

A Comparative Data Base Analysis On Service Quality And Patient Satisfaction In Private And Public Hospitals: A Systematic Review

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ABSTRACT

Introduction: In developing countries, the private sector provides a substantial proportion of primary health care to low income groups for communicable and non-communicable diseases. These providers are therefore central to improving health outcomes. We need to know how their services compare to those of the public sector to inform policy options.

Methodology: We summarised reliable research comparing the quality of formal private versus public ambulatory health care in low and middle income countries. We selected studies against inclusion criteria following a comprehensive search, yielding 80 studies. We compared quality under standard categories, converted values to a linear 100% scale, calculated differences between providers within studies, and summarised median values of the differences across studies.

Results: As the results for for-profit and not-for-profit providers were similar, we combined them. Overall, median values indicated that many services, irrespective of whether public or private, scored low on infrastructure, clinical competence, and practice. Overall, the private sector performed better in relation to drug supply, responsiveness, and effort. No difference between provider groups was detected for patient satisfaction or competence. Synthesis of qualitative components indicates the private sector is more client centred.

Conclusion: Although data are limited, quality in both provider groups seems poor, with the private sector performing better in drug availability and aspects of delivery of care, including responsiveness and effort, and possibly being more client orientated. Strategies seeking to influence quality in both groups are needed to improve care delivery and outcomes for the poor, including managing the increasing burden of non-communicable diseases.

Keywords: Public Hospitals, Private Hospitals, Patient Satisfaction, Data Bases, Developing Countries.

INTRODUCTION

In many low- and middle-income nations, the private sector serves as the principal supplier of primary healthcare for the underprivileged (LMICs). For instance, in South Asia, approximately 75% of children from the lowest

income quintile seeking medical attention for acute respiratory conditions go to a private provider [1], and in 26 African countries, approximately 45% of sick children from the lowest income quintile go to a formal or informal private provider rather than a public

provider [2]. As the prevalence of non-communicable diseases (NCDs) rises, private providers are also becoming more crucial for delivering ambulatory care [3]. Private providers might be "formal," that is, recognised by the law or by regulatory agencies that are recognised by the law, or "informal," that is, not recognised [4]. 'For-profit' hospitals, independent contractors, and 'not-for-profit' non-governmental organisations are examples of formal private providers (NGOs). Churches are among the NGOs, which are particularly prevalent in Africa. However, in reality, the distinction between for-profit and not-for-profit organisations is not always clear cut because some NGOs only operate as tax advocates for private practitioners [5,6]. Quacks, lay health professionals, drug dealers, and regular store owners are examples of informal allopathic providers [7]. The argument that formal for-profit commercial services are superior to government supply sparks intense ideological arguments [8–10]; likewise, some people view not-for-profit private providers, like those run by churches, as excellent and offering good value [11]. Regardless these disagreements, it is generally acknowledged that improving the calibre of both public and private providers could significantly affect health outcomes. It is frequently recommended that the state provide these mixed systems with enough stewardship and monitoring [9,12], but the procedures for ensuring quality are complicated and have questionable efficacy [13,14]. Enhancing stewardship and oversight requires complicated management of resources, laws, and market-influencing strategies [15,16]. Therefore, knowing how the formal private sector's quality and performance stack up against the public sector can aid governments in concentrating their delivery-improvement measures. Simply put, if the quality of care provided by the private sector is generally lower than that of care provided by the public sector, then it is imperative to improve quality and outcomes; on the other hand, if the quality of care provided by the private sector is high, the goal of policy should be to somehow influence the market to

further improve access for low income groups. The utilisation of a service is likely to be influenced by a variety of factors, including structural quality, delivery-related factors, and the technical or professional content of treatment [17]. Each factor will have intricate implications for patient satisfaction, service use, and health outcomes. Additionally, each is interconnected; for instance, population health outcomes depend on service use, technical quality, and drug accessibility. There has been minimal progress in improving the quality of prescribing for both sectors, according to a recent comprehensive review that looked at the usage of medications in primary care [18]. The authors also noted the necessity for research on the distinction between the public and private sectors and the relatively poor quality of the data. Our goal was to systematically find research that directly compare the quality of commercial providers and public services in regard to ambulatory health care in LMICs and summarise their findings.

