; Murillo et al., 2019 ; Soto-Becerra et al., 2020).	Items evaluated patients' involvement in making decisions about their own health care, mostly using a five-point scale. Other aspects included whether they received information on patient rights, the possibility of obtaining information on other types of treatment and whether a referral or procedure was performed without consent.	'During your hospitalization, how do you assess the possibility to participate with the healthcare team in decisions on delivery and labour?'—Excellent vs. good, fair, bad, very bad (dichotomized scale). 'Problems encountered regarding care in the past months: Did not signed authorization for procedure or

Domains	Number of items identified	Content	Example items
			referral'. (dichotomized scale). categorical variable
Choice of provider	As independent variables: 1 As dependent variables: 4 Included in 4 articles (Gouveia <i>et al.</i> , 2005; Reyes-Morales <i>et al.</i> , 2013; Swarcwald <i>et al.</i> , 2016; Geldsetzer <i>et al.</i> , 2018).	Items asked about the freedom to choose either a provider or a facility using a five-point Likert scale.	'Freedom to choose a provider or physician'—Very good (1), regular, bad and very bad (0) (dichotomized scale).
Clear communication	As independent variables: 21 As dependent variables: 26 Included in 19 articles (Gouveia <i>et al.</i> , 2005; Arroyo-Valerio <i>et al.</i> , 2013; Reyes-Morales <i>et al.</i> , 2013; Barrera <i>et al.</i> , 2014; Calo <i>et al.</i> , 2014; d'Orsi <i>et al.</i> , 2014; Doubova <i>et al.</i> , 2016; Macinko <i>et al.</i> , 2016; Swarcwald <i>et al.</i> , 2016; Soeiro <i>et al.</i> , 2017; Figueiredo <i>et al.</i> , 2018; Geldsetzer <i>et al.</i> , 2018; Guanais <i>et al.</i> , 2018; Doubova <i>et al.</i> , 2019; Alarcon-Ruiz <i>et al.</i> , 2019a; Murillo <i>et al.</i> , 2019; Holt <i>et al.</i> , 2020; Núñez and Chi, 2021; Silva <i>et al.</i> , 2021).	The areas of communication evaluated included clarity of explanations, time to ask questions, response to questions, information given on health status or the care received, providers' attention to patient and eye contact, among others. One article presented specific items regarding communication in surgery care, such as 'surgeon explained the risks and benefits of the surgery' or 'surgeon gave clear information to the patient's relatives'. In some cases, different communication aspects were grouped by the article's authors in a variable called 'communication' (Arroyo-Valerio <i>et al.</i> , 2013), but in others, they were grouped under the variable 'patient-centeredness' (Macinko <i>et al.</i> , 2016), 'patient-provider communication quality' (Calo <i>et al.</i> , 2014) or 'quality of dispensation' (Soeiro <i>et al.</i> , 2017), where they were analysed together with other quality domains such as dignity, autonomy or evidence-based effective care.	'Availability of time to ask questions about the health problem or treatment'—Very good, good (1), regular, bad and very bad (0) (dichotomized scale). 'During the past 12 months, how often did doctors, nurses or other health professionals make sure you understood the things you needed to do to take care of your health'—always to never (four-category scale.) (Response was included in a composite score named 'patient-provider communication quality'.)
Confidentiality	As independent variables: 0 As dependent variables: 3 Included in 2 articles (Gouveia <i>et al.</i> , 2005; Swarcwald <i>et al.</i> , 2016).	In the two articles where it was assessed, it implied the possibility of speaking privately with a physician or other health professional and information being kept confidential, measured on a five-point Likert scale.	'Patient's freedom to speak privately with the health professionals'—Very good, good (1), regular, bad, very bad (0) (dichotomized scale).
Continuity and integration	As independent variables: 20 As dependent variables: 29 Included in 14 articles (Arroyo-Valerio <i>et al.</i> , 2013; Barrera <i>et al.</i> , 2014; Malta <i>et al.</i> , 2015; Doubova <i>et al.</i> , 2016; Macinko <i>et al.</i> , 2016; Abreu <i>et al.</i> , 2018; Baumgarten <i>et al.</i> , 2018; Figueiredo <i>et al.</i> , 2018; Guanais <i>et al.</i> , 2018; Amorim <i>et al.</i> , 2019; Leniz and Gulliford, 2019; Prado-Galbarro <i>et al.</i> , 2020; Seixas and Freitas, 2021; Silva <i>et al.</i> , 2021).	This domain was addressed through questions related to ease of referral, whether providers often helped to coordinate a referral and whether they knew relevant and essential information of their patients in follow-up visits, such as previous treatment received or test results (Seixas and Freitas, 2021). In addition, it was asked if the participants' health concerns	'Having an "own" general doctor or family doctor, do you know the name of that doctor?' (binary variable). 'When you are treated in this health unit, do you think that the team tries to solve your needs/problems in the health unit itself?'—Yes; yes, sometimes; never (categorical variable).

