The structural quality of Tanzanian primary health facilities

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Structural quality is a key element in the quality of care provided at the primary level, which aims to offer health care interventions of proven efficacy. This assessment of the structural quality of Tanzanian primary health services indicated serious weaknesses in the available physical infrastructure, as well as supervision and other support, both for government and nongovernmental services and for dispensary and first referral-level services. Addressing these weaknesses is likely to require some additional funding and review of the functions of different groups of health care facilities within the primary care system. Although district health management teams have an important role to play in tackling the weaknesses, the existing division of management responsibilities indicates that they can only do so with the support of the regional and national levels of the health management structure. Study methods might be adapted to facilitate improved supervision and management.

Introduction

The meaning and concept of quality includes excellence or prestige, and in health care this excellence is ultimately reflected in the improvement of health status (*1, 2*). It is, however, technically difficult both to measure changes in health status and to link those changes to health care interventions. Yet if outcomes cannot be linked to an intervention, they "offer no particular guidance to quality assurers as to how to improve the quality of care delivered, even if they may suggest quality needs improving" (*3*, p. 45; *1, 2*). In developing countries, primary health care is anyway largely based on curative and preventive interventions already proven to be efficacious, such as the 'child survival' programmes (*4, 5*). Achievement of quality in such settings requires the "proper performance (according to standards) of interventions that are known to be safe, that are affordable by the society in question, and that have the ability to produce an impact on mortality, morbidity, disability, and malnutrition. Such interventions exist and the most common problem is that they are not made available to all those in need or — if they are — they are not properly executed" (*6*, pp. 54–55). It is, therefore, more important to know why such interventions are not properly executed than to know their potential impact on health status, for quality assurance.

Problems in execution may result from process quality failings, shortcomings in the practice of providing care, but they frequently also result from a range of structural problems. For example, a Papua New Guinean review of health service features such as physical facilities, staff performance, levels of supervision, and the availability of basic drugs and equipment suggested that management weaknesses and wide variation in supervision visits were contributing to the poor quality of care in rural health facilities (*7*). A review of African studies concluded that "performance deficiencies... may not always reflect a need for training. For example, most assessments identified logistic problems that limit the quality of service delivery" (*4*, p. 160).

Even in developed countries, system failures (e.g., poor coordination and poor communication) are significant determinants of poor quality of care at the primary level (*2*). The greater severity of such failures in African and other developing countries ensures that the performance of isolated primary workers is dependent on circumstances at the intermediate and national levels and on the wider health system environment (*6*). The process of providing care takes place within, and so may be influenced by, structural constraints concerning manpower, finance and equipment (*8*).

The assessment of structural quality reported in this paper was undertaken in the United Republic of Tanzania as part of a wider evaluation of the primary health facility's efficiency, which also analysed costs, process quality, and community satisfaction with the

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available care.[a] After describing the study's methodology, the paper discusses the quantitative analysis of structural quality, giving details of the nature of the quality weaknesses in each of the three facility groups assessed. Responsibility for performance failures and some causes of poor performance are then assessed before a discussion of the policy implications of the study.

Methods

There are two types of primary health facility in Tanzania: dispensaries, providing a basic range of curative and maternal and child health (MCH) care, and health centres, offering inpatient and a higher level of delivery care and staffed by a wider range of more qualified health workers than in the dispensaries. A total of 58 primary health facilities were assessed in this study: 40 government dispensaries, 14 church dispensaries, and 4 health centres. The government health facilities were randomly selected from a sample frame of all facilities within the Morogoro region, stratified by district. Ten dispensaries, representing 20–90% of all dispensaries in the district, and one health centre were selected from each of the four districts. Although several voluntary agencies support health care within the region, this study focused on a single group of church dispensaries which were centrally administered and supported by one Roman Catholic diocese. The selected 14 church dispensaries were located in two of the region's four rural districts and represented 82% of the total number within the diocese.

Structural quality was assessed against expected standards. A draft list of structural criteria embodying international and national standards was first developed, drawing on existing Tanzanian supervision checklists and experience from other countries. It was reviewed and finalized by health managers within the Morogoro region to ensure national and local relevance.

