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Using Health Facility Profiles as a Monitoring Tool:

An Example Based on Data from Three African Countries

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Nancy Fronczak, Bolaji Fapohunda, Bates Buckner, and Catherine Schenck-Yglesias

I Introduction

Substantial investments have been and continue to be made to improve health services in countries with weak health systems. However, useful information on the status of services and the overall health systems within which they operate is rarely available. Sound decisions about where to invest resources to improve health services require knowledge of the existing health infrastructure, the services currently offered, the systems needed to support the services, and the availability of equipment and consumable supplies.

As a first step towards improving access to this information, the International Health Facility Assessment Network (IHFAN)[1] has compiled a recommended set of core indicators that measure the presence or absence of minimal, basic standards for facility-based health based services.[2] These core indicators represent a first attempt at defining minimum standards in a way that will help government ministries of health as well as private sector sponsors and donors to know and understand better the conditions under which health services are being provided in a given country setting.

The objective of this document is to illustrate and compare the current status of facilities in three countries for which data are available, using information derived from the core indicators to create a set of facility profiles. Also illustrated is the calculation of a composite index that combines results obtained from the individual indicators into an overall summary measure of facility-based service conditions in a given country. It is hoped that this application of core indicators results in the form of facility profiles will stimulate further discussion and refinement of the core indicators and the summary indices. The ultimate aim is to facilitate the adoption of standard procedures that can produce consistent and internationally comparable information to inform the planning of health system investments and health programs, and to assess their impact. We believe that the use of standardized and internationally comparable information to produce facility profiles will allow donors and countries to understand better how conditions for facility-based services differ among countries, and can provide a context for interpreting status and needs.

[1] Formerly known as the Health Facility Assessment Technical Working Group.

[2] Facilities refer to any locations in the formal health sector that provide basic client services. These may range from single service facilities (such as stand-alone sites for voluntary counseling and testing for HIV) to hospitals.

1.1 How facility profiles can improve health services

As noted above, there is a dearth of basic information about health facilities and health systems in many countries. When asked about the status of health facilities and service provided, one can readily find opinions defining health services as “poor” or “good.” But what is the evidence underlying these opinions, what facilities are included in the description, how representative are these subjective assessments? How can we tell if conditions at health facilities are improving?

There is, in fact, no internationally agreed set of standard criteria for facility service conditions. A general consensus can be reached for what most would define as the “ideal conditions” that should exist in all facilities. At the same time, it is not uncommon to hear reasons given for why these ideal conditions are not being met, and are not expected to be met. This hints at an unwritten consensus that standards may need to be different for certain facility types or facilities in certain locations. Health posts, for example, typically are located in hard-to-serve rural areas and have few resources. It is not uncommon for health posts to lack water or electricity, especially if they are located in geographic areas where these utilities are lacking. Such a lack of resources rarely, if ever, reflects a lack of need for the resources. Rather, it is a pragmatic attempt to ensure that some basic level of curative and preventive services is available to local people, and ideally within a supporting system where referral to a higher level facility is an option. To accept the practical necessity of these constraints, however, does not mean accepting that this is a reasonable standard for services. To do so would imply that substandard service conditions are acceptable for some people. A more desirable goal is to define a minimum standard of service that is expected across all health facilities. In working towards improvement of the health system, it is important to identify those facilities that do not or cannot meet the standard at a given point in time.

The illustrative profiles provided here use the service standards incorporated into the core indicators to provide information on the status of health facility (HF) conditions at the time of the survey. Once consensus is reached on the definition of minimal standards for facility-based health services, it is important to assess the standards on a regular basis. This is necessary to reinforce their acceptance and importance, as well as to monitor changes over time. Comparing facility profiles by region, by facility type, and by managing authorities, can help to guide decisions and tailor resources to needs. Similarly, periodic re-assessment of the indicators provides an objective measure of the extent to which improvements are occurring.

1.2 Background information on the "core indicators"

Most information currently used when deciding on project or program priorities is derived primarily from household-level surveys that collect basic outcome and service coverage indicators. This information is supplemented to varying degrees by information from routine health information systems (RHIS). Information about the actual, on-the-ground status of facilities and services of the type provided by sample surveys and facility censuses are rarely utilized for decision making. This is in part because there are many countries in which such surveys and censuses have not been conducted, and RHIS are also weak. However, even in countries where one or more facility surveys have been conducted, the usefulness and comparability of the information is often limited by the use of different sampling methodologies, variation in data collection instruments (including the use of different definitions for measuring the same elements), and decisions about public/private sector coverage. These factors make it difficult, if not impossible, to measure change over time within the same facilities, let alone within countries or between countries.

The core indicators are an attempt to address some of these issues by suggesting a basic set of indicators that can be collected across all surveys in a standard way. When these core indicators are used to present basic information on health facility status, a uniform definition of the infrastructure and basic systems expected across all HFs begins to emerge, and can be compared across levels. Based on criteria set forth by the IHFAN, the core indicators were established to meet the following conditions:

1) They reflect key items necessary for providing quality facility-based health services.
2) They include general, cross-cutting facility components (e.g., infrastructure, staffing) as well as components essential to providing selected key services (e.g., specific medicines, diagnostic tests, guidelines, records).
3) They are clearly and precisely defined so that results will be comparable across surveys.
4) They are relatively simple to collect and can be integrated into most existing types of facility assessment protocols.

The indicators are organized to capture key elements within nine categories or domains. These are: 1) infrastructure; 2) infection control; 3) services offered; 4) guidelines for services offered; 5) staffing; 6) health service statistics; 7) laboratory capacity; 8) pharmaceuticals for services offered; and 9) equipment. Annex 2 provides a summary listing of the core indictors and the indicator sub-components to be measured within each domain. More information on the core

indicators and their development can be found in a working paper available through MEASURE Evaluation.[3]

II Data and Methods

Service Provision Assessment (SPA)[4] data from three countries, Ghana 2002 SPA, Kenya 2004 SPA, and Tanzania 2006 SPA, were used to calculate the core indicators and to develop a profile of the health facilities in these countries. SPA is a national level facility-based survey designed to capture the capacity of facilities in the formal health sector to provide basic health services (see Annex 1). SPA utilizes a standardized data collection methodology to produce nationally and regionally representative data on health facilities in a country.[5] The sampling frames differ slightly from country to country, depending on the objective of the survey. For example, the Ghana 2002 survey included private facilities that provide maternal, child health, and reproductive health services. The private sector coverage was more inclusive in Kenya and Tanzania, as the frame was expanded to include facilities providing HIV and AIDS services. Within each country, data were weighted to correct for imbalances in sampling.