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Domains	Number of items identified	Content	Example items
		could be solved in the same facility and if other health professionals were involved in the participant's care (Dobova et al. 2016). In one study, participants were asked if they had their 'own' general or family doctor and knew their name.	
Dignity	As independent variables: 7 As dependent variables: 14 Included in 12 articles (Gouveia et al., 2005; Arroyo-Valerio et al., 2013; Reyes-Morales et al., 2013; Calo et al., 2014; d'Orsi E et al., 2014; Aravena and Inostroza, 2015; Szwarcwald et al., 2016; Soeiro et al., 2017; Álvares et al., 2017; Geldsetzer et al., 2018; Dobova et al., 2019; Murillo et al., 2019).	Participants were asked to grade the 'quality of treatment or politeness' experienced (including courtesy and respect) using a scale. In other articles, what was assessed was the frequency with which respectful care was received, or whether the participant had experienced mistreatment (either physical, verbal or psychological). Only one survey was found to assess the quality of treatment from different professionals involved in healthcare, not only health professionals (Arroyo-Valerio et al., 2013).	'Adverse personal experiences', positive if any of the following is positive: 'Indicate if you consider yourself to have received: physical abuse, psychological or emotional abuse, rudeness, prepotency, corruption, abuse to family members, unequal treatment, lack of respect to your intimacy'. (dichotomized composite score). 'If you had contact with one of these members of the staff, tell us how they treated you?' (security, information desk, social worker, payment office, clinical archives, nurse, doctor, technician, laboratory staff, x-rays technician, cleaning staff)—very good, good, bad and very bad. Each response was given a score of 0–3 to generate a score of 0–33 in total, if score >7, 'mistreatment'. (Dichotomized composite score).
Ease of use	As independent variables: 15 As dependent variables: 21 Included in 18 articles (Gouveia et al., 2005; Emmerick et al., 2013; Reyes-Morales et al., 2013; Aravena and Inostroza, 2015; Macinko et al., 2016; Oliveira et al., 2016; Szwarcwald et al., 2016; Soeiro et al., 2017; Álvares et al., 2017; Abreu et al., 2018; Geldsetzer et al., 2018; Guanais et al., 2018; Amorim et al., 2019; Dobova et al., 2019; Moscoso-Porras et al., 2019; Prado-Galbarro et al., 2020; Soto-Becerra et al., 2020; Silva et al., 2021).	Two categories were present: (1) The ease of use of the facility in terms of structure: cleanliness, comfort, clarity of signage and accessibility for disabled individuals, such as the presence of ramps or safety rails and (2) the ease of use of the facility regarding how to contact it: opening hours, the possibility to schedule visits over the phone or if it could be reached on weekends. Questions were often categorized by the authors as 'accessibility' (Soto-Becerra et al., 2020), 'accommodation' (Álvares et al., 2017), 'ambiance' (Soeiro et al., 2017) or 'acceptability' (Oliveira et al., 2011), sometimes coupled with geographical or physical accessibility questions such as distance to facility or transportation barriers (not considered in this review).	'Cleanliness of the SUS dispensing unit where the patient receives medicines'—Very good, good, neither good or bad, bad, very bad (categorized scale considered into a dimension named 'Accommodation'). 'Opening hours for this health care unit' very good, good (1), neither bad/nor good, bad, very bad (0) (dichotomized scale included in 'Ambiance').