The criteria chosen reflected realistic expectations of the health facility structure and services required for the provision of good quality care. For each criterion, good (sometimes average) and poor performance were defined in statements of expected availability/practice. The criteria assessed the condition of the physical infrastructure and supplies (buildings, equipment, drugs), the availability of services and staff, staff working practices (e.g., whether or not outreach was undertaken, cleanliness of key items of equipment), and the support received (supervision, in-service training). The health centre checklist included criteria for the assessment of inpatient care, which were also used in assessing church dispensaries with inpatient facilities.

Data collection drew on district-based sources wherever possible (e.g., drug and staff records); and supplementary information was collected during health facility visits. All visits were undertaken by the project coordinator and an accompanying representative of the relevant district's health management team.

A scoring system translated performance judgements across over 100 different criteria into more easily used assessment figures. For each criterion, good performance scored 2 points; average, 1 point; and poor, 0 points. The actual score for each facility was calculated as a percentage of the maximum total and represented the overall performance. On the guidance of regional health managers a standard of 60% was established to distinguish between health facilities providing good and poor quality care. The criteria were also categorized under a variety of subgroups to allow more detailed assessment of aspects of structure; for example curative, MCH and outreach services, equipment and staff. For each subgroup the actual scores were calculated as the percent of the maximum total, to allow comparison across health facilities; and the 60% standard was again applied in assessing quality levels.

Data analysis was undertaken using exploratory data techniques (*9*) and non-parametric statistics, as the data were not normally distributed and were, at best, ordinal. This approach allowed full exploration of the available data and was, therefore, deemed to be particularly relevant in a study seeking to evaluate current service provision in order to determine appropriate policy strategies.

As all observations were undertaken by one person, assessment of inter-observer variation was not necessary. The reliability of the findings was also enhanced by the use of criteria verifiable by observation, and through validation by district and regional health managers of both the overall picture of structural quality and that of individual health facilities. Scoring procedures facilitated comparison of performance between facilities and facility groups, and was complemented by qualitative analysis of differences between facility groups.

Results

Performance against structural criteria

Table 1 presents median scores by facility group, and Table 2 identifies the number of health facilities

[a] **Gilson L.** *Value for money? The efficiency of primary health facilities in Tanzania.* PhD thesis, University of London, 1992.

Table 1: **Percentage medians expressing structural quality, by variables, for government and church dispensaries and health centres**

Variables	Government dispensary (n = 40)	Church dispensary (n = 14)	Health centre (n = 4)
Overall:			
Totper1[a]	49.0	49.0	47.0
Totper2[b]	49.5	48.0	51.0
Totper3[c]		52.0	51.5
Outreach	44.0	19.0	47.0
Curative care:	42.0	56.0	37.0
Equipment	25.0	38.0	44.0
Drugs	50.0	71.0	25.5
Dressings	29.0	43.0	7.0
Injections	50.0	67.0	50.0
Laboratory	25.0	40.0	67.5
MCH care:	48.0	40.0	46.0
Equipment	56.0	44.0	53.0
Antenatal	50.0	50.0	50.0
Family planning	33.0	33.0	50.0
Immunization	69.0	50.0	69.0
Child welfare	50.0	50.0	50.0
Deliveries	40.0	60.0	20.0
Health education	67.0	33.0	63.0
Inpatient care:		44.0	59.0
Equipment		17.0	25.0
Staff		50.0	75.0
General:			
Staff	63.0	50.0	43.0
Infrastructure	50.0	65.0	62.0
Support	33.0	44.0	60.0

[a] Basic total score = totper1.
[b] Basic plus laboratory score = totper2.
[c] Basic, laboratory plus inpatient score = totper3.

performing at good levels against the 60% standard; significant differences between the facility groups are summarized in Table 3.