Detailed results for each indicator within each indicator domain and each country are provided in Appendix Tables 1-9. In some cases, the information required to calculate the core indicator exactly as defined was not available, but a meaningful approximation of the indicator could be calculated. Where indicator results reflect definitions that deviate from the standards used in the core indicators, a note describing the difference is included in Annex 2.

In these profiles, the core indicator results are presented by type of health facility, with the classification by type based on the country's own classification scheme (see section 3.1). Summary information is also provided by size of facility, with "size" indicated by number of overnight beds (see section 3.2). As will be seen, a common understanding of the criteria underlying a given facility classification scheme is important for interpreting indicator results, both within and across countries. The core indicators define a general level of infrastructure and support system that indicate capacity for offering quality health services, but these requirements may vary by level and expected complexity of services. For example, hospitals are expected to have better laboratory diagnostics support than primary health care centers. Hospitals see larger numbers of clients and deal with more complex illnesses since than primary health care centers, and are often planned as referral sites for the smaller facilities. Thus, the status of infrastructure

[3] Health Facility Assessment Technical Working Group. Methodology for selecting and using core indicators for cross-country comparisons of health facility readiness to provide services [working paper, WP-07-97]. Chapel Hill, NC: MEASURE Evaluation, 2007. Available at: http://www.cpc.unc.edu/measure/publications/pdf/wp-07-97.pdf.

[4] SPA is a survey implemented under the Measure DHS project through Macro International Inc. Background information for the SPA surveys used for this report are provided in Annex 1.

[5] Reports for each country that describe the survey and sampling methodology are available at: http://www.measuredhs.com/pubs/search/search_results.cfm?Type=21&srchTp=type&newSrch=1

and systems for different types of facilities offering different levels of care may vary in ways that result from a rational utilization of scarce resources and financing.

III Classification of Health Facilities by Type

3.1 Classification of health facilities based on existing country-specific classification schemes

Most international classification schemes categorize types of health facilities in developing countries as hospitals, health centers, dispensaries, clinics, or health posts. Most country-specific classification schemes use some combination of these categories, usually with a few additional terms (e.g., maternity, voluntary counseling and treatment [VCT] center).[6] As a result, most classification schemes share the same nomenclature for types, but criteria for designating the facilities by type are not consistently the same across countries; and even within the same country, the classification scheme is not always applied uniformly across the public and private sectors. This complicates the interpretation and cross-country comparison of indictor results and facility profiles, such as those presented here. The following tables illustrate this variation across countries and across the public and private sectors.[7] Table 1 shows the proportions of facilities assigned to each category in the three countries and Table 2 shows how these same categories are applied across sectors (i.e., by public/private managing authority) within each country.[8]

Table 1 Distribution of Facilities in the Survey Sample, by Country Classifications

Type of facility (country-specific classification scheme)	Ghana 2002		Kenya 2004		Tanzania2006	
	Number	Percent	Number	Percent	Number	Percent
Hospital*	43	10	28	6	25	4
Clinic	107	25	8	2	*	
Health center	166	39	125	28	55	9
Health post	18	4	NA	NA	NA	NA
Dispensary	NA	NA	249	56	528	86
Maternity	95	22	20	5	NA	NA
Stand-alone VCT	NA	NA	10	2	3	1
All facilities	428	100	440	100	611	100

* The "hospital" category for Ghana includes data on polyclinics (there were only four polyclinics).
NA = not applicable.

[6] Country-specific classifications are useful and informative within a given country context, but it is nevertheless important to go beyond the initial classification and determine who, within a ministry of health, for example, is responsible for services in the different types of facilities.

[7] Data in Tables 1, 2, and 3 are weighted so that facility types are representative of their actual presence within each region.

[8] Estimates in Tables 1, 2, and 3 are provided for illustrative purposes only since some of the difference across countries may be due to the fact data are available for different time periods.

As seen in Table 1, the vast majority of facilities in Tanzania are classified as dispensaries (86 percent), and only 9 percent are classified as health centers. In Kenya, on the other hand, 28 percent of facilities are classified as health centers, and 56 percent as dispensaries. In Ghana, the health center classification is used to describe 39 percent of all facilities.

Table 2 Distribution of Facilities by Country-Specific Classification Type and Public/Private Managing Authority*

Country-specific classification scheme	Public and Private Sector facilities, by type of facility (percentage)					
	Ghana 2002: Managing authority		Kenya 2004: Managing authority		Tanzania2006: Managing authority	
	Public	Private	Public	Private	Public	Private
Hospital†	67	33	41	59	46	54
Clinic	64	36	0	100	NA	NA
Health center	98	2	70	30	62	38
Health post	94	6	NA	NA	NA	*
Dispensary	NA	NA	58	42	67	33
Maternity	0	100	5	95	NA	NA
Stand-alone VCT	NA	NA	10	90	0	100
All facilities	**64**	**36**	**56**	**44**	**65**	**35**
Total Number	276	152	246	195	399	211

* Data are weighted.
† For Ghana, hospitals and polyclinics are grouped together (there were only four polyclinics).
NA = not applicable.

Table 2 shows the proportion of each type of facility by managing authority (public/private), again according to the country's own classification scheme. In Ghana, "clinics" are found in both the public and private sectors, while this classification is used exclusively for private sector facilities in Kenya. Similarly, "health center" is almost exclusively reserved for publicly-managed facilities in Ghana (98%), but is used to designate both public and private facilities in Kenya and Tanzania.

