

Huge potential for improved health service quality



This brief is based on data collected in 2007 in all nine rural districts in Dodoma and Morogoro regions, Tanzania.

126 randomly selected health facilities were enrolled, including 11 hospitals, 25 health centers and 90 dispensaries. 80 of the facilities were owned by the government, 46 by voluntary agencies. 159 health workers were randomly selected for inclusion.

More than 3500 outpatient consultations were directly observed. Interviews were conducted with all health workers, all patients/caretakers, and with the in-charge of all facilities.

The research team is grateful to district officials and health workers in all the nine study districts, who participated in the study, discussed the results with the research team, and assisted in the interpretations.

Health workers' knowledge and skills are much better than their practice suggests. By closing the gap between knowledge and action, the quality of health services will increase substantially.

In recent years, much attention has been devoted to the need to increase the number of health workers to strengthen the quality of health services in Africa. A study from rural Tanzania shows that there is also a huge potential for improving service quality with the existing workforce, by reducing the large gap between knowledge and practice.

Quality of care is below required standards

Health workers in Tanzania often do not examine their patients as carefully as they are supposed to, according to national guidelines. With patients presenting with fever, cough and/or diarrhea, health workers ask an average of 2.9 questions and perform 1.2 physical examinations. This is only 22 per cent of the items required by protocol. This performance level was reached while a research was present in the consultation room.

Trained clinicians may be able to provide high quality care without following guidelines 100 per cent. However, with the present level of performance, many cases of serious illness are probably not accurately diagnosed, with the likely

consequence that lives are lost and patients are mismanaged (see CMI Brief Vol. 10 No. 9 in this series).

What are the reasons for the low level of performance? Do health workers lack knowledge? Some do, but their level of knowledge typically exceeds actual performance by far; there is a large gap between knowledge and action. Why then don't the health workers put more of their knowledge into practice? Are they overworked due to a low number of health workers? We find that they are not, and we conclude that health workers are capable of performing at a much higher level than they presently do.

A large know-do gap

We presented health workers with a knowledge test in order to measure whether the level of performance is constrained by lack of knowledge (see Box 1).

Health workers perform much better on the test than when they consult real patients. The

test result demonstrates that health workers are able to perform almost twice as many diagnostic assessment tasks as they presently do when consulting patients; only 58% of their knowledge is put into practice. In other words, the gap

they do it with only around 20 per cent of the children. Similarly, to pinch the abdominal skin is crucial to detect severe dehydration in children with diarrhea. 76 per cent of the clinical officers mention this procedure in the knowledge test, but only 31 per cent of the children do receive this examination. This suggests that knowledge is presently not the limiting factor for improved performance.

Box 1: The “knowledge test”

Each clinician (or non-clinician when they do prescribe) is presented with three hypothetical patient cases. One surveyor acts as a patient with a specific illness. He tells the health worker his main symptom(s) in response to questions asked by the clinician. If the clinician wants to make an examination, he will tell the patient which examination, and the patient will tell him what he would find. The clinician then makes a diagnosis. A second surveyor observes and records what the clinician does during the “consultation”. The clinician is encouraged to perform up to the best of his knowledge, but the test results are probably still heavily influenced by normal practice. A more theoretical test would probably result in an even higher knowledge score.

To say that there is a large gap between knowledge and practice is not to say that more knowledge cannot make a difference. Three in ten patients in our study area were consulted by a nurse or medical attendant, in other words, by health workers who are not supposed to prescribe treatments. Although these health workers may have acquired substantial skills through on-the-job training, their performance is not as good as for trained clinicians; a clinical officer performs almost twice as many relevant diagnostic procedures as a medical attendant (Figure 2). To ensure that more health facilities are staffed by trained clinicians should therefore continue to be a high priority. The large gap between knowledge and practice for all groups of health workers shows, however, that training is not enough.

between knowledge and practice (the know-do gap) is 42% (Figure 1). Most likely, the know-do gap is even larger, as our measure of knowledge is a very conservative one.

The know-do gap does not vary significantly with facility ownership (government vs. faith-based), level of care (hospitals vs. health centers and dispensaries), or the cadre of the service providers (clinical officers vs. lower cadres).

Importantly, some of the procedures that are most important in order to diagnose the severity of illnesses are at the same time the procedures where that gap between knowledge and practice is largest (Table 1). For example, to auscultate the chest and/or count the respiratory rate are important procedures to detect severe pneumonia. 75 and 56 per cent of the clinical officers mention that they will do these procedures in the knowledge test, but in practice

High workload does not explain the large know-do gap

According to the World Health Organization, Tanzania has a critical shortage of health personnel. This might explain the large know-do gap; when the number of patients is too large, there will not be enough time to provide each with proper treatment.

This explanation is not valid in our study area. The number of patients is not as high as one might expect. We found that each clinician had 18 patients per day and that he/she spent 5.7 minutes with each. The average clinician therefore spent less than two full hours a day in patient consultations. This is a manageable workload.

Table 1: The procedures with the largest absolute difference between knowledge test score and practice. Data based on clinical officers’ examination 933 children.

<i>Symptom</i>		<i>In knowledge test</i>	<i>In practice</i>
Cough	Auscultate the chest	74.7	21.4
Diarrhea	Pinch abdominal skin	75.8	31.1
Diarrhea	Ask about vomiting	72.4	29.9
Diarrhea	Examine for sunken eyes	70.8	29.2
Diarrhea	Inability to drink or breastfeed	71.4	33.2
Cough	Count respiratory rate	56.2	19.5
Fever	Take temperature	80.7	48.0
Fever	Ask about pattern of fever	45.5	14.0
Fever	Ask about cough	69.8	38.3

Figure 1: The know-do gap. Data based on 2095 OPD consultations of patients presenting with fever, cough and/or diarrhea.