Overall performance. Fig. 1 and Table 1 show that overall performance (as judged from the 'totper' variables) was not high. Median scores calculated across all criteria fell around 50% for all facility groups and all variables. Only three facilities out of the total of 59 were judged to perform at good levels against the 60% standard (Table 2): two government dispensaries and one church facility. The church facility performed at good levels across all 'totper' variables: the basic summary total (totper1), basic plus laboratory total (totper2), and basic plus laboratory and inpatient services total (totper3). Health centres, although intended to provide higher level care, only scored at similar levels to dispensaries.

A slightly better impression of performance levels is given by the number of facilities performing at reasonable levels against the 60% standard for specific aspects of structure (Table 2). Yet for 14 out of 21 variables reviewed, more than 60% of the facilities in each group performed at poor levels.

Performance by activity. Fig. 2 compares the performance of the facility groups in different activities and indicates the relative strengths of each group: church dispensaries in curative care, government dispensaries in MCH care, and health centres in outreach. Review of the scores (Table 1) and performance levels (Table 2) also indicates the overall and curative care weaknesses of health centres, which had several significantly lower scores for this activity than church facilities (Table 3). Curative care in

Table 2: **Number of dispensaries with good performance,[a] by variables and dispensary or health centre**

Variables	Government dispensaries (n = 408 with labs)	Church dispensaries (n = 157 with inpatients)	Health centres (n = 4)
Overall:			
Totper1[b]	2	1	0
Totper2[c]		1	0
Totper3[d]		1	0
Outreach	11	0	1
Curative care:	3	7	0
Equipment	5	0	0
Drugs	10	9[e, f]	0
Dressings	3	3	0
Injections	6	9[e, f]	1
Laboratory	2	1	3[e, f]
MCH care:	6	4	1
Equipment	12	6	1
Antenatal	16	7	1
Family planning	16	7	2
Immunization	27[e, f]	7	3[e, f]
Child welfare	19	7	1
Deliveries	8	8[e]	0
Health education	28[e, f]	5	3[e, f]
Inpatient care:		0	2[e]
Equipment		0	0
Staff		2	4[e, f]
General:			
Staff	21[e]	4	1
Infrastructure	7	8[e]	2
Support	4	1	4[e, f]

[a] Good performance = 60% or more.
[b] Basic overall performance = totper1.
[c] Basic performance plus laboratory score = totper2.
[d] Basic, laboratory plus inpatient scores = totper3.
[e] More than 50% of unit group performing at 'good' levels.
[f] More than 60% of unit group performing at 'good' levels.

Table 3: **Comparison of facility groups with significant differences between them, by variables**[a]

Groups compared	Significant differences ($P<0.05$)
Government dispensary versus all church dispensaries	Church higher[b] for: curative care total, drugs, dressings, injections Government higher for: outreach, health education (infrastructure $P = 0.071$, church higher mean rank)
Government dispensary versus health centres	Health centre higher for: support Dispensary higher for: deliveries (laboratory $P = 0.06$, health centre higher mean rank)
Church with inpatient facilities versus health centres	Health centre higher for: outreach, laboratory, inpatient staff, support Church higher for: totper1,[c] curative care total, drugs, dressings, injections, deliveries

[a] Analysis of variation using the Kruksal-Wallis test.
[b] Higher = higher mean rank of scores, indicating better performance.
[c] Basic total score = totper1.

government dispensaries was weaker than that in church facilities. Outreach service scores were uniformly low, but were least for church facilities whose performance was well below the standards for immunization sessions (monthly), home-visiting (weekly), and school visits (at least one in the previous two months).

Although most facilities offered the range of services set by national standards, church dispensaries did not provide family planning services, and probably did not offer environmental sanitation services or tuberculosis/leprosy and mental health care. However, in contrast to government dispensaries, laboratory services were usually available. In addition to the services provided in dispensaries, health centres did generally provide inpatient care.