In the absence of standard criteria that distinguish one type of facility from another, we cannot easily interpret this cross-country variation, and this has obvious implications for interpreting and comparing country-level profiles and indicators. Variation in classification criteria for the same nomenclature (e.g., health center, clinic) means that indicator values are not always directly comparable from country to country, or across the government and private sectors. It would be useful to have a common standard, based on objectively measurable criteria, for categorizing facilities by type, regardless of country context.

3.2 Uniform measure of facility size

Many factors, such as client case load, mix of services offered, and the accessibility of services outside the facility, are relevant to determining the resource requirements and range of services a given facility should provide in order to meet basic standards for quality service provision. Since information at this level of detail is not readily available in many countries, we use an easily quantifiable proxy indicator of facility size, as measured by number of overnight or inpatient beds. Although not perfect, number of overnight beds has implications for the level and complexity of services expected from the facility. Even facilities that do not offer inpatient services per se may have beds that allow them to keep patients overnight (or for a few days) to stabilize them prior to (or instead of) referral. It is fair to assume that such a facility does not have the resources to offer routine inpatient services, but staff will stay overnight if needed. Similarly, among facilities offering inpatient services, the assumption is that the facility has the resources necessary to provide continuous care, and staff members are routinely scheduled for overnight duty. Facilities that provide overnight or inpatient services, regardless of how they are classified by type, are expected to have a more developed infrastructure, greater diagnostic capabilities, and a larger, more complex staffing pattern compared to facilities with no inpatient services or beds.

As shown in Table 3, facilities with the same country-specific classification type vary widely according to this size criterion. In Kenya, for example, 29 percent of facilities classified as health centers have no overnight beds, but 16 percent have 20 or more beds. Also in Kenya; facilities classified as ‘maternities’ vary in size from a few beds to 100 or more. In Tanzania, health centers range in size from 2% with no overnight/inpatient beds to 46% with 20-49 beds. In Kenya, 78% of dispensaries have no beds, while in Tanzania, 76% have 1-9 beds.

In the absence of better measures, we believe it is reasonable to assume that ‘number of overnight beds’ serves as a reliable basis for classifying facilities by size, and is a reasonable indicator of service complexity. Until better measures are proposed, we suggest a sorting by bed size in cross national comparisons of facility infrastructure, resource requirements and resource availability.

Table 3 Distribution of Facilities Classified as Health Centers, by Number of Client Beds*

Country survey†	Country-specific classification for facility type	Percentage of facilities with indicated numbers of beds						
		no beds	1-9 beds	10-19 beds	20-49 beds	50-99 beds	100+ beds	Total
Kenya 2004	health center	29	31	24	16	0	0	100
Tanzania 2006	health center	2	20	30	46	2	0	100
Kenya 2004	dispensary	78	19	0	3	0	0	100
Tanzania 2006	dispensary	18	76	3	3	0	0	100
Kenya 2004	maternity	0	24	35	29	6	6	100
Total								
Kenya 2004	all facilities	56	21	9	9	2	3	100
Tanzania 2006	all facilities	17	67	6	7	1	3	100

* Data are weighted.
† Number of beds was not collected in the Ghana survey.

IV Profiles of Health Facility Services and Resources

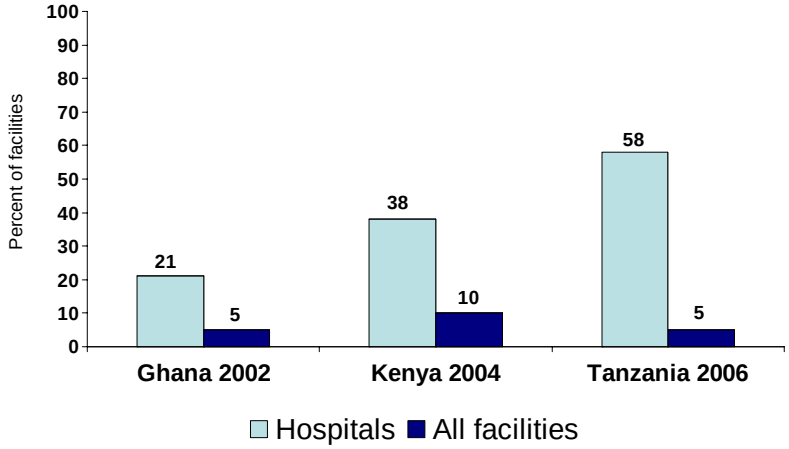
The three illustrative health facility profiles compiled here are built upon the core indicator criteria. Indicator results for each country are presented by type of facility (using the country's own nomenclature and classification scheme) and by facility size, as defined above. The profiles incorporate results reflecting each of nine domains: basic infrastructure, infection control, services offered, accessibility of guidelines for services offered, staffing, information systems, laboratory capacity, pharmaceuticals, and basic equipment.

4.1 Domain 1: basic infrastructure

Criteria to be met for basic infrastructure include having a regular source of electricity, running water on-site, a client consultation room with visual and auditory privacy, a client toilet, some type of emergency communication for support from a higher level of care, a system to support emergency transportation to a higher level of care, and inpatient or overnight beds for clients. Countries differ widely in the percentage of facilities having none, some, or all items of basic infrastructure (see Appendix Table 2). Among facilities classified as hospitals, the percentage meeting all infrastructure criteria ranges from 21 percent (Ghana) to 58 percent (Tanzania), with Kenya in the middle at 38 percent (Figure 1). Among all facilities, only 5 percent in Ghana and Tanzania, and 10 percent in Kenya have all infrastructure items. Item by item variation in the infrastructure domain is shown in Appendix Table 2. The largest differences were observed with

respect to emergency transportation and communication systems. Facilities in Ghana were the least likely to have an emergency communication system (33%) and facilities in Tanzania were the least likely to have an emergency transportation system (10%). On-site emergency transportation vehicles in place were observed in 15% of health facilities in Ghana, and 20% in Kenya. The proportion of all facilities with overnight or inpatient beds ranged from 80 percent in Ghana to 42 percent in Kenya.

Figure 1. Percentage of facilities with all basic infrastructure items.



