



Quality of Primary Health Care in Developing Countries: Recent Experiences and Future Directions

IETJE H. REERINK* and RAINER SAUERBORN†

*Harvard School of Public Health, Boston, Massachusetts, USA

†Harvard Institute for International Development, 1 Eliot St., Cambridge, MA 02138, USA

Assessing and improving the quality of health care was, until recently, a low priority, both for policy makers in developing countries, and for technical agencies. The authors review the reasons for this long neglect of quality of care, which include: (i) a perceived priority of extending coverage at the expense of quality; (ii) the view that quality is difficult to assess in the absence of reliable documentation and health information systems; and (iii) the perception that improving quality is tantamount to increasing inputs, thus costly and not affordable for many countries.

The authors strongly suggest that focusing on improving the process of care through quality assurance (QA) is the most promising avenue to improved quality of care in these countries. They review the current state of the art of QA in developing countries and formulate some policy suggestions: they call for a national commitment and leadership that provides a legal and institutional framework for QA and supports QA teams in the areas of setting professional standards, training, supervision, and information. The authors stress that the focus on process should not lead to a neglect of improving inputs.

We conclude by suggesting future research in four broad areas: (i) development, testing and evaluation of new ways to implement QA

through operational research; (ii) the links between process as well as inputs and outcomes; (iii) the relationship between quality and other health system variables, such as demand, costs, revenues and equity; and (iv) development of comprehensive quality indicators based on a score of process, input and outcome variables that allow researchers and policy makers to compare quality across time, space and different types of care providers. Copyright © 1996 Elsevier Science Ltd.

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INTRODUCTION

In industrialized countries, quality of care is widely debated in the context of health sector reform [1]. A wealth of literature reflects the progress made in developing tools to monitor and improve the quality of health care. In developing countries, however, interest in the issue has been surprisingly low until recently. This is so, in spite of overwhelming published and anecdotal evidence of low quality of care in these countries (for an overview, see [2]). In this paper, we give a brief review of published work on quality of care in developing countries, and trace the reasons behind the paradoxically low interest of both the academic and the donor communities as well as national decision-makers on the issue. Our focus will be on the quality of primary health care services, and not on macro-aspects of quality of care, such as the regulation of technology acquisition or accreditation of facilities and licensing of practitioners. We argue that, especially in countries with severe resource constraints, the focus should

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Correspondence: Rainer Sauerborn, Harvard Institute for International Development, 1 Eliot St., Cambridge, MA 02138, USA. Tel. 617 495 3903; Fax 617 495 0527.

appropriately be on process, rather than inputs. From this flows our suggestion that quality can best be improved by applying quality assurance¹.

Some specific examples will be mentioned to illustrate the practical application of quality assurance initiatives in developing countries identifying past successful initiatives. We then put forward some policy suggestions. Finally, we sketch a research agenda to advance our understanding of how to assess and improve the quality of care in countries with extreme resource constraints.

THE STATE OF QUALITY OF CARE IN DEVELOPING COUNTRIES

Early evidence of low quality of care

One of the first large-scale comprehensive efforts to provide detailed information on how primary health care services were delivered in developing countries was carried out by the USAID-financed Primary Health Care Operations Research (PRICOR) project (1985–1992) whose studies spanned 12 countries. Using a direct observation of over 6000 patient-provider encounters, this project uncovered severe deficiencies in the diagnosis, treatment, and counseling of patients as well as in the supervision of health workers for the following primary care activities: growth monitoring and promotion, immunization, case management for malaria, diarrhea and acute respiratory infections [4].

Another study by Amonoo-Lartson *et al.* carried out in 1984 in rural clinics in Ghana assessed the process of providing maternal and child care [5]. They compared actual (observed) performance levels with expected levels for a number of diagnostic, therapeutic and counseling tasks. They found significant performance gaps, especially in the area of physical examination and in the counseling of patients/clients. Similarly, Sauerborn *et al.* [6] analyzed maternal and child health services in a rural district of Burkina Faso. They reported that especially the task of screening for risk factors in

both under fives' clinics and antenatal clinics was carried out well below standard. They also found that communication in both curative and preventive clinics was poor, e.g. only 5% of mothers who brought their children to under fives' clinics received any kind of counseling during their visit. Bjorck *et al.* [7] observed 539 primary care visits and found that, according to local standards of care, only 65 (12%) of the patients were adequately diagnosed and treated. The same weakness in the process of primary health care provision was reported by Garner *et al.* [8] for managerial tasks, such as cold chain support and maintenance in 76 rural health centers in Papua New Guinea. It is therefore no surprise that community satisfaction with primary health services is low, especially in the domain of interpersonal skills of health center staff, as Gilson *et al.* reported [9] from a qualitative study in Tanzania.