(1) *Curative care*

Curative services in the typical government dispensary were undermined, in particular, by drug shortages and lack of equipment. At best, for example, there was a 40% probability of having the required level of injection equipment in the typical dispensary; shortages of diagnostic and dressing equipment were almost inevitable. There was a 50% chance of having chloroquine but only a 20% chance of having penicillin for the whole month. The government facilities that offered laboratory services usually did not have a specific laboratory area, the furniture and equipment needed (other than a microscope), or the required reagents. As a result, only some tests could be undertaken (stool, urine, haemoglobin, sputum for acid-fast bacilli, malaria blood-slide examination); although staff undertaking laboratory tests had some training, they sometimes attempted tests despite lacking the appropriate reagents.

Equipment availability was worst in government dispensaries and drug availability was worst in health centres. Although chloroquine was mostly available in health centres, stocks of penicillin and

Fig. 1. **The overall structural performance by government and church health facilities (group median scores).**

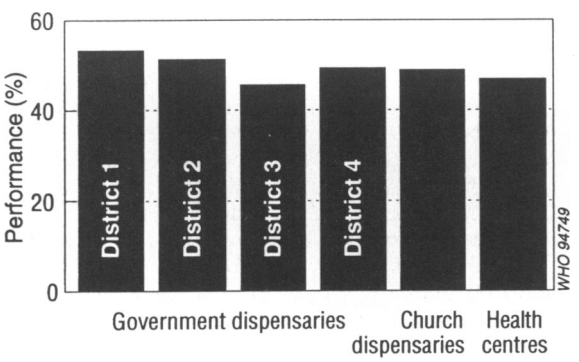
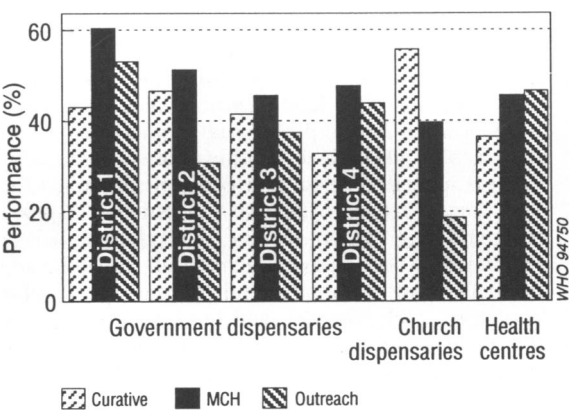


Fig. 2. **Performance in curative, MCH and outreach services by government and church health facilities (group median scores).**



analgesics often ran out before the end of a month. While supposed to offer minor surgical operation facilities, health centres had very poor wound dressing facilities, with a median score of 7%. The only real curative care advantage of health centres over dispensaries was in their laboratories, with significantly higher scores than church facilities and higher scores than government dispensaries. Even so, laboratory services suffered from shortage of reagents and other materials.

Inpatient services were always available and staff availability was reasonable in the inpatient wards (1 nurse, day and night in the wards: one centre scored 100%), but equipment was often minimal (two facilities scored zero). However, the full complement of beds and mattresses was not always available, food was rarely provided to patients, and there were equipment problems (two centres scored zero). The structure of the inpatient facilities was, at best, basic.

Church facilities had significantly higher scores than other groups for drug availability. Thus, for example, there was a 90% chance of their having chloroquine, and a 70% chance of having penicillin constantly available. Their scores for injections and dressings were also significantly higher than other groups, but they did suffer from shortfalls in diagnostic equipment (such as stethoscope, spatula, thermometer). Although they offered laboratory services, reagents were in short supply and staff had received little formal training.

(2) *MCH care*

Scores for MCH variables were generally higher than for curative care variables across facilities, although some government dispensaries in one district and some church dispensaries did not offer MCH services at all. Overall, church facilities performed MCH services relatively poorly: for example, few church facilities undertook health education regularly. MCH equipment, although more scarce in church than other facilities, was generally available more than curative equipment.

In terms of services, immunization scores were comparatively high but performance was still not good enough, given the strong supply system and considerable available resources. Church dispensary performance was below that of other facilities. The range of problems experienced included equipment shortfalls, problems with the refrigerator temperature level, irregular vaccine and kerosene supplies, and inadequate sterilization facilities (perhaps sharing with the curative services). There was only a 30% chance, for example, of having unexpired vaccines available and of having kerosene regularly available in the previous 3 months in the typical church dispensary, compared to a 50% chance of both in the government facility. The typical church facility had an 80% chance of the refrigerator temperature being incorrect for more than 4 days in the preceding month, compared to 70% for the government dispensary.