4.2 Domain 2: infection control

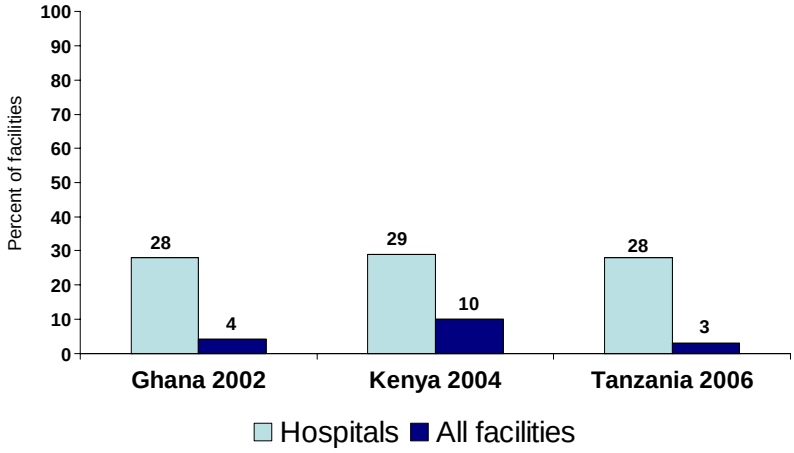
Infection control criteria include the presence of functioning equipment for sterilizing, an adequate system for disposal of sharps and infectious waste, and stock supplies of a chlorine-based disinfectant, latex gloves, sharps box, sterile, single-use syringes, and hand washing soap.

Close to three out of 10 hospitals in each of the three countries met all criteria for the infection control indicator (Figure 2). Looking across all facilities, however, very few were observed to have all items for infection control (3% in Tanzania, 4% in Ghana, 10% in Kenya). Item-by-item analysis (Appendix Table 3) reveals low availability of sterilization equipment in facilities below hospital level across the three countries. Across all facilities, the proportion with functioning sterilization equipment was highest in Kenya (30%). In Ghana and Tanzania, less than one in five facilities had the functioning sterilization equipment. In the majority of these facilities,

boiling (high-level disinfecting) was the main method for sterilizing equipment. As expected, large proportions of hospitals in all three countries had functioning sterilization equipment.

An adequate system for disposal of contaminated waste and sharp items was available in less than one-third of all facilities (14% in Ghana, 22% in Kenya, 26% in Tanzania). Hand washing soap was widely available in the three countries, but availability was highest among facilities in Ghana. It is interesting to note that, at the time of the 2002 SPA survey, infection control within facilities offering maternal and child health services was a major program focus.

Figure 2. Percentage of facilities with all listed items for infection control.



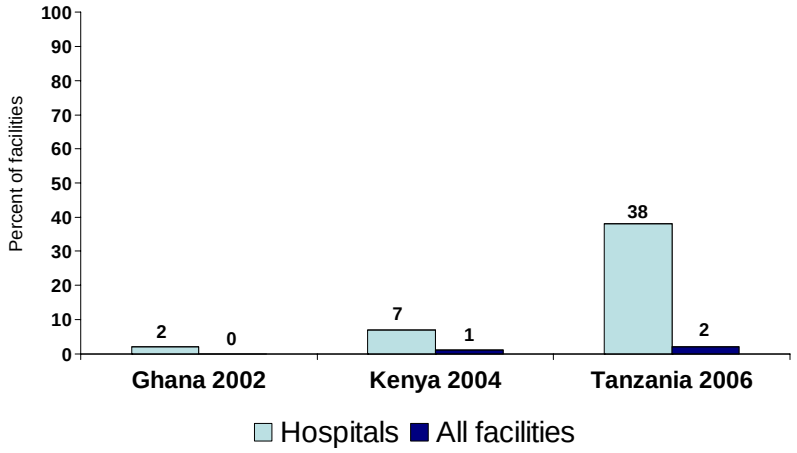
4.3 Domain 3: range (mix) of services offered

The presence or absence of 11 types of services was assessed in the SPA: 1) antenatal care (ANC); 2) facility-based delivery services; 3) family planning; 4) child immunization; 5) curative care for the sick child offered five days per week; 6) treatment of sexually transmitted infections; 7) prevention of mother-to-child transmission (PMTCT) of HIV; 8) counseling and testing for HIV; 9) palliative care for AIDS; 10) antiretroviral treatment (ART); and 11) tuberculosis services.

Ghana had the lowest proportion of facilities offering all 11 services, primarily due to the lack of services for HIV/AIDS (the survey data are from 2002, just as services were being introduced. See Appendix Table 4). Likewise, in Tanzania, the country with the most recent profile data

(2006) and an active HIV/AIDS program, a very large proportion of facilities (82 percent) were able to provide palliative care for AIDS. Percentage of hospitals offering all maternal and child health (MCH) services and reproductive health services were 38 percent in Tanzania, but only 2 percent in Ghana and 7 percent in Kenya (Figure 3).

Figure 3. Percentage of facilities offering all MCH and reproductive health services.



4.4 Domain 4: acess to protocols and guidelines for services offered

Guidelines should be readily accessible and available in each area where services are offered. This is important for two reasons: 1) to reinforce the expectation that service providers will adhere to protocols/guidelines; and 2) to be used as technical reference manuals, should they be needed. Indicator criteria were considered to be met if guidelines/protocols were observed in the main service area for each service assessed. Appendix Table 5 provides details for each type of facility. It is rare for facilities to have guidelines available for every service offered.

4.5 Domain 5: staffing

The data needed to calculate the first component of the recommended core indicator in the staffing domain (percentage of assigned staff present on the day of the survey) is not available in any of these three SPA surveys. However, information is available on the second indicator

component, facilities with duty rosters for 24-hour emergency services, or with a provider who lives on-site.

More than half of all facilities in each of the three countries (55 percent to 69 percent) have 24-hour service provision and a duty roster (observed) or provider who lives on-site. (Appendix Table 6).