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Domains	Number of items identified	Content	Example items
Evidence-based effective care	As independent variables: 18 As dependent variables: 16 Included in 20 articles (Gouveia <i>et al.</i> , 2005; Reyes-Morales <i>et al.</i> , 2013; Malta <i>et al.</i> , 2015; Berquó and Lago, 2016; Doubova <i>et al.</i> 2016, Doubova <i>et al.</i> , 2019; Heredia-Pi <i>et al.</i> , 2016; Macinko <i>et al.</i> , 2016; Szwarcwald <i>et al.</i> , 2016; Soeiro <i>et al.</i> , 2017; Abreu <i>et al.</i> , 2018; Baumgarten <i>et al.</i> , 2018; Figueiredo <i>et al.</i> , 2018; Guanais <i>et al.</i> , 2018; Alarcon-Ruiz <i>et al.</i> , 2019a; Amorim <i>et al.</i> , 2019; Leniz and Gulliford, 2019; Borges <i>et al.</i> , 2020; Prado-Galbarro <i>et al.</i> , 2020; Silva <i>et al.</i> , 2021).	It was assessed by patient ratings of provider skills or knowledge, thorough examination or adequate duration of visit; in some cases, the duration of the last visit as a numeric variable was also obtained. Additionally, participants were asked if specific health actions relevant to their health concern had been performed.	'How long was the moment you admitted to the office to the physician's office?' 'Self-reported diabetic patients referring having had an ophthalmological exam in the last 2 years' (binary variable).
Non-discrimination	As independent variables: 2 As dependent variables: 8 Included in 6 articles (Gouveia <i>et al.</i> , 2005; Travassos <i>et al.</i> , 2011; Arroyo-Valerio <i>et al.</i> , 2013; Boccolini <i>et al.</i> , 2016; Braga <i>et al.</i> , 2019; Junior <i>et al.</i> , 2020).	Of the six articles analysing non-discrimination, in four, it was the only quality domain assessed; in fact, their main objective was to describe discrimination within their respective populations and their associated factors (Travassos <i>et al.</i> , 2011; Braga <i>et al.</i> , 2019; Junior <i>et al.</i> , 2020; Boccolini <i>et al.</i> , 2016). Reasons for discrimination assessed included skin colour, race, sex, lack of money, social class, type of working occupation, type of disease, sexual preference, religion, age, nationality and 'other reasons'.	'Any discrimination'. If response positive to any of the following items: 'In the last 12 months, have you thought that health professionals treated you worse than other people for any of the following reasons?'—sex, age, lack of money, social class, skin colour, type of disease (dichotomized composite score). 'In the past 12 months have you felt a victim of any type of discrimination': (1) 'when you sought medical services or health care?' (binary variable).
Patient voice and values	As independent variables: 2 As dependent variables: 7 Included in 7 articles (Gouveia <i>et al.</i> , 2005; d'Orsi E <i>et al.</i> , 2014; Berquó and Lago, 2016; Binfa <i>et al.</i> , 2016; Abreu <i>et al.</i> , 2018; Figueiredo <i>et al.</i> , 2018; Soto-Becerra <i>et al.</i> , 2020).	Three aspects of this domain were assessed: allowing a companion or a visitor during care, offering solutions according to participants' reality (Figueiredo <i>et al.</i> , 2018), and the presence of mechanisms of hearing 'the voice of the patients'.	'Presence of companion during childbirth' (binary variable). '[Inpatient] Possibility of receiving visits by family members'—Very good, good (1), regular, bad, very bad (0) (dichotomized scale).
Privacy	As independent variables: 2 As dependent variables: 6 Included in 7 articles (Gouveia <i>et al.</i> , 2005; Arroyo-Valerio <i>et al.</i> , 2013; d'Orsi E <i>et al.</i> , 2014; Soeiro <i>et al.</i> , 2017; Álvares <i>et al.</i> , 2017; Amorim <i>et al.</i> , 2019; Murillo <i>et al.</i> , 2019).	As with dignity, privacy was assessed with a scale, asking the frequency with which privacy was respected or asking whether there had been privacy-related adverse experiences. The aspects of privacy evaluated included the privacy of the area/place of care and respect for intimacy during physical examination or childbirth.	'Problems encountered regarding care in the past months: My privacy was not respected' (dichotomized categorical variable). 'Respect of intimacy during physical examination and care'—Very good, good (1), regular, bad, very bad (0) (dichotomized scale).
Safety	As independent variables: 0 As dependent variables: 2 Included in 2 articles (Barrera <i>et al.</i> , 2014; Soeiro <i>et al.</i> , 2017).	Both items identified and assessed adverse events: whether information was provided on immunization adverse events (Barrera <i>et al.</i> , 2014) and whether the participant had experienced	'Health workers inform me of the risk of adverse events' (binary variable included in a domain named 'Quality of service'). 'In your opinion, is this medicine causing you any health problems?' (binary