Within the range of MCH services, maternal services (antenatal, family planning, and delivery) were performed especially poorly, particularly by the health centres. These results say little about the way health workers provided care, but they do highlight limitations on the care they can provide. For example, few contraceptives were available for family planning clients in government dispensaries. For antenatal care it was rarely possible in any dispensary (government or church) to measure albumin or haemoglobin (Hb) levels because the necessary equipment was lacking, undermining the ability of health staff to identify and monitor mothers at risk. Yet the required resources, albustix and Hb paper, were relatively cheap and family planning supplies were often available, free of charge, through donor organizations.

Church dispensaries offered better delivery services than government facilities. For example, there was a 60% chance of having the standard complement of equipment and an 80% chance of its being clean in church dispensaries, as compared to the near certainty of having limited and dirty equipment in the typical government facility. The generally poor performance of the delivery services in government dispensaries reflected lack of equipment and poor cleanliness, itself a comment on the skills/morale of the health workers. Delivery services were especially weak in health centres, which had a median score of only 20% for this service, significantly less than both dispensary groups. Hardly any emergency obstetric equipment was available despite the health centre's role as a referral facility for labour cases.

General infrastructure and support performance. Tables 1, 2 and 3 give additional details about the availability of staff, condition of buildings, and provision of support for all health facilities assessed.

Differences in performance against the infrastructure variable between health facility groups emphasized the generally better availability and condition of buildings used by church dispensaries. On the other hand, their lower staff score indicated that although an RMA (rural medical aide) was always available, trained MCH staff rarely worked in church facilities. Staffing levels were good in over half the government dispensaries. In both groups of dispensaries the staff spent most time on curative services but were even more likely to have spare time during the day.

Although generally accessible, the typical health centre was most probably over 25 km from the referral hospital but could not easily refer patients because of lack of regular transport for at least the previous three months. Compared with the typical dispensary, it provided a wider range of services using a greater number and range of staff. Typically in charge of health centres was the medical assistant (MA), who is a more skilled health worker than the RMA and who can be upgraded through further training to medical doctor status. Even the nurses working in health centres had usually received more formal training than those working in dispensaries, who were often only trained on the job. However, health centres scored least well in terms of the availability of staff because staffing levels did not reach the required health centre standard, particularly in the numbers and mix of nursing staff. Buildings were bigger and mostly newer than those of the dispensary, with more space available for basic curative and MCH services and with more privacy, but they also needed repair and maintenance. Staff were probably not especially busy, as in dispensaries, and most of their time was also allocated to curative care. Staff housing and uniforms were, as for government dispensaries, in short supply. None the less, general infrastructure performance was above that of the government dispensaries (and around the same level as church facilities).

Support to the health centres was significantly better, because of the more frequent and longer duration of supervision visits to them than to dispensaries, and the greater opportunities for in-service training. A comparison of dispensary performances shows that church facilities scored highest for both supervision (median, 100%) and in-service training (median, 67%). A supervision visit was defined as a visit of at least one hour undertaken once every three months by the district medical officer or district nursing officer and once every three months by the district MCH coordinator. The typical government dispensary had not received such supervision (with the supervisor staying for an hour or longer) for at least the last three months from either district managers or health centre staff and rarely received feedback to complaints and requests to the district. Better church performance was due to 2 or 3 one-day visits per facility each year by a team of one or two persons; but despite being part of the district health system, the typical church dispensary had received few visits from district health management team members.

Median scores for government dispensary in-service training were generally above those for supervision, although still not high, and were based on one member of the curative and MCH staff having received some form of in-service training in the last six months. MCH staff were more likely to have had opportunities for in-service training than curative care staff, but no staff member had received more formal higher training. The slightly better church performance for in-service training was based on yearly in-service training seminars for each cadre of staff working with the dispensaries.