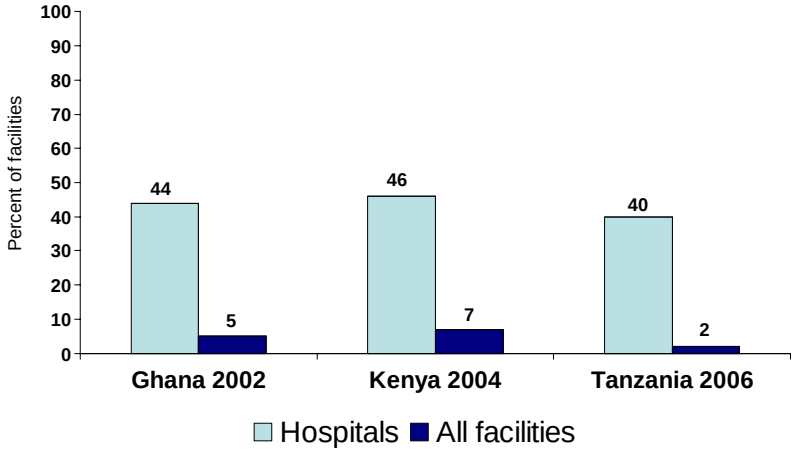
4.6 Domain 6: health information systems

The core indicators recommended for assessing health information systems call for information that not previously collected in the SPA. For illustrative purposes, the formal indicator definitions have been adapted here to take advantage of the relevant information that is available in these surveys (see Appendix Table 6). The observed presence of up-to-date registers for all offered services varied widely across the countries, from 24 percent of facilities in Ghana to 60 percent in Tanzania. “Evidence of data use” (i.e., information on whether data were being used to monitor population coverage of the eligible clients) was assessed for only three types of services — immunization, antenatal, and delivery services.

4.7 Domain 7: laboratory capacity and testing

Facilities that met the indicator criteria for each of the specified laboratory tests were those that could perform the test on the day of the survey, or had a documented system to send the client or specimen out and receive results back. Even among hospitals, less than half met the indicator criteria in any of the three countries (40 percent to 46 percent). Appendix Table 7 shows details for each specified laboratory test. Overall, less than one in 10 facilities could conduct all of the specified laboratory tests or sent the client/specimen outside and received results back. Even among hospitals that provide more complex services, and would ordinarily be expected to have these capacities, less than half (roughly 40 percent) were observed to have capacity for all of the specified laboratory tests (Figure 4).

Figure 4. Percentage of facilities able to provide all specified laboratory test results.



4.8 Domain 8: pharmaceuticals

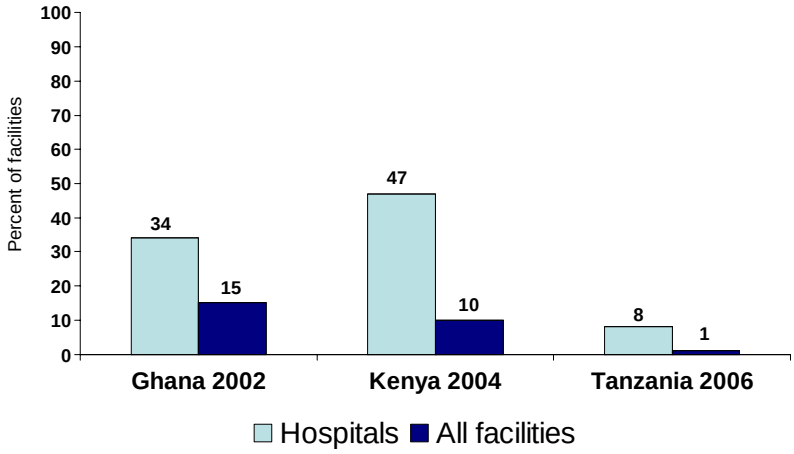
The pharmaceuticals assessed to meet the core indicator requirements comprise the minimum required to provide the specified services. Most of the specified medicines are multi-purpose and fall with core indicator requirements for all facilities, but some are expected only at facilities offering a particular type of service. These include contraceptive methods other than the condom, the antiretroviral for PMTCT, the oxytocic for child birth, and the TB medicines (see Appendix Table 8). Although there is considerable variation across facilities in the types of drugs stocked out, very few facilities had all of the specified items in place. Among the notable gaps was that male condoms were available in only two of three facilities for all three countries, and medicines as basic as oral re-hydration salts (ORS) , vitamin A, iron, and folic acid were lacking in a large proportion of facilities in all three countries.

The lack of TB medicines and PMTCT antiretroviral medicines in facilities offering these services must be evaluated in context of the system used in the country for that particular service. For example, TB drugs may be kept with the client, and stocked only at the referral facility. In countries where most women deliver in a health facility, the PMTCT antiretroviral medicine may be kept only at the facility where deliveries occur, and not in facilities offering antenatal care and PMTCT counseling and testing, but no delivery services. The pharmaceuticals most frequently missing are opiates. Essential drug lists have rarely included opiates, but they are slowly being introduced as palliative care services develop for AIDS patients.

4.9 Domain 9: equipment

Core indicator specification for the basic equipment domain is shown in Appendix Table 9. Basic equipment was lacking across all countries and types of facilities, even components such as adult and infant weighing scales that are part of most basic equipment packages. The most likely explanation is that the equipment is no longer functioning and has not been replaced. The item most frequently lacking was resuscitation equipment for newborns, but programs that emphasize newborn care have been active only a few years, and this is a relatively new standard. As shown in Figure 5, the proportion of facilities with all equipment in place is lowest in Tanzania, and this is largely attributable to the lack of newborn resuscitation equipment.

Figure 5. Percentage of facilities with all listed items of basic equipment.*



*Basic list including equipment for newborn resuscitation.

V Scoring of Facility Core Indicators for Services

One of the difficulties when using facility-based data to assess changes in the health system is that there are so many variables to consider. Over time, one variable may improve while another deteriorates or stays the same, giving rise to questions about how to interpret the overall finding: is the situation better or worse?