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Domains	Number of items identified	Content	Example items
		drug-related adverse events. None of the articles identified studied other practices specifically related to safety, such as healthcare-associated infections, improper injection practices or falls during health care.	variable included medicines').
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Timely action	As independent variables: 11 As dependent variables: 17 Included in 15 articles (Miquilin et al., 2013 ; Reyes-Morales et al., 2013 ; Aravena and Inostroza, 2015 ; Macinko et al., 2016 , Macinko et al., 2020 ; Szwarcwald et al., 2016 ; Azevedo e Silva et al., 2017 ; Stopa et al., 2017 ; Amorim et al., 2019 ; Doubova et al., 2019 ; Murillo et al., 2019 : 195; Cabieses and Oyarte, 2020 ; Dantas et al., 2021 ; Núñez and Chi, 2021 ; Silva et al., 2021).	Participants were asked if they received care the first time they sought it and if they could receive care without an appointment; also, binary questions were asked about problems experienced in receiving timely care in different areas, such as in emergency care, surgical care or primary care.	'Sought health care in the 2 weeks prior to the survey and received care in the first visit' (binary variable). 'It is easy to get an appointment'—always, most of the times (yes) vs. (no) rarely, never (dichotomized scale)
Waiting times	As independent variables: 10 As dependent variables: 19 Included in 19 articles (Gouveia et al., 2005 ; Arroyo-Valerio et al., 2013 ; Reyes-Morales et al., 2013 ; Barrera et al., 2014 ; d'Orsi E et al., 2014 ; Passero et al., 2016 ; Szwarcwald et al., 2016 ; Soeiro et al., 2017 ; Álvares et al., 2017 ; Abreu et al., 2018 ; Díaz de León Castañeda, 2018 ; Geldsetzer et al., 2018 ; Rech et al., 2018 ; Alarcon-Ruiz et al., 2019 Alarcon-Ruiz et al., 2019b ; Doubova et al., 2019 ; Murillo et al., 2019 ; Cabieses and Oyarte, 2020 ; Prado-Galbarro et al., 2020 ; Soto-Becerra et al., 2020).	This domain was evaluated using multiple perspectives: (1) Objectively, in some cases, a specific amount of time, in minutes, was presented; in others, different time categories were used (e.g. 0–15 min, 15–30 min, >30 min). (2) Subjectively, some items asked for the participants' assessment or satisfaction with the experienced waiting times, while others asked whether the participants had problems regarding this domain (Cabieses and Oyarte, 2020). Only three articles considered both objective and subjective assessments (Szwarcwald et al., 2016 ; Murillo et al., 2019 ; Álvares et al., 2017).	'Mean state waiting time [min]'. 'Waiting time'—Very good, good (1), regular, bad, very bad (0) (dichotomized scale).
Quality impacts			
Care uptake and retention	As independent variables: 6 As dependent variables: 7 Included in 10 articles (Macinko and Lima Costa, 2012 ; Reyes-Morales et al., 2013 ; Calo et al., 2014 ; Doubova et al., 2016 ; Oliveira et al., 2016 ; Pérez-Cuevas et al., 2017 ; Stopa et al., 2017 ; Amorim et al., 2019 ; Prado-Galbarro et al., 2020 ; Seixas and Freitas, 2021).	This domain was evaluated by asking whether the participant had a usual source of care or a regular place/doctor for primary care and willingness to change it given the option.	'Do you usually seek the same place, doctor, or health service when you need care?' (binary variable). 'User's desire to change the dentist or primary care unit if given the option' (binary variable included in composite score 'Satisfaction with oral health services').
Health concern resolution	As independent variables: 7 As dependent variables: 4 Included in 10 articles (Reyes-Morales et al., 2013 ; Binfa et al., 2016 ; Doubova et al., 2016 , Doubova et al., 2019 ; Macinko et al., 2016 ; Passero et al., 2016 ; Soeiro et al., 2017 ; Guanais	This domain was evaluated regarding the perception of improvement in health status after the care received, assessed as 'resolved demand' or 'perceived improvement after care' (Reyes-Morales et al., 2013). The need for hospital	'Perceived improvement after care': 'After the last care you received, you consider that your health has...?'—improved (improved a lot, improved); not improved (remained the same, worsened, worsened a lot) (dichotomized scale).