Variation in performance within facility groups. Variation within all facility groups was considerable (Table 4), with the size of the inter-quartile range[b] being more than 30% for 10 out of 25 (40%) of health centre and church variables, and 8 out of 21 (38%) of government dispensary variables. Variation within groups was most marked for the variables assessing MCH care performance, particularly for the church group, for which the size of the inter-quartile range of 7 out of 9 variables was greater or equal to 50%. For the other two facility groups, this degree of variation was noted for only two of the total number of variables.

Further examination of significant differences within facility groups implies that only the better church facilities seek also to provide inpatient care. Church facilities with inpatient services performed significantly better across seven of the eight MCH variables (the generally weaker activity of the group overall) than other facilities ($P \leq 0.05$), apparently explaining the large variation in scores for these variables.

Differences between districts for government dispensaries were limited but there were significant differences between districts for the 'totper1' variable and for the dressing, immunization and support variables. District median scores (Table 5) indicated that 'totper1' score differences were only limited (range of 7.5% between districts). The better dressing performance in district 2 reflects better equipment availability and cleanliness.

Differences in the immunization and support variables reflect, in large part, district management practice differences. Better support performance in district 1 was, for example, made possible by external assistance, which enabled higher than normal levels for both supervision and in-service training, and more effective supervision practices. The better performance in district 1 in the immunization variable, including assessment of vaccine supply and cold chain support, suggests that performance improvements (even within available resource levels) were possible for this variable.

[b] The difference between the 25th and the 75th percentile score, a measure of variance.

Table 4: **Percentage inter-quartile range,[a] by variables and facility groups**

Variables	Government dispensary (n = 40)	Church dispensary (n = 14)	Health centres (n = 4)
Overall			
Totper1[b]	8.8	13.8	8.8
Totper2[c]	11.3	30.0	9.0
Totper3[d]		8.0	10.8
Outreach	44.0	12.0	43.5
Curative care:	19.5	15.0	16.3
Equipment	25.0	13.0	21.8
Drugs	34.8	29.0	34.0
Dressings	15.0	28.0	35.8
Injections	23.0	17.0	18.8
Laboratory	37.5	15.0	20.0
MCH care:	16.0	27.0	18.0
Equipment	17.0	50.0	18.0
Antenatal	33.0	50.0	24.8
Family planning	34.0	50.0	34.0
Immunization	38.0	72.0	30.8
Child welfare	50.0	50.0	37.5
Deliveries	20.0	80.0	15.0
Health education	67.0	34.0	58.5
Inpatient care:		15.0	36.3
Equipment		33.0	50.0
Staff		50.0	18.8
General:			
Staff	13.0	13.0	26.3
Infrastructure	15.0	29.0	42.0
Support	42.5	11.0	15.0

[a] The size of the variation between the first and third quartile scores.
[b] Basic overall performance = totper1.
[c] Basic performance plus laboratory scores = totper2.
[d] Basic, laboratory plus inpatient scores = totper3.

Responsibility for performance strengths and weaknesses

In order to assess responsibility for current performance patterns, the structural quality criteria were allocated by regional health managers as the responsibility of five groups, on the basis of existing practice: the facility staff, the district staff, external forces (outside the district), a combination of two of these groups, and a combination of all three. For church facilities this allocation was slightly reformulated so that facility staff included the parish priest, district staff implied the church supervisors, and external forces implied forces outside the supervisors. Of the total number of criteria, 34% were assigned as the responsibility of facility staff, 11% to facility/district collaboration, 19% to district managers alone, 31% to district/external collaboration, and 6% to facility/district/external collaboration (the drug availability criteria).