Why is quality bad?

"Just give me more staff, more equipment, and more money and I will improve quality"[10]. However obvious the scarcity of human resources, buildings, equipment and money to run health services may be in developing countries, we argue that there are other, more conceptual reasons, which delayed tackling the issue of quality of care in these countries:

(i) *Overemphasis on quantity and access.* One of the documents which decisively altered health policies, especially in developing countries, was the Alma Ata Declaration of 1978 which put the concept of Primary Health Care (PHC) to the forefront of the health policy agenda [11]. The Declaration emphatically embraced community participation in health care and stressed the links between health and other sectors of society. As far as health care delivery was concerned, the key issues were access and affordability. Although the Declaration underlines the importance of improving the efficiency of service delivery and performance to recover costs, it does not mention qual-

¹For the purpose of this paper, we follow Donabedian's definition of quality assurance (QA) as a continuous management activity, that is, "a cyclic process by means of which we assure ourselves and others of the quality of care for which we have responsibility".

ity, let alone provide any guidance of how the quality of PHC could be achieved.

Although some increase in the utilization² of modern health care was noted, research from Ghana, Burkina, and Mali showed [12,14] that the availability of primary health care in and of itself does not guarantee its utilization. In fact, household surveys revealed that the perceived low quality of health care was one of the main reasons why people did not attend primary health care services in cases of illness [3,5].

(ii) *Inappropriate focus on inputs.* Of the three elements in the Donabedian triad of structure, process and outcome, the focus in the assessment of quality has been clearly put on structure³. The assumption was that document-based analysis of the process of care was not feasible, given the low degree of documentation of care, and that observation of provider-patient encounters was prohibitively expensive. Therefore, inputs, which could be assessed with ease and at low cost, were frequently used as proxies for quality (Table 1). Such input indicators included the presence of drugs in health centers [15,16], staffing, and the availability of electricity or running water [16,17].

The reality in many developing countries made it tempting to equate lack of quality with the absence or shortage of inputs. The proposed policy consequence was to finance inputs to improve the quality of care. The assumption was that a minimal level of inputs is essential before one can focus on the process of health care delivery.

The problem of improving *process* was mainly assigned to closer "supervision" of health care workers. However, supervisors were often viewed as people who inspect, affix blame and assign responsibility for system deficiencies. Moreover, doubts arose as to the validity of supervision in assessing the quality of care. Studies revealed that large discrepancies exist between what supervisors believed health workers were doing and what independent observers found about how they actually spent their time. As an example, a study done in the Philippines [18] reported that supervisors

thought that 82% of health workers explored a history of vomiting in children with diarrhea, while simultaneous observation of patient-provider encounters revealed that only 11% did so in reality.

(iii) *The new concern for quality of PHC.* In the late 1980s, several factors came together to put quality of care on the agenda: first, the recognition that the quality of many health services was, indeed, low (as shown above). Second, studies indicated that the low utilization of both community health workers and first line health services was, to a large extent, due to consumers' perceptions of low quality of care [13,15]. Patients voted with their feet and shunned health care which they perceived as low quality. Third, the crucial motivation to address the problem of quality came from a change in the *financing* of health care. Austerity policies under the banner of "structural adjustment" forced governments in the 1980s to cut subsidies to the health sector. Since in most developing countries the bulk of primary care was (and still is) provided by subsidized government services, policy-makers began to look for non-budgetary ways to finance health care. They turned to either user fees or some form of prepayment schemes. In both cases, patients/consumers were asked to pay directly for health services. It became clear that consumers were only willing to pay for health services, and thus generate the necessary revenues to fund them, if they perceived these services to be of reasonable quality (Fig. 1, upper part).

Not surprisingly, therefore, utilization dropped in many instances after user fees were introduced [19]. Corroborating the link between quality and health care utilization, Litvack and Bodart [15] showed that, when quality improvements were coupled with the introduction of user fees, the utilization of health services in fact *increased* after fees were raised.