One way to summarize large amounts of information is to aggregate the indicator data into a single index. One method for calculating such an index is explained in a 2007 working paper

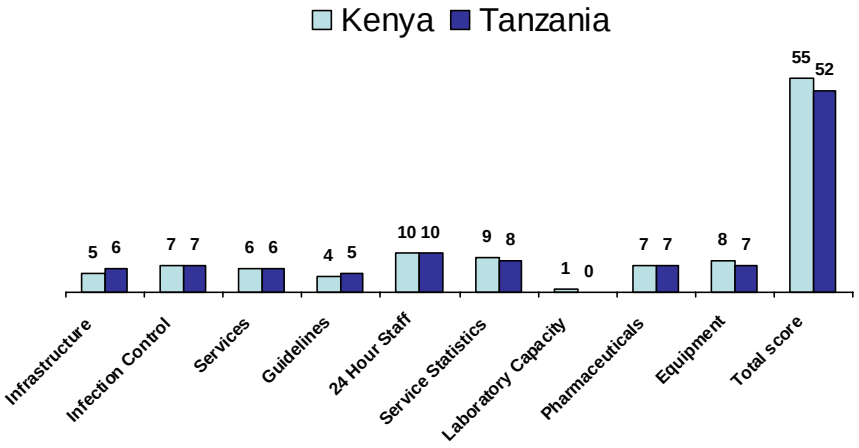
entitled “Methodology for selecting and using core indicators for cross-country comparisons of health facility readiness to provide services” (see footnote 3 for a full citation). In this approach, each indicator domain is standardized to a maximum score of 10. This ensures that each domain receives equal value, or weight, in the overall score. Thus, summing over the nine indicator domains, the maximum score possible would be 90 for a facility that meets the standard defined for all of the core indicators.

Examples of this scoring are demonstrated here for Kenya (Table 4) and Tanzania (Table 5). Results are presented by the common indicator of facility size discussed above, i.e., number of overnight/inpatient beds. While the index score may be highest for larger facilities, such as hospitals, that provide higher levels of services, facilities at all levels can achieve a high score on the index if they are able to meet the basic standards specified in the core indicators for the particular services offered. As noted throughout, some indicator components are evaluated only when a particular type of service is offered at the facility. For example, the presence of guidelines for obstetric services is evaluated only in facilities offering these services. If a facility offers all 11 types of services (domain 3), they will receive a score of 10 for that domain. Because there are 11 types of services, each service accounts for 0.91 toward the possible maximum score of 10. For example, if the facility has guidelines/protocols for only seven of these 11 services, its score for this domain would be 6.37 (0.91 x 7 = 6.37). Likewise, if a facility offers only seven of the 11 services specified in domain 3, it will receive a score of 6.37 for that domain (0.91 x 7=6.37). If guidelines are present for each of the seven services offered, the facility will earn a score of 10 for domain 4, with each guideline contributing 1.43 points (10/7=1.43).

When this standardized scoring system is applied to indicator data from these countries, the overall results are remarkably similar (Figure 6).[9]

[9] The summary index for Ghana is not calculated because number of beds was not collected in the survey.

Figure 6. Standardized median score for each indicator domain and country total score.



On the basis of this median summary score, both countries attain a relatively low score on the index, and show little or no variation in score by indicator domain. As expected, the degree to which the indicator standards are met, and consequently the overall median score, is highest among the larger facilities (Table 4), i.e., those able to offer a wider package of services and to provide more diagnostic and treatment services. Based on these results, the conclusion is that there is substantial room for improvement in both countries to ensure that all facilities have the infrastructure, equipment, and supplies for providing a minimum quality of client services.

In summary, this illustrative analysis demonstrates the types of information yielded by the indicator data for assessing HF preparedness to provide services within and across countries. But this is only the beginning, a first step. As more data become available over time, and as similar analyses are carried out for a wider range of countries, it will be possible to refine the indicator domains, definitions, and scoring system such that similar statistical analyses become useful tools for understanding the variation in health facilities and health systems over time and across countries.

Table 4 Standardized Median Score for Core Indicators for Kenya Facilities, Based on KSPA 2004 Data

KSPA2004	Standardized median score for the indicated domain for core indicators										Weighted number of facilities
	Domain										
	1	2	3	4	5	6	7	8	9		
	Infrastructure	**Infection control**	**Services**	**Guidelines***	**24 hour staff**	**Health service statistics**	**Laboratory capacity or system for testing**	**Pharmaceuticals†**	**Equipment**	Total	
Maximum score possible	10	10	10	10	10	10	10	10	10	90	
Stand alone VCT	6.0	0.9	0.9	10.0	0.0	6.7	1.4	0.0	0.0	26.2	9
Multi-service facilities											
no beds	4.3	7.1	4.5	4.3	0.0	6.7	0.0	7.0	6.7	48.2	237
1-9 beds	7.1	7.1	5.5	4.4	10.0	8.9	2.9	7.8	8.3	58.4	93
10-19 beds	7.1	7.1	7.3	5.0	10.0	9.6	7.1	8.0	8.3	66.1	40
20-49 beds	7.1	7.1	7.2	4.0	10.0	9.3	4.3	7.4	8.2	61.0	39
50-99 beds	9.2	8.6	9.1	4.6	10.0	9.0	8.6	8.2	10.0	75.9	8
100+ beds	9.9	8.6	9.1	6.6	10.0	9.3	10.0	8.2	8.3	76.2	14
Total excluding stand-alone VCT	5.1	7.1	5.5	4.4	10.0	8.7	1.4	7.0	8.3	55.3	440

* Facilities have item for each of the services offered in domain 3. Score is standardized to 10 if guidelines and records are available for all services offered.

† All facilities were assessed for all common pharmaceuticals. Exceptions were made for pharmaceuticals specific to family planning, delivery (oxytocic), PMTCT (ARV), and TB. These pharmaceuticals were only assessed and included in the index if the service was offered. The index was adjusted for facilities not offering these services so that the maximum would be 10 if all pharmaceuticals other than those for services not offered were present.