Domains	Number of items identified	Content	Example items
	<i>et al.</i> , 2018; Rech <i>et al.</i> , 2018; Prado-Galbarro <i>et al.</i> , 2020).	readmission (Macinko <i>et al.</i> , 2016) or repeated surgery (Doubova <i>et al.</i> 2016) was also used to address this domain. Lastly, in one article, a 'well-being score' was used to assess labour and childbirth (Binfa <i>et al.</i> , 2016).	'Well-being score labour and childb optimal, adequate using the 'Matern Being Scale' a 42-instrument create validated in Chile scale).
Recommendation	As independent variables: 0 As dependent variables: 0 Included in 0 articles	None of the 58 articles evaluated this domain, either regarding a specific provider or facility.	
Satisfaction	As independent variables: 7 As dependent variables: 34 Included in 33 articles (Macinko and Lima Costa, 2012; Emmerick <i>et al.</i> , 2013; Núñez and Chi, 2013; Reyes-Morales <i>et al.</i> , 2013; Barrera <i>et al.</i> , 2014; d'Orsi E <i>et al.</i> , 2014; Martins <i>et al.</i> , 2014; Aravena and Inostroza, 2015; Doubova <i>et al.</i> 2016, Doubova <i>et al.</i> , 2019; Macinko <i>et al.</i> , 2016; Oliveira <i>et al.</i> , 2016; Passero <i>et al.</i> , 2016; Szwarcwald <i>et al.</i> , 2016; Pérez-Cuevas <i>et al.</i> , 2017; Soeiro <i>et al.</i> , 2017; Stopa <i>et al.</i> , 2017; Álvares <i>et al.</i> , 2017; Abreu <i>et al.</i> , 2018; Baumgarten <i>et al.</i> , 2018; Díaz de León Castañeda, 2018; Geldsetzer <i>et al.</i> , 2018; Macarevich <i>et al.</i> , 2018; Rech <i>et al.</i> , 2018; Alarcon-Ruiz <i>et al.</i> , 2019 Alarcon-Ruiz <i>et al.</i> , 2019b; Amorim <i>et al.</i> , 2019; Hernández-Vásquez <i>et al.</i> , 2019: 2; Murillo <i>et al.</i> , 2019; Souza <i>et al.</i> , 2019; Holt <i>et al.</i> , 2020; Prado-Galbarro <i>et al.</i> , 2020; Soto-Becerra <i>et al.</i> , 2020; Silva <i>et al.</i> , 2021).	Among the articles identified, participants' satisfaction with different aspects was explored, such as satisfaction with the care received, either in a single visit or in a time frame or focusing on the assessment of a specific facility, a specific service (Doubova <i>et al.</i> , 2019) or health provider. Additionally, satisfaction with the health system in general was evaluated; in one article, satisfaction was assessed in terms of the perception of the need for health system reform or transformation (Pérez-Cuevas <i>et al.</i> , 2017). Lastly, items on different quality domains were often grouped by authors to form a composite score of overall 'perceived quality/satisfaction' (Soeiro <i>et al.</i> , 2017; Soto-Becerra <i>et al.</i> , 2020). Interestingly, of the 33 articles evaluating satisfaction, 30 (90.9%) assessed this domain as a dependent variable, and half of them (15) tried to correlate it with other quality variables.	'Regarding the health care service received today in this health facility, how would you rate your satisfaction level?'—(Satisfied) very satisfied, satisfied; (Not satisfied) neither satisfied nor dissatisfied, dissatisfied, very unsatisfied (dichotomized scale). 'Evaluation of the health system': 'How would you grade the Chilean health system, in general? Use a scale from 1 to 7 where 1 is "very bad" and 7 is "very good"'. Responses 5–7 were categorized as (1), and 1–4 as (0) (dichotomized scale).
Trust	As independent variables: 5 As dependent variables: 0 Included in 4 articles (Tortolero-Luna <i>et al.</i> , 2010; Reyes-Morales <i>et al.</i> , 2013; Calo <i>et al.</i> , 2014; Prado-Galbarro <i>et al.</i> , 2020).	This domain was addressed by assessing participants' trust in the information, diagnosis or treatment received by either providers or government health agencies. Additionally, trust in their health providers as a whole was assessed. Notably, in all cases, they were considered as independent variables.	'Rating of level of trust in information from participant's providers'—a lot vs (not a lot) some, a little, not at all (dichotomized scale). 'Reason for not coming back to health facility: Disagreement with the diagnosis or treatment received' (dichotomized categorical scale).