Quantifying the relationship between price, quality and demand of health services in Nigeria using a multinomial probit model, Akin [16] concluded; "if public facilities offered private sector levels of quality of care, they could raise

²Utilization is defined as the probability of choosing Western-type primary health care, given illness.

³We will use the term "inputs" instead of "structure", acknowledging that structure encompasses, in addition, the organizational aspect of care.

TABLE 1. Cost-ranking of methods for assessing and improving the quality of care in developing countries

Costs	Quality dimension		
	Tasks	Input	Outcome
High	Assess		Document-based peer review
	Improve	More personnel, facilities, equipment, supplies, drugs	Health status: document-based peer review; prospective population-based studies
Medium	Assess		Observation of client-provider encounters, supervision data
	Improve	Training	Supervision and motivation of staff, maintenance of equipment
Low	Assess	Availability of staff, drugs, electricity running water	Quality assurance
	Improve		Consumer satisfaction: exit polls/user surveys; qualitative interviews; focus groups

Note: quality assurance is process-oriented, aims at both assessing and improving health care and is of low cost. Based on assumptions; see text. n/a = not applicable.

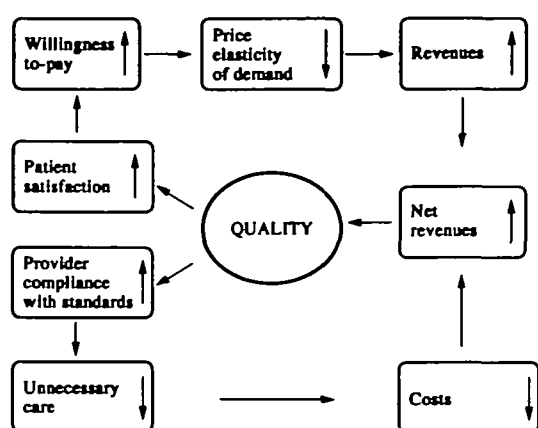


FIGURE 1. Conceptual framework of the relationship between quality of care and net revenues under a user fee scheme (modified after Wouters and Veldhuysen van Zanten, 1994 [21]). Quality is assumed to increase net revenues through two mechanisms: (1) by increasing consumers' willingness-to-pay, thus making them less sensitive to price increases for health services—this allows services to generate higher revenues (upper part of model) and (2) by containing costs (lower part) through reducing wasteful health care practices.

outpatient prices to the level of the private sector (an 87% increase) and still increase usage”.

In addition to generating additional revenues, better quality was also assumed to lead to cost containment [20,21], as shown in the lower part of Fig. 1. Although little evidence has been provided so far to support this contention, the idea was that costs would be contained through strict compliance by providers with standards, thus eliminating unnecessary diagnostic and therapeutic procedures. Increasing the quality of care was therefore anticipated to increase net revenues through both revenue generation and cost containment [20,21].

QUALITY ASSURANCE: THE MAIN TOOL FOR QUALITY IMPROVEMENT IN DEVELOPING COUNTRIES

Several characteristics of the QA approach make it very appropriate for developing countries. The first is its focus on process. While

not ignoring the need to improve inputs, it provides an opportunity to achieve results within the current resource constraints [4].

Second is its team-orientation. The view that teams of providers of care and clients are empowered to address and solve their quality problems is very much in line with the PHC philosophy of decentralization of control and participation of communities in health care. Furthermore, involving community representatives in the QA teams ensures that the problem of low consumer satisfaction is addressed.

Thirdly, the data required can be obtained from available routine sources or through small-scale *ad hoc* studies that are feasible without help from outside; and fourthly, its problem-solving focus fosters concrete, palpable and short-term results, without waiting for government, donor or other outside help.

Quality assurance was systematically applied in the framework of the Quality Assurance Project, which succeeded the PRICOR project. Problem-solving techniques were employed to search for the causes of weaknesses, and simple management tools were used to implement QA as part of the daily practice for health care personnel at all levels. The project has documented a large number of success stories of quality improvement through QA. Examples of such successes are: in Colombia, researchers conducted tests to see whether local health workers were more responsible and capable of counting respiratory rates in children with acute respiratory illness (ARI). Reports showed 30% accuracy before the QA program was implemented versus 85% thereafter. In Costa Rica, the recording accuracy for documenting immunizations was improved from 28% to 85%, and sterility of syringes was maintained in 85% of observations, compared with the previous figure of 22%.