Table 5: **Comparison of percentage median scores for districts, by four variables**

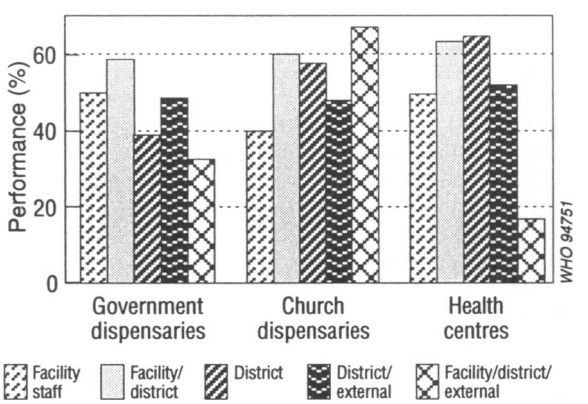
Variable	District (n = 10 in each district): 1	2	3	4
Totper1[a]	53.0	51.0	45.5	49.0
Immunization	86.0	50.0 (71.0)[b]	57.0	57.0
Support	56.0	33.0	22.0	44.0
Dressing	29.0	43.0	14.0	14.0

[a] Basic total score = totper1.
[b] Median of those units providing immunization only in district 2.

Examination of performance scores against responsibility assignments (Fig. 3) indicates that weaknesses, in each district and for both government and church facilities, were the mutual responsibility of all groups. Facility/district collaboration was at its best in relation to church facilities, where facility staff action was worst. Health centres performed well due to their better staff performance than any other group, and to the better support received from the district level than dispensaries; district support was least effective with respect to dispensaries.

Closer examination of two particular structural quality problems — outreach and vaccine supply weaknesses — illustrate the different groups' responsibilities and the underlying problems. The outreach criteria, more than other aspects of structural performance, reflect facility staff performance of duties. Informal exploration of outreach problems indicated that a major factor in health workers' refusal to

Fig. 3. **Performance of responsible groups in government and church health facilities (group median scores).**



undertake outreach was the poor level of health worker morale. Some MCH outreach areas were distant, sometimes bicycles were not available, and outreach allowances were never paid (despite their provision through the immunization programme). RMAs, in charge of dispensaries, hardly ever saw home-visiting as a part of their work — even in tuberculosis/leprosy defaulter follow-up — and home-visiting by maternal and child health aides was also minimal.

On the other hand, vaccine supply problems appeared to be caused by a variety of factors: delays in delivery of vaccines to the district level; shortages of, and difficulties in getting funds for purchasing kerosene within districts; vehicle breakdowns; and access difficulties to some facilities. District management failures were also a problem, such as the failure to coordinate transport use. Health centre immunization performance failings might also have undermined their own provision of the service as well as their role as supporting centres in the logistical chain.

Discussion

Overall, structural quality was poor and was likely to have undermined health workers' performance of their duties (process quality), for example through the lack of equipment or supplies. Particular weaknesses were noted for curative care, although even the well-resourced immunization service had surprising deficiencies. Church dispensaries tended to have a better curative and worse MCH structure than government dispensaries, although their delivery structure was also better. Health centres' structure was poor relative to the lower-level dispensary, e.g., for drugs and dressings. Although expected to provide support to dispensaries for delivery services, by allowing referral to a higher level of care, health centres were too weak in structure to allow them to fulfil this critical role. Despite good staff structure, lack of equipment undermined the overall inpatient performance of health centres.

Variation within groups was greatest for church facilities, particularly with respect to MCH services (reflecting the better structural performance of those dispensaries providing inpatient care). Some aspects of variation (such as government dispensary immunization performance differences) suggest the possibility for improvement within current resource availability levels but, overall, the existing low level of structural quality indicates that improving quality is likely to require greater expenditure. For example, improving health centre curative and delivery care will require additional equipment and building maintenance. Without such resource enhancements health centres cannot fulfil their role as facilities of first referral.

These findings also suggest that caution should be exercised in generalizing about the supposed strengths of nongovernmental services. Detailed assessment of the quality of such services is essential in developing appropriate policy, in terms of whether or not to promote these services, the support they require to maintain and improve standards, and the complementary services that the government will still need to provide.

Health centres' failures further point to the need to reassess their role within the health system. Despite a larger structure and more staff, with consequent cost implications, structural quality was clearly inadequate for some basic services and the inpatient care available was also very limited. The expenditure required to offset these health centre weaknesses should be considered against its alternative use in strengthening lower-level health facilities.