Discussion

This review identified 58 articles that measured healthcare users' experiences and opinions on the care processes and the quality impacts perceived after their own interaction with the health system. As previously described (Larson *et al.*, 2020) and as evidenced in our review, publications regarding such measures have increased over the years. This is likely to have been influenced by the growing attention to health system quality in recent years (World Bank, 2018; Kruk *et al.*, 2018a). However, gaps in how data are obtained still exist in LAC countries.

The fact that most surveys were cross-sectional assessments performed only once, and that there were 11 surveys still actively administered and only eight were published and were used for secondary analysis, attests to the dearth of timely, comparable data sources in the region. One-off surveys are a poor use of resources—the time and energy to develop and analyse the survey are not further applications of it. The literature indicates that utilization of repeated cross-sectional surveys can be advantageous for detecting changes in prevalence and perception or behaviour in the population over time, provided that consecutive years have samples (McManus, 2020). Likewise, repeated cross-sectional surveys could include retrospective questions for valuable past experiences with the health services and be used to monitor policy changes, as the comparability of the information is maintained using the same tool (Rafferty *et al.*, 2015).

Latin American health systems are described to be fragmented, meaning that there are several subsectors (in some countries up to three or four) with different funding sources that provide health care to the population but that it is often not coordinated or integrated (Göttems and Mollo, 2020). Another gap evidenced in our review is that apart from affecting quality, fragmentation also affects the measurement of quality. We found that the private sector was not evaluated in ~one-third of the included articles. This gap has already been reported in other settings, where data from the private sector are shared incompletely, not regularly enough, and where consolidation of data is challenging (Lozano *et al.*, 2006; Bhattacharyya *et al.*, 2016). What is more, in the LAC region, private ‘informal’ health system providers, such as pharmacists, shops or traditional doctors, are also an important component of the health system (Sudhinaraset *et al.*, 2013), and no description of this sector has been found in the included articles.