Table 5 Standardized Median Score for Core Indicators for Tanzania Facilities, Based on TSPA 2006 Data

TSPA 2006	Standardized median score for the indicated domain for Core Indicators										Weighted number of facilities
	Domain										
	1	2	3	4	5	6	7	8	9	Total	
	Infrastructure	**Infection control**	**Services**	**Guidelines***	**24 hour staff**	**Health Service statistics**	**Laboratory capacity or system for testing**	**Pharmaceuticals†**	**Equipment**		
Maximum possible score	10	10	10	10	10	10	10	10	10	90	
Stand alone	4.0	0.0	1.7	0.1	0.0	3.0	1.4	1.1	0.0	13.0	5
Multi-service facilities											
no beds	5.7	7.1	4.5	5.0	0.0	6.4	0.0	6.7	5.0	42.2	122
1-9 beds	5.7	7.1	6.4	4.3	10.0	6.7	0.0	7.3	6.7	52.2	303
10-19 beds	7.1	5.7	7.3	5.0	10.0	6.7	2.9	6.4	6.7	59.1	25
20-49 beds	7.1	7.1	7.3	5.0	10.0	6.7	5.7	7.5	8.3	64.1	35
50-99 beds	8.6	8.5	8.2	6.5	10.0	6.7	9.9	6.7	8.2	73.5	17
100+ beds	10.0	8.6	9.3	7.7	10.0	9.8	8.6	8.4	8.3	78.5	104
Total excluding stand-alone VCT	5.7	7.1	6.4	5.0	10.0	6.7	0.0	7.3	6.7	52.2	611

* Facilities have item for each of the services offered in domain 3. Score is standardized to '10' if guidelines and records are available for all services offered.

† All facilities were assessed for all common pharmaceuticals. Exceptions were made for pharmaceuticals specific to family planning, delivery (oxytocic), PMTCT (ARV), and TB. These pharmaceuticals were only assessed and included in the index if the service was offered. The index was adjusted for facilities not offering these services so that the maximum would be '10' if all pharmaceuticals other than those for services not offered were present.

VI Discussion of Core Indicator Components and Type of Facility

When interpreting findings on the various indicators within each domain, it is important to do so in the context of the time when the survey data were collected, particularly in light of the massive roll out of funds and services for HIV/AIDs over the past few years. Information from Ghana was collected prior to this international scale up for HIV/AIDS.

One of the critical questions always asked when discussing standards for facilities is: What is expected at what level of facility? It is true that quality services can be provided under a variety of conditions. There are, however, conditions that support quality and that, when lacking, will certainly impact on the willingness of staff to work at a facility, willingness of clients to use a facility, and the ability to enforce minimum adherence to standards in practice.

Given the need to make pragmatic choices, it is true that expectations will vary by level of facility. The interpretation of differences between facility types needs to be made in the context of whether the service conditions meet minimum standards, and whether clients have access to the components that are lacking in one facility, at another nearby facility. One always needs to consider the possibility that when required to visit multiple facilities to receive needed services, appropriate utilization of services will be less than optimal, as the benefit of familiarity and convenience of services in a single facility is lost. The determinations of the importance to be placed on certain levels of facilities not meeting the core standards are best made by people within a country who know the situation. It should be helpful for them, however, to see how their facilities look in comparison with other countries in view of the core indicators.

Some generalizations, however, can be made, as follows:

Infrastructure domain — All of the items for infrastructure should be available in all facilities. Even electricity, which is often cited as not essential, is important for adequate lighting for client examinations. In urban settings where there are multiple facilities in a close geographic proximity, overnight beds for 24-hours may not be necessary to provide quality services if a nearby facility has this capacity.

Infection control domain — All of the conditions for infection control should be available in all facilities. In facilities that do not carry out surgery or deliveries, it might be considered acceptable to use high-level disinfection (boiling, steaming, or chemically disinfecting) for equipment, and not to have capacity for sterilization.

Services offered and items to support their quality (domains 3, 4, and 6) — In urban settings where there are multiple facilities in a close geographic proximity all services may not be

necessary for all facilities to offer. What is important is that services be conveniently located for a family where multiple services are routinely needed (maternal, child, reproductive health services). If a family must visit a variety of different facilities to meet basic needs, there is the risk that they will not follow-through.

Some of the specialized services (HIV/AIDS, TB) might feasibly be offered in fewer facilities.

Findings for this indicator need to be interpreted within a country context.

Staffing domain — Similar to the issue when assessing the need for overnight beds, when interpreting the importance of findings with regards to staffing for 24-hour emergency services, it is important to understand if the facility is in an isolated area and may be the only source of 24-hour services, or if it is nearby other facilities (such as in urban settings) where all facilities do not need to provide 24-hour services in order to ensure that the emergency needs of clients can be served.

Laboratory domain — Clients need access to all of these diagnostic tests. A facility does not need to offer the test, if there is a system where a client can get the test and have the results followed either in this, or a nearby facility.

Pharmaceuticals domain — All facilities should have the pharmaceuticals that are relevant to the services they provide. If clients must purchase medicines from outside the facility, there is a greater risk that they will not purchase the full dose or that they will not receive the correct medication.

Equipment domain — All facilities should have these basic pieces of equipment. Facilities that do not provide delivery services may not be expected to have resuscitation equipment for the newborn.

Comparing countries on the basis of the core indicators provides some interesting insights into how services are organized between different countries. Although the interpretation must rely on knowledge and understanding of the country context, comparisons help to raise awareness and stimulate questions as to what lies behind observed differences and whether these impact on the ultimate health of the population.

VII Conclusion and Recommendations

Information on individual items within each domain is important for persons planning strategies for improving specific items. The strategies and inputs required to improve the multiple aspects of infrastructure and health services that are addressed in these core indicators cut across systems and departments within ministries of health. Some are readily improved, and some are beyond the capacity to be improved given existing systems and resources.

A system for tracking whether the multiple programs, inputs, and systems are impacting on the basic infrastructure and resources for health services at the facility level, helps to keep the overall perspective on whether the situation is improving, deteriorating, or staying the same. This perspective is often lost, due to subjective impressions or non-validated reports. An aggregate index helps to provide the perspective when assessing the overall system. Despite difference between types of facilities and the two countries for each domain, overall the status of health facilities as measured using these core indicators as an aggregate index is very similar.