MATERIAL AND METHODS

Requisites for inclusion

We examined the service quality of ambulatory care provided by private versus public medical health services in field-based studies. To prevent confounding variables related to overall differences in service quality between nations, it was intended to include research using the same methodology to measure the differences and in the same countries. Studies that evaluated ambulatory care, which is described as the "delivery of personal health care services on an outpatient basis" [19], were conducted in LMICs were included in our analysis. Only studies that satisfied specific standards for quality and that evaluated commercial and public services concurrently in the same nation and using the same methodologies were included. We only included those who are employed by the allopathic medical systems because "private" is defined as "all organisations and persons acting beyond the direct supervision of the state" [20]. Individuals

or groups of medical professionals working in privately owned clinics, hospitals, and pharmacies that are for-profit were referred to as "private for-profit providers," whereas professionals working in non-profit organisations like different (missionary or non-missionary) NGOs and private voluntary organisations were referred to as "private not-for-profit providers." Informally trained healthcare professionals such as shop owners and street sellers were included in this category. From January 1970 to April 2009, studies published in English, French, or German were considered. We carefully applied the comprehensive inclusion criteria to the full texts of those identified in the screening search after carefully reviewing all titles/abstracts discovered using the search techniques mentioned below for prospective inclusion. Studies using qualitative techniques were recognised and included if they met the following criteria: (a) they used widely recognised data collection techniques (such as in-depth interviews, focus groups, or observation); (b) they identified the analysis techniques they used (such as thematic analysis, content analysis, or grounded theory); and (c) they presented their findings thematically or as verbatim quotes.

Search Techniques

The search strategies used both indexed and free-text terms, such as "health sector," "health care," "delivery of health care," "primary health care," "medical care," "health clinic," "outpatient service," "ambulatory care," "practitioner," "health provider," "hospital," "pharmacy," "drug vendor," "drug seller," "drug store," "public sector," "private sector," "quality of health care," "Africa," "Asia," "

Information Gathering and Analysis

To all titles and abstracts, the inclusion criteria were applied. To clear up any doubts, we discussed each full-text copy of a record that might be pertinent. Then, in order to exclude out studies where the results were unlikely to be valid, we evaluated possible research against a

set of fundamental minimum methodological standards. Using structural, delivery, and technological categories, we modified Donabedian's [17] taxonomy of healthcare quality (Table 1). We divided technical quality into measures of competence and clinical practise, and we included "responsiveness" [26] to reflect elements like waiting time, communication quality, and dignity. We also evaluated the "effort" providers put forth, including whether they examined the patient and how long the consultation lasted [27,28]. (Table 1). Then, we calculated summary statistics for (a) the overall level of healthcare quality in the private and public sectors, as well as (b) the disparity in healthcare quality between the two sectors, stratified by quality components and categories. When a study included several data measures for a single component, we computed the median of all reported measures to get a single measure for the provider's component quality. For instance, the median for the structural component "building, equipment, and material" would be 50% in the case of a public-sector score (on a linear scale, with 100% being the highest possible attainable) of 45 percent for physical infrastructure, 50 percent for the availability of basic diagnostic equipment, and 60 percent for the availability of basic material. The median for the disparity in quality score between private and public providers was also calculated. For instance, the median difference for the provided comparison in a study would be +11 percent in the case of a difference of +5% in physical infrastructure, +11% in the availability of basic diagnostic equipment, and +14% in the availability of basic material. We calculated medians and inter-quartile ranges (IQRs) across all comparisons after computing the medians for the overall quality of care and the difference in care for each comparison in each research. To determine whether a difference was obvious, the size of the difference and its IQRs were considered.