The findings also emphasize that although the district is not solely responsible for health facility weaknesses it does have a pivotal role in improving its own performance, motivating an improved performance of health facility staff and seeking external support where necessary. The role of forces outside the district (regional/national) in supporting district health care management must also be recognized. Having explored ways of addressing the identified structural quality failings, for example, one district health management team strongly recommended that health services be re-centralized in order to ensure the higher-level support required to tackle performance failures.

However, the methods and findings of this study suggest that monitoring structural quality through observation checklists can facilitate the work of district health management teams. The study methods might be adapted — for example, by reduction of the checklist — for purposes of supervision. Although they require regular review to maintain their relevance and validity (*7, 10*), checklists are an easy-to-use instrument by which to give focus to supervision visits and to allow regular and continuing review of a health facility's structural quality. The information so generated could then be used to allow more effective district management, including focused requests for external assistance based on clear identification of existing problems.

This study has also emphasized that at the primary level, structural factors, both physical infrastructure and health system organization, are critical influences over quality. Further research is required to consider the influence of organizational structure on management practice, and to determine organiza-

tional developments that will foster better management practice through enhanced motivation. Quality assurance at the primary level must be based on consideration of the performance failings induced by the health system structure, and this structure's potential for improvement.

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Résumé

Qualité structurelle des établissements de soins primaires en Tanzanie

La qualité structurelle est un élément clé de la qualité des soins dispensés à l'échelon primaire du système de santé, lequel vise à offrir des prestations d'efficacité reconnue. Cet article présente une évaluation de la qualité structurelle de 58 établissements de soins primaires (dispensaires et centres de santé, officiels et religieux), réalisée en Tanzanie. Au moyen d'une liste de contrôle de critères élaborée en collaboration avec les responsables de la santé au niveau de la région et du district, les chercheurs ont évalué l'infrastructure matérielle et les approvisionnements, les services et le personnel, les pratiques professionnelles du personnel, et le soutien dont bénéficie l'établissement. Un système de notation permettait de traduire le jugement de l'évaluateur en un chiffre plus facile à utiliser (pourcentage de la note maximale possible), et des notes ont ainsi été calculées pour la qualité globale, la qualité des activités (soins curatifs, santé maternelle et infantile etc.) et la qualité des principaux éléments structurels (matériel, personnel, soutien).

Dans l'ensemble, la qualité structurelle était médiocre, mais variable. Des faiblesses particulières ont été relevées pour les soins curatifs dans les établissements officiels, et même les services de vaccination, qui bénéficient de ressources suffisantes, présentaient des lacunes surprenantes. Dans les dispensaires tenus par des religieux, les soins curatifs tendaient à être meilleurs que dans les dispensaires d'Etat, mais les soins à la mère et à l'enfant étaient pires, malgré une meilleure structure pour les accouchements. Les centres de santé avaient une structure médiocre par rapport aux dispensaires de plus bas niveau. Par exemple, alors qu'ils sont supposés servir d'appui et de recours aux dispensaires pour les soins obstétricaux, leur structure était trop faible pour leur permettre de jouer ce rôle crucial.

Ces résultats montrent que la surveillance de la qualité structurelle au moyen de listes de contrôle peut faciliter le travail des équipes de gestion de la santé au niveau du district, en mettant en évidence les problèmes à suivre. Ils indiquent qu'il est nécessaire d'être prudent lors de l'élaboration de politiques favorisant les établissements non gouvernementaux de soins de santé, et d'évaluer soigneusement leurs services. Le rôle des centres de santé doit également faire l'objet d'une évaluation critique à la lumière des contraintes matérielles et des faiblesses observées. Enfin, l'examen des solutions possibles aux problèmes révélés par cette étude montre que, malgré le rôle crucial des équipes de gestion de la santé au niveau du district, les facteurs extérieurs au district (la région et le centre) ont, au sein du système de santé tanzanien, une incidence importante sur l'adoption de mesures appropriées par le district lui-même.

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