From the numerous QA activities reported to have been carried out in the last decade, only a handful has been published and is open to scrutiny. Apart from studies reported by the Quality Assurance Project⁴, there is a dearth of published papers that scientifically analyse QA programs and document their effect on defined

⁴See [4] as well as the “QA Brief”, the newsletter of the Quality Assurance Project which is available from the University Research Corporation Center for Human Services, 7200 Wisconsin Ave., Suite 600, Bethesda, MD 29814-4820, USA.

parts of the process of care in developing countries.

OUTLOOK AND POLICY RECOMMENDATIONS

Although the evidence is weak, it appears that QA teams throughout the developing world have been able to make some progress towards improving the quality of care. Nevertheless, we argue that, until and unless these efforts are supported by a national policy framework, we will see only scattered examples of quality excellence without a comprehensive improvement of quality in all PHC services. Furthermore, even those teams that embrace QA are not likely to be able to sustain their activities in the long run without consistent support from higher levels of the health system. The prerequisite for success lies in strong national leadership and commitment to QA [3,22]. From this commitment flows a series of five support activities. In the following passage, we cite the example of the Palestinian national quality assurance program [22] as an illustration. These activities comprise:

(i) Providing a legal and institutional framework. For example, the Strategic Plan for Quality of Health Care in Palestine [22] stipulates that, in order to be accredited, each health facility must have a "Quality Council" whose members are in charge of the establishment and execution of a service-wide QA program. The plan calls for legislation to define the authority, responsibility and accountability of these Quality Councils. A manual for quality of care guiding the Quality Councils is currently being developed by the Palestinian Ministry of Health.

(ii) Achieving a national consensus on appropriate and achievable standards of care. In Palestine, efforts are underway to establish a "bill of rights" for patients and to agree on standards of care for *all* health care providers, public, non-governmental organizations, private or UNRWA⁵.

(iii) Training members of QA teams, such as the Quality Councils, who need special new skills to conduct their activities. In the short

run, this requires offering short-term courses in QA techniques for QA team members. In the long run, QA needs to be incorporated into the formal training curricula of medical, nursing and business schools in developing countries.

(iv) Establishing and incorporating quality of care indicators in national health management information systems. The work of QA teams can be facilitated, if the routine information system provides them with indicators that reflect facets of quality, such as the availability of drugs, the availability and state of repair of equipment items or the utilization of different services provided at the facility.

Although *national* quality assurance programs have been reported to be under way in several developing countries—Egypt, Malaysia, Zambia, Palestine [3,22,23]—we could not identify any papers which describe their actual implementation and analyse their effect on the quality of care in these countries.

So far, we have stressed the need for quality assurance programs in developing countries. A caveat applies, however; the focus on process does not absolve policy-makers from the responsibility for improving inputs, that is for training and motivating staff, for building health facilities and equipping them. International aid is warranted to help the poorest countries to finance these inputs. Without appropriate inputs, QA cannot achieve its potential to improve outcomes in the long run.

THE NEED FOR FURTHER RESEARCH

How can the academic community help to improve the quality of care in developing countries? We argue that four sets of research questions need to be addressed, which we will treat in turn in the following section.

The first question is how can QA best be implemented and what are the effects on quality improvement? Such questions are the domain of operational research. A good example for such research is provided in a book recently published by Razum [24]. In his research, this investigator combined quantitative and qualitative methods to analyse the quality of the management and the delivery of immunization

⁵UNRWA = United Nations Relief Work Agency. This UN-agency provides about a third of primary health care in Gaza and the West Bank.

services in first-line health facilities in Zimbabwe. He identified weaknesses in the process of immunizations, using a software package developed by WHO [25]. The author then carried out focus group interviews with mothers and health care providers to understand the underlying root causes for the deficiencies, and suggested improvements in the delivery of immunization.