RESULTS

80 studies contained direct quantitative comparisons between formal public and private providers out of all the titles and abstracts found (Figure 1). These produced 133 comparisons, and we were able to scale 101 of these up to one hundred percent. The majority of research were undertaken after 1990, with the majority taking place in sub-Saharan Africa (n = 39) and Asia and the Pacific (n = 23). Most studies compared quality by looking at all primary service types and disease categories (Table 2). Only five studies [30–34] reported data by various wealth categories, and the majority of studies [30–34] did not disclose the socioeconomic status of public and private service customers. There is no study that contrasts the same healthcare professionals operating in public and private settings. We picked public vs private doctors as comparison groups rather than public versus private nurses or midwives for two studies [35,36] that published results independently for different cadres, however it should be highlighted that for both groups results indicated in the same direction. Only two research contrasting formal state services with unofficial private services could be located. The first [37] revealed that the public sector was marginally superior when comparing knowledge of malaria and chloroquine availability in public dispensaries and informal drug merchants. The second [38] combined formally recognised and unrecognised private providers. The results of these two investigations were not included in the analysis. Of the 101 formal comparisons between the private and public sectors that were scaled to 100 percent, 57 compared the government with for-profit private companies, 10 with a combination of for-profit and nonprofit companies, and 34 with private non-profit companies. The majority (n=29) of the most recent 34 comparisons were carried out in sub-Saharan Africa. Table 3 displays the within-study discrepancies as well as the study-level summary results for each quality component. Additionally, we divided private for-profit and

private not-for-profit providers in our analysis. The data from the for-profit and non-profit suppliers are merged since they were extremely consistent. In addition, eight studies had qualitative information that was eligible and had a comparable geographic distribution to the quantitative information.

Structure

No difference was found for structures, machinery, supplies, or equipment. The IQR of the difference for the 26 comparisons included 0. Respondents in two qualitative studies covering this area described private facilities as better [39,40] in terms of both quality [43] and quantity [39,40,44,45], as well as more accessible in terms of medications.

Service Provision

Out of seven comparisons, the care provided by the private sector was more responsive. Patient interviews, observations, or simulated visits were all used in studies. The waiting times were shorter in the private sector in six out of the seven comparisons. Qualitative data from five research showed that the private sector offered more individualised, respectful [39, 40, 46, 47], client-centered [43], and listening [48] services, as well as quicker and easier access [47, 49]. From three comparisons, private sector care was superior in terms of effort. Even though statistical significance was only calculated and validated in two of the four additional studies that reported on average consultation hours, all of them showed that they were longer in the private sector [6,50-52]. Qualitative findings supported this conclusion. Studies have repeatedly praised the private sector and criticised the public sector (with practitioners demonstrating favouritism for some patients and less regard for poorer consumers [39,40,43,44,46,48,49]). From eleven comparisons, there was no discernible difference in patient satisfaction between the private and public sectors. In none of the studies that measured "satisfaction," a validated questionnaire was mentioned. Only one study [53] considered potential discrepancies

between expectations for public and commercial services.

Technical Excellence

Competence was assessed using case studies or vignettes, provider interviews, or a formal test; ratings for private- versus public-sector treatment were comparable, and generally bad. Although the expertise of some providers was questioned, qualitative evaluations suggested that the private sector was quicker and easier to access [40,48]. Inconvenient and provider-centered, with complicated systems that required time and effort to navigate, the public sector was frequently seen as technically competent but inefficient [44,47,49,54]. From 22 comparisons, the private sector's care was somewhat superior in clinical practise. With no discernible differences, 14 studies that were not convertible to a linear 100 percent scale evaluated prescription behaviour using the same accepted techniques, as listed in Table S8. Respondents in qualitative research believed public providers to be knowledgeable and skilled [43], though some were believed to overprescribe to increase their salary [40,48]. The private sector has also come under fire for things like excessive prescribing, doctor-pharmacist collaboration, alleged "fake" or unlabeled pharmaceuticals, "fake" doctors, and nurses working illegally in unlicensed private pharmacies that need to be regulated [40,46,48]. Only 67 papers and comparisons (n=67) rated as good quality due to their size

were used in our sensitivity analysis, and the outcomes were remarkably comparable to Table 3.