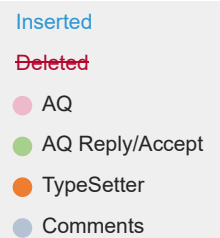
Although there is information on the formal private sector, which appears to provide higher-quality care to the population in the region (Berendes *et al.*, 2011; Emmerick *et al.*, 2013; Macarevich *et al.*, 2018; Murillo *et al.*, 2019), we believe that an strategy to collect information from the totality of the health system is needed to guide systemic and collaborative actions that raise the quality level of the whole system (Berendes *et al.*, 2011; Sudhinaraset *et al.*, 2013; Bhattacharyya *et al.*, 2016). In fact, as a proportion of people who seek care in the private sector is financially vulnerable, ensuring the quality of health care in the private sector (e.g. by accreditation or certification practices) would also promote more equitable care to all the population (Berendes *et al.*, 2011; Sudhinaraset *et al.*, 2013; Göttems and Mollo, 2020). It is important to note that some private sector users may be people insured by the public sector but not able to access care there due to organizational barriers. To this end, with respect to measurement, we found that population-based surveys rather than facility-based ones would be more efficient for assessing all subsectors of LAC countries health systems.

As mentioned in the Results section, while most of the surveys identified were implemented by governments, the ones that assessed multiple LAC countries were implemented by independent study groups. In this context, the integration of efforts from both government and academic groups is necessary to impact the creation and/or modification of policies. Relevant research findings for future action should be shared in a timely manner with policymakers, implementers and the public to enhance collaborative work and to facilitate the development and implementation of evidence-based interventions (Oliver *et al.*, 2014). In addition, for data to translate into effective action, it is essential to involve those in charge of implementing quality improvements in the development of survey instruments and implementation stages (Institute for Healthcare Improvement, 2003; Marx *et al.*, 2018; Arrieta *et al.*, 2019).

Regarding the aspects of quality prioritized by LAC countries, satisfaction was the domain most frequently measured as a measure of ‘quality impact’, and an overall appreciation of the care received or of the health system (Donabedian, 1988; Kruk *et al.*, 2018a), which may explain why it is frequently used as a ‘summary measure’. Nonetheless, as the report of satisfaction alone does not point to a specific area for improvement, it is recommended that other quality domains are evaluated with it, especially processes of care, to provide a more comprehensive and insightful assessment of health system quality for the region (Donabedian, 1988; Fritsche and Peabody, 2018; Kruk *et al.*, 2018a).

Prior studies have indicated that low expectations of quality correlate with higher satisfaction ratings, even in the context of poor-quality care, and this may create a vicious cycle, where low-quality expectations lead to less pressure on the system to improve, and thus, the poor quality offered remains (Kruk *et al.*, 2018a; Roder-DeWan *et al.*, 2019). Measuring expectations of care through vignettes, where respondents rate standardized examples of high- and low-quality care, provides a method of indexing quality ratings against expectations (Salomon *et al.*, 2004; Geldsetzer *et al.*, 2018) and obtaining more accurate data. On the other hand, timely sharing of quality ratings with the population in a simplified but useful manner can promote accountability and empower people to demand for higher-quality care and replace the described vicious cycle by a virtuous one. An interesting means in which countries could do this would be the regular (e.g. yearly) reporting and sharing of health system performance to the public by use of a dashboard of key quality indicators along with measures of financial protection and equity. Robust registries and trustworthy routine health information systems are important prerequisites to enable this (Kruk *et al.*, 2018a).

The domains evaluated in the studies included in our review differed, probably denoting different priorities among countries and authors. In the LAC region, as access and financial barriers to health care still exist (Riutort and Cabarcas, 2006; Houghton *et al.*, 2020), every effort to measure nationally representative quality data should be highly efficient (Lozano *et al.*, 2006). This fact and the high variability of items that made the summary of quality ratings challenging call for the need for a set of quality indicators that both efficiently and comprehensively assess quality of health care. Furthermore, although it is expected that each country needs specific measures according to their individual realities, this new set of indicators should also enable the comparison of ratings between countries and the production of multinational reports that promote benchmarking, the sharing of experiences and even collaboration within the region (Macinko *et al.*, 2016; OECD, 2017).



This systematic review had some limitations. First, operational definitions of quality domains were lacking in many articles or were not consistent across articles or with the framework we applied. Therefore, it is important to acknowledge that despite the systematic extraction of data, the possibility of misclassification across categories cannot be entirely ruled out. Second, although we excluded items addressing geographic or financial access to health care was motivated by the aim of prioritizing perceptions of care and quality impacts, we recognize that cost and distance represent crucial determinants of healthcare utilization and that accessible care is an important characteristic of high-quality health systems; in fact, financial protection is a quality indicator that could be considered in further publications on the topic. Additionally, our results refer to Spanish- and Portuguese-speaking countries only. Finally, as important information for our review was obtained from sources beyond the content of the articles, we acknowledge that a systematic search of grey literature in the topic would be very useful to complement our work.