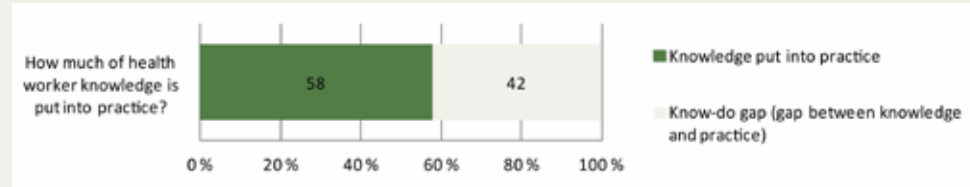


Figure 2: Share of relevant assessment tasks performed, by cadre.

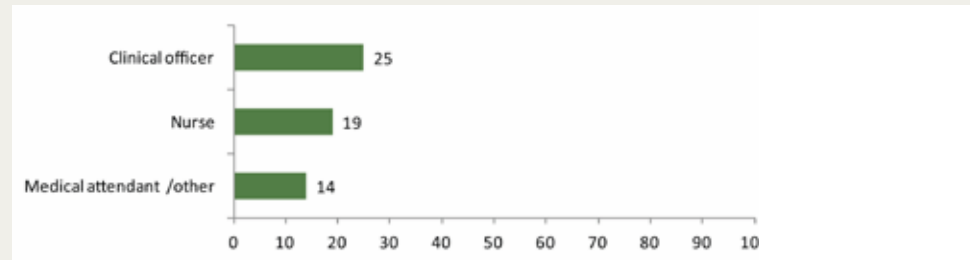
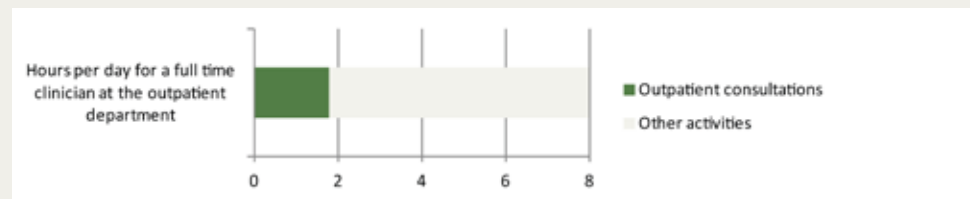


Figure 3: Allocation of time between OPD consultations and other activities



There are large differences in workload across health facilities. Some places are crowded with patients; some of the facilities had between 40 and 50 patients per clinician per day. However, the surprising fact is that the thoroughness of the diagnostic process was not any lower at these health facilities than in places with less than ten patients. This is yet another indication that workload presently is no major reason for low quality health care in these rural areas; even the most crowded facilities were able to maintain the same quality level as other facilities.

Huge potential for improved performance

In sum, our findings suggest that there is a huge potential for improved quality of health services with the existing workforce. Health workers possess more knowledge than they use in practice, and their workload is not so overwhelming that it prevents the provision of quality care. Lack of equipment is not a likely explanation of low performance either, as almost every procedure we have studied can be performed without equipment (only a thermometer and a stethoscope would be required, but these were available, or could be obtained, at most facilities).

Health workers willingness to serve their patients needs to be strengthened

The survey data suggests that health workers lack sufficient motivation to perform up to their potential. This finding is largely confirmed by the qualitative data. Although most clinical officers interviewed said they have a “calling” (wito) for their work, many added that their motivation, or ‘heart’ (moyo), for doing a good job had gradually been eroded. One third of the informants admitted that their own work ethic is low, and the great majority said that others are negligent when consulting patients. One said:

The salaries are so low, and so is the work morale. You work, but the willingness to give that extra (kujitumia) is castrated (...). Instead of thinking of examining the patient in front of you, you think “I don’t know where I will get school fees for my child”. (...) You might even find that people look for bribes, but it is not that they like doing it, it is just because of the hardness of life (ugumu wa maisha).

This clinician implies that low salaries are the reason for low motivation. However, it would be too hasty to conclude that higher payments

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would solve the problem. The objective is that health workers should be willing to put in enough effort with each of their patients. This willingness can be installed in various ways, not only through money. In the health sector, a strong professional ethic and emphasis on caring attitudes have been important mechanisms to promote patient-centered services. These values do not presently seem to have sufficient foothold among Tanzanian health workers.

One possible way forward is to build a stronger professional ethic amongst health workers. This may be a slow and cumbersome route, but may yield large long-term gains. Alternatively, or in addition, other sources

of motivation have to be activated. It is beyond the scope of this brief to discuss the alternatives in detail. We confine ourselves to pointing at two possible avenues, which may be mutually reinforcing. One is to strengthen human resource management within the health sector (this may include a range of measures, from the “soft” ones, such as increased recognition and appreciation of the work that is being done, to the “harder” ones, such as monetary incentives and sanctions). The other avenue is to empower local communities to engage in closer monitoring of their service providers. Both avenues have demonstrated promising impacts in neighbouring countries (Rwanda and Uganda).

The MAP project (Health Worker Motivation, Availability, and Performance) is a collaboration between NIMR (National Institute of Medical Research), CMI (Chr Michelsen Institute), University of Bergen, REPOA (Research on Poverty Alleviation), and Bergen University College.



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Subscribe to CMIBrief at www.cmi.no
Printed version: ISSN 0809-6732
Electronic version: ISSN 0809-6740