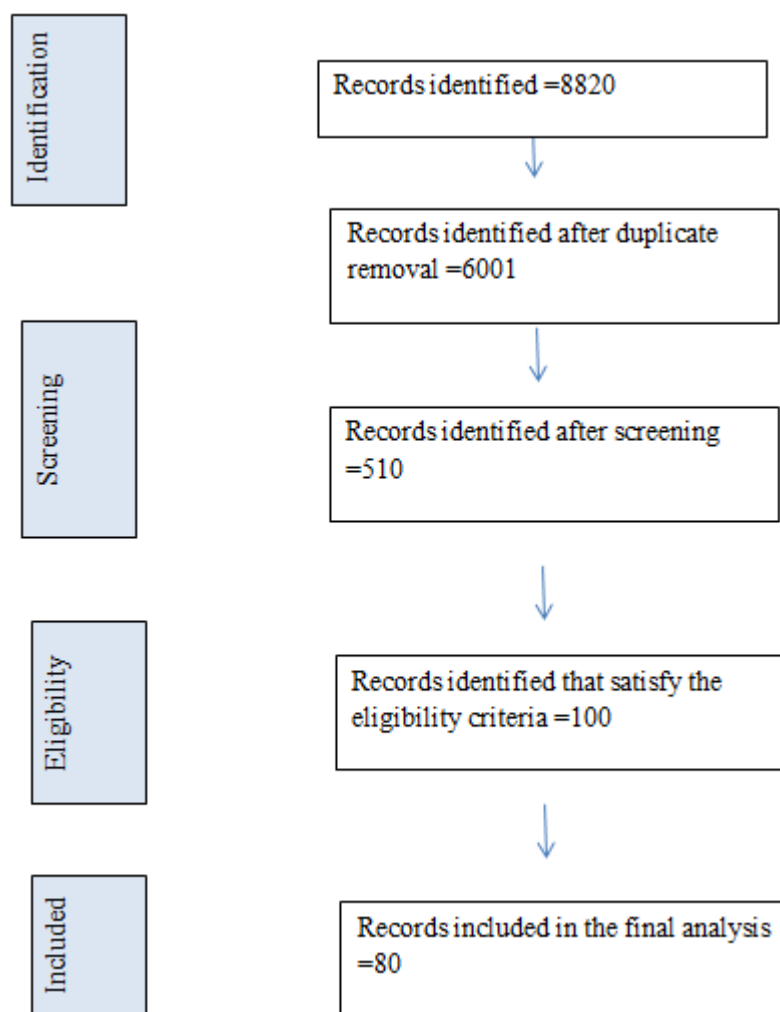
Providers who are both for-profit and non-profit

As previously stated, the majority of non-profit studies were conducted in sub-Saharan Africa (29 of 34 comparisons). The difference's direction is the same as it was for the total value of all components. Notably, clinical practise was significantly better in the for-profit sector than in the not-for-profit sector, however there aren't many for-profit sector comparisons.

Contributing Factors to a Quality Difference

It was the goal of these qualitative investigations (n = 8) to explain the disparity in quality between the two industries. The lack of a public family/general practise system that allows patients to return to the doctor(s) of their choice and build trusting relationships over time [43], public-sector drugs being sold privately [39,40], staff favouring certain patients [39,47], and clients lac were some of the factors perceived to be related to low public-sector quality. These factors included resource limitations, low salaries, high workloads, and poor incentives and conditions of service. [39,46,49,54].

Figure 1: Flow chart of the selection of the studies.

**Table 1. Quality categories, sub-categories, and indicators used.**

Quality Category	Sub-Category	Description and Indicators
Structural	Building, equipment, materials	Availability and condition of health facilities, and of defined equipment, materials, and supplies
	Drug availability	Availability of essential drugs in health facilities and pharmacies
Delivery	Responsiveness	Waiting time, privacy, confidentiality, staff friendliness, communication, dignity
	Effort	Length of consultation time, whether a physical examination is performed, number of explanations given
Technical	Patient satisfaction	Patients' satisfaction with last consultation
	Competence	Professional knowledge and skills
	Clinical practice	Presence or absence of critical elements of care, whether practice is according to standards or guidelines, proxies for correct prescribing behaviour

Table 2. Characteristics of quantitative studies comparing public and formal private providers by region (n= 80).