This systematic review also has several strengths. First, this investigation has successfully identified and comprehensively analysed the primary tools utilized to measure and evaluate the quality of various public and private entities within the LAC region over the past 15 years, representing a starting milestone for further instrument development to close the gaps found. Second, our findings reveal the prevalent priorities for quality measurements in the LAC region and provide insight into how they are considered, either as dependent or independent variables. Third, we detail the items used to assess various quality domains, which could be adapted to be incorporated in upcoming initiatives over the region at a national, subnational or even facility level. Finally, we underscore the gaps found in quality measurement in the region and point to opportunities of policies that can address them.

Conclusion

Measuring quality in health systems is important in the policy-making area because policymakers can identify gaps in service delivery, such as financial or organizational barriers, and take steps to address these issues. If these measurements are consistent and repeated, they can also monitor the impact of policy interventions and make evidence-based decisions about resource allocation. To this end, we believe that while some measurement of quality indicators is performed in the LAC region, it is not enough at this state.

Countries need to assess more than only satisfaction measures, existing numerous aspects of healthcare quality regarding processes of care and quality impacts amenable to measurement by repeated cross-sectional nationally representative surveys. Government representatives, research groups and policymakers should work together in the design and development of the instruments needed to do this to increase the impact of the results obtained. Also, ideally efforts and ideas should be shared, so that the new instruments created (or adapted from previous ones) can produce results that are comparable among countries enabling benchmarking and the sharing of successful experiences. The use of a shared quality framework, the one cited here or a new and updated one, would be very important to this end. Finally, the results obtained should also be consistently available and reported to the population, so they can hold health systems accountable for the care they provide and start a virtuous circle of high quality in health systems in the region.

Supplementary data

[Supplementary data](#) are available at *Health Policy and Planning* Journal online.

Data availability

The data underlying this article are available in the article, in its online supplementary material and upon request to the corresponding author.

Funding

The present study was supported by the Inter-American Development Bank and the Swiss Agency for Development and Cooperation through the grants ‘Making the People’s Voice heard on health system quality in Latin America in times of crisis—RG-T3768’ and ‘Strengthening Latin-American Health systems with locally generated evidence—Contract no 81068994’, respectively. The funders were not involved in any manner in designing, data collection, analysis or in drafting or reviewing the manuscript.

Acknowledgements

The authors thank the librarians working at the Institute for Clinical Effectiveness and Health Policy for their assistance in developing the systematic search strategy and the key informants from the Latin American and the Caribbean region who offered their invaluable insight and support.

Author contributions

J.M.-R., L.A.E., P.J.G. and H.H.L. contributed to conception of the review protocol, study design literature review, quality assessment, data extraction, data analysis, interpretation and drafting of the manuscript. J.R., E.G.-E. and A.M. contributed to conception of the review protocol, study design, quality assessment and critically reviewing and editing the manuscript. All authors have read, critically reviewed, edited and approved the final manuscript.

Reflexivity statement

This systematic review was conducted by seven authors who represent the Quality Evidence for Health System Transformation in Latin America. They have diverse professional backgrounds in research, academia and governments. In the author team, two are early career researchers, while the remaining authors are seniors in health system quality research. There are six researchers from low- and middle-income countries in Latin America (J.M.-R., L.A.E., P.J.G., E.G.-E, A.M. and J.R.) and one from a high-income country (H.H.L.). Four authors are female, and three authors are male.

Ethical approval

The protocol and instruments were approved by the Cayetano Heredia University Ethics Institutional Board (Project ID 205271 'Hacer que se escuche la Voz de la Gente sobre la Calidad del Sistema de Salud en América Latina en Tiempos de Crisis').

Conflict of interest

The authors have declared that they have no competing interests.

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