A second set of research questions should shed more light on the assumed relationship between the process of care and health outcomes. We are only aware of one study on diarrhea case management in a Jamaican hospital, which relates the process of care to *individual* outcomes [26]. The author found a significant decline in diarrhea-related case-fatality rates after quality improvements were implemented in the management of inpatients with severe diarrhea. Similar studies should also be conducted at the *population* level, in order to corroborate and quantify the assumed association between the quality of care and population outcomes, such as mortality or morbidity. Appropriate, low-cost techniques have been developed to assess the age- and cause-specific mortality and incidence in developing countries through a prospective, population-based design [27,28]. The costs of assessing population outcomes are therefore no longer prohibitive.

A third set of research should probe into the assumptions underlying the relationship between quality of care and other health system variables such as demand, equity, willingness-to-pay, costs and revenues (Fig. 2).

Rigorous studies should compare the full *costs* of quality assurance programs with their benefits in terms of cost savings and incremental *revenues* (Fig. 1). The crucial assumption that quality improvements lead to net revenues (Fig. 1) remains still to be verified. We could only locate one unpublished study from Ecuador in which the savings of improved case management of common acute diarrhea were estimated [29]. The authors showed that more appropriate prescribing practices, for example, by eliminating the prescription of antibiotics to cure common childhood diarrhea, would result in national savings of approximately \$669,000 per

year based on this single intervention indicator alone. Another research topic in this set of suggested studies is the relationship between quality and *equity*. Do patients of different income, wealth, gender or age receive care of the same quality? If there is inequity in the quality of care, is it related to differences in the price of care for these population subgroups? The positive effect of quality of care on *demand* has been reported by Akin [16] for Nigeria and by Litvack and Bodart [15] for Cameroon. Both authors, however, used a narrow, input-based definition of quality (Table 1). They used the availability of drugs (both studies), of equipment at the facilities and operational health service expenditure per patient (Akin) as proxies. This leads us to the fourth and last research question we suggest for future studies.

How can we measure the quality of primary care in developing countries? Comprehensive indicators are needed that capture both inputs and processes and user satisfaction. Such indicators would allow a comparison of the quality of care over time, across facilities and regions, and across different types of providers, i.e. private, public, and non-governmental organizations. The only paper we are aware of to attempt to build such a comprehensive indicator for a *primary*⁶ health care setting in a developing country is by Kipp *et al.* [30]. In their study in Uganda, the authors used "aggregate indi-

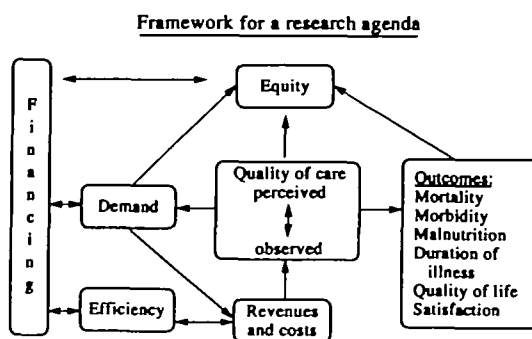


FIGURE 2. Research agenda: comparing patient-perceived with professionally assessed quality, the relationship between increased quality and demand for health care, and its effect on revenue, looking at the equity effects of demand, ill health and quality, and finally assessing health outcomes.

⁶For the *hospital* sector, Thomason and Edwards [32] proposed a comprehensive quality score composed of input and process variables.

cators" composed of 10 aspects of quality: (i) inputs: physical infrastructure, staffing, availability of drugs, basic skills and knowledge of staff, and (ii) process planning and management, supervision, community involvement and immunization coverage.

CONCLUSIONS

"While it has long been thought that the assessment and assurance of quality is a luxury confined to the more developed countries, many now believe that quality is not the domain of the richer countries alone" [31]. Quality assurance holds a great potential for improving the quality of care, even in the most resource-constrained health care systems, since it focuses on the process of health care delivery. Great sensitivity and caution should be exerted, however, to adapt QA methods to the prevailing cultural norms and values, the availability of resources and local priorities, thus avoiding mere replication of Western methodology.

QA activities at health facilities should be supported and integrated by national policies which provide an institutional and legislative framework, standards of care, and a unified management information system containing quality indicators, training and more. The need for strong national leadership in QA cannot be overemphasized.

Finally, the academic community is called upon to support the quality improvement efforts in developing countries, both through operational research and through research which tests critical policy assumptions underlying the relationship between the process and outcomes of care, as well as between the quality of care and other health system variables, such as demand, costs and equity.

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