Characteristic	South Asia, East Asia, and Pacif ic	Sub- Saharan Africa	Other ^a	Total Number of Studies
Language				
English	23	3 3	16	72
French	0	6	2	8
Study year range				
1980–1989	1	2	1	4
1990–1999	8	1 6	7	31
2000–2009	14	2 1	10	45
Primary study purpose				
Describe or compare quality of private and public services	17	2 8	13	58
Assess drug availability and affordability	4	3	2	9
Assess demand for, access to, or utilisation of services, or efficiency of service delivery	2	8	3	13
Service type				
Promotive or preventive	1	4	2	7
Curative, rehabilitative, or palliative	7	1 4	7	28
All types	12	1 8	8	38
Not specified	3	3	1	7
Disease category				
Both CD and NCD	14	2 4	9	47
CD	7	1 3	5	25
NCD	1	0	3	4
Not specified	1	2	1	4
Population age				
Adult	6	1 1	2	19
Both adult and child	15	2 1	7	43
Child	1	3	4	8
Not specified	1	5	5	11
Population gender				
Both (male and female)	21	3	15	70

		4		
Female	2	5	3	10
Total number of studies	23	3	18	80
9				
^a Includes Europe and Central Asia (n= 1), Latin America and the Caribbean (n= 6), the Middle East and North Africa (n= 7), and studies reporting on countries in more than one world region (n= 4).				

Table 3. Overall level of quality and comparative quality difference of public and formal private providers.

Category	Component	Number of Comparisons Converted to 100% Scale	Public Quality Score (%)		Private Median	Quality Score (%)	Difference	Private-Public ^a (%)	
			Median	IQR				IQR	Median
Structural	Building, equipment, and materials	26	41.9	25.0, 76.5	44.5	22.0, 86.6	2.8	22.9, 20.6	
	Drug availability	14	45.3	38.8, 58.5	63.0	45.4, 94.8	17.9	12.5, 29.1	
Delivery	Responsiveness	7	85.0	56.9, 86.3	89.1	75.7, 94.5	7.5	7.0, 12.4	
	Effort	3	84.9	46.5, 87.0	92.9	54.5, 93.5	8.0	5.5, 8.0	
	Patient satisfaction	10	75.0	56.9, 78.8	75.0	68.0, 79.1	0.5	22.0, 4.4	
Technical	Competence	19	52.8	36.3, 54.2	45.2	35.0, 53.3	23.0	27.6, 0.8	
	Clinical practice	22	44.5	27.5, 60.9	47.0	39.1, 66.5	5.2	1.3, 14.0	
^a Within each comparison, the difference between the public score and the private score was calculated. The data in this column are the median of these values across all studies. For this reason, they will not correspond to an arithmetic difference of the absolute median scores in the previous columns.									

DISCUSSION

Our analysis' findings show that median values for structure, competence, and clinical practise are around or below 50/100 in both the public and private sectors. While the instruments employed and the rigour of the original research

studies used to apply these standards influence these values, the patterns offer some insight into absolute performance, with clear issues with technical components of care in both sectors.

The formal private sector outperformed other

sectors in terms of drug accessibility, responsiveness, and effort. Stereotypical beliefs that one sector is unquestionably superior to another are not substantiated by this analysis because the median differences were, on the whole, moderate.

Qualitative research showed that formal private services were more client-centered than those provided by the public sector. This is in line with the variations in care delivery that the quantitative data revealed.

As money is not as tightly controlled as it is in the public sector, and private providers are driven to entice patients to return, there may be more medications available in a formal private environment.

These findings, along with the fact that a significant portion of health services are provided by the private sector, bring up two additional issues: the necessity of paying attention to both sectors if overall quality is to be improved and the requirement for governments to take a more active role in ensuring quality of care.

On the basis that public funding should be reserved for the public sector because that is where the poor turn for their healthcare, many initiatives to increase the quality of ambulatory care are limited to the public sector. However, focusing only on the public sector leaves out a sizable portion—in some cases, the majority—of the service providers that the poor rely on. In fact, improving the standard of care provided by both public and private providers would be a pro-poor action since it would increase the efficiency of the money the poor spend on healthcare. Secondly, it is said that saving money for the public sector is more efficient because private healthcare providers offer care that is of inferior quality. According to the review's findings, the general standard of care provided by the two groups of providers is comparable; if anything, the private sector is more responsive and offers a wider range of medications.

The general low quality of care is projected to worsen as the dual burden of communicable disease (CD) and non-communicable disease

(NCD) becomes more pronounced. Today's public and private health care professionals have received institutional training and are employed in CD-focused health systems. Because NCDs require a new set of clinical abilities and a different strategy to therapy, practitioners have little expertise of them. Contrary to popular belief, NCDs and related risk factors are not the domain of the wealthy; they are equally, if not more, frequent among the poor [55]. Effective treatment for NCDs requires techniques very different from those that are available through the current health systems. As a result, it must be taken into account that while some diseases, like some NCDs and more complex CDs like AIDS, may call for particularly high levels of structural quality, drug availability, and provider competence, other diseases, like childhood diarrhoea, that are simple to diagnose and treat, may require providers to put in more effort and put what they already know into practise [56]. Raising the quality of treatment in a health system is a long-term endeavour that calls for attention to a variety of factors, including the incentive system and training, both of which the government may play a significant role in but typically neglects. Traditional narrative evaluations that are systematic and thorough offer numerous suggestions for how to improve quality. For instance, it has been discovered that supervision and auditing with feedback, especially when combined with training, are successful [57]. The general oversight of the private sector, however, typically receives insufficient attention and resources due to a general government bias against it. However, setting standards is a crucial function of the government [16,58]. This is done in part by assuring training standards, in part by granting licences and certification to professionals (with an emphasis on continuous education), and in part by enacting consumer protection laws. Based on the "principal-agent theory," researchers like Leonard and colleagues [15] have offered practical theoretical frameworks for influencing the private sector. Others have suggested several categories for categorising

the many tactics that have been employed thus far to enhance the calibre of private care, such as categorising tactics in accordance with their impact on either supply or demand or the general market environment [16, 59]. The evaluation by Peters et al. for reproductive health care [14] reveals that empirical information on the efficacy of various treatments is fairly scarce.

Advantages and drawbacks

To guarantee that comparisons were accurate and that they were made directly using the same techniques, a thorough search was conducted along with careful application of the inclusion criteria and quality standards. Results on the absolute level of care quality must be taken with care because studies used a wide diverse range of instruments to measure quality of care. However, as we were sure to only include studies that directly examined quality of care in the same country at the same time, using the same techniques, the results on the difference in care quality can be interpreted with more confidence. Another advantage is that we were able to classify the different aspects of study quality to enable comparisons between research. The sensitivity analysis, which excluded the smaller studies, did not change the direction of the differences across the sectors, which is a drawback because tiny studies could contribute just as much to the estimations as large studies.

The comparison of costs and equity-related factors still has to be done, even if this evaluation comprehensively evaluated all eligible comparative studies on quality. There are differing opinions on whether private or public care is more expensive or more accessible to the poor, similar to the disagreement over quality.

The assessment also calls attention to the dearth of comparative data comparing the private informal sector with the state sector, despite the latter's widespread use [2,60].

CONCLUSION

Considering the quality of primary healthcare services in both the public and commercial

sectors is clearly necessary to improve health outcomes, according to the available evidence. There is a propensity for the private sector to offer services of higher quality, but more investigation into the quality as a whole and assessing the viability and efficacy of methods to increase quality will be crucial for future improvements in health in LMICs.

To facilitate cross-country discussions about effective quality assurance procedures and to promote comparability, research requires to standardise study results and socioeconomic status assessments. It is crucial to conduct research on the efficiency of market-driven tactics for influencing the private sector. Studies on dual practise, which look at how the same clinicians behave in the two settings, may be particularly helpful in discovering setting-specific characteristics. The establishment of minimum standards of care and research that identifies efficient ways to meet them are crucial to realising the improvements in health that are currently attainable with preventative and therapeutic medical technologies.

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