These data are being presented at this time primarily to stimulate discussion and input into the content and definitions for the indicators and the index, and to demonstrate the utility of core indicator data in monitoring changes over time and providing a picture of the status of health facilities for providing basic client services across countries. This information enhances the knowledge of the health service situation the client faces at the point of delivery, and provides vital information for prioritizing inputs into health systems and making decisions regarding expansion or introduction of new programs or services.

Although comparisons among countries can provide a valuable picture of differences in the capacity to provide facility-based care with a minimum standard of service, comparisons within the same country, over time, is probably the most valuable use of this information as a tool for strengthening health services and monitoring the impact of inputs.

Annex 1 Background to Service Provision Assessment Survey

The SPA is a national level facility based survey, developed to capture the capacity of facilities in the formal health sector to provide basic health services. The first SPA survey was conducted in Kenya in 1999 (KSPA 1999). Subsequent surveys have expanded on the information collected, and have improved on the data collection instruments to strengthen the specificity and reliability of the data.

The selection of the sample facilities for KSPA 1999 was based on a representative sample of the population. These results in an under-representation of facilities located in less populated areas that may have poorer infrastructure and resources. Subsequent sampling for SPA surveys was facility-based and produced a nationally representative sample of facilities, stratified by type of facility. Identification of a full sampling frame of facilities depends on the availability of an accurate and up-to-date listing of facilities. While the lists of facilities managed by the government, and by the nongovernmental and faith-based organizations, are usually reasonably complete, listings of other private facilities tend to be less complete and biased in favor of larger facilities. To date, few national level surveys have captured small private offices that provide client services, and the private sector facilities selected typically restricted to those that provide specific services of interest (such as maternal health, child health or services for HIV/AIDS).

Among the three surveys used for this report, the sampling method was the same, to provide a nationally and regionally representative picture of facilities; however, the sampling frame differed. Ghana included private facilities that provide maternal, child health, and reproductive health services. The private sector sample was more inclusive in Kenya and Tanzania, as the frame was expanded to facilities providing HIV and AIDS services. Aside from the stand-alone HIV testing and counseling (VCT) centers, this may have resulted in more inclusion of for-profit facilities.

Annex 2 Summary List of Core Indicators by Domain

Domain	*New Indicators*	*Notes/definitions (otherwise, none)*[10]	*Notes on indicator definitions as applied in this analysis*
Signature Domain (information needed to identify a facility uniquely, not a substantive indicator domain, but a recommended protocol component)	Date of survey Health facility registry Health facility identification (ID) Health facility name Health facility contact information, e.g. postal address (optional) Heath Facility administrative unit GPS coordinates (latitude, longitude waypoint ID)	Unique identifier for HF. For details, see www.cpc.unc.edu/measure/publications	
I. Infrastructure	% facilities on day of interview with: 1. Power (a grid and/or functional generator with fuel) 2. Improved water source within facility (UNICEF definitions) 3. Room with auditory and visual privacy for patient consultations 4. Toilet facilities for clients (UNICEF definitions) 5. Communication equipment 6. Emergency transport 7. Overnight beds for 24 hour emergency care	I.1 Generator may be reported I.2-5 Must be observed I.6 May be reported	Information on the presence of power at the time of the survey was not collected in the SPA. Facilities were scored as having power if they had experienced no power outage lasting more than two hours during the week prior to the survey.
II. Infection Control	% of facilities on day of interview with: 8. Sterilization equipment 9. Storage and disposal of sharps and infectious waste	All items observed II.8 Functioning autoclave or dry heat sterilizer (observed equipment, reported	Waste disposal: Open burning and then burial was scored as an acceptable disposal method. The disposal categories

[10] Contact MEASURE Evaluation for further information including full definitions, a data collection training manual, and a tabulation plan for core indicators.

Domain	*New Indicators*	*Notes/definitions (otherwise, none)*[10]	*Notes on indicator definitions as applied in this analysis*
	10. Disinfectants 11. Latex gloves 12. Sharps box/container 13. Single use —standard disposable (5cc) or auto-disable syringes 14. Soap	response for functional status is accepted II.9 Incinerated and/or buried waste in protected environment with no unprotected waste observed in facility or on grounds	specified in the core indicators were not used in the SPA. Sharps boxes: Availability in any assessed site was accepted for puruposes of this analysis. The SPA did not look for stock supply of sharps boxes.
III. Services offered	% of facilities that offer 15. Antenatal Care (ANC) 16. Facility-based delivery 17. Family Planning 18. Child immunization 19. Sick child care U5 (curative care for children offered daily) 20. Sexually transmitted infection (STI) treatment 21. Prevention of mother to child transmission (PMTCT) 22. Counseling & Testing for HIV 23. Palliative care (including treatment of opportunistic infections) 24. Antiretroviral treatment (ART) or follow up 25. Tuberculosis (TB) treatment or follow up	III.19 curative care for children offered daily III.21 Routine counseling and testing, with maternal ART drug(s) approved by national guidelines. Denominator: facilities providing delivery and/or ANC	
IV. Availability of Guidelines	% of facilities on day of interview with guidelines readily available in service area*: 26. ANC 27. Delivery	Guidelines need to be observed in the proximity of the service area and observed on the survey day. Score	Immunization: The SPA surveys did not assess guidelines for immunization, so all facilities were given credit for having these.

Domain	*New Indicators*	*Notes/definitions (otherwise, none)*[10]	*Notes on indicator definitions as applied in this analysis*
	28. FP 29. Immunization 30. Sick child care U5 31. STI treatment 32. PMTCT 33. C&T 34. Palliative care (including OI) 35. ART treatment or follow up 36. TB treatment or follow up * If service is offered	applies for each service. Minimum content: IV.30 Treatment of pneumonia and malaria (if applicable) for children IV.34 Treatment of common OIs, management of severe pain in AIDS clients	Sick child care: Any guidelines for treating child illnesses were accepted. The SPA surveys did not specifically assess whether pneumonia and malaria treatment were specified (it is assumed that these were in the guidelines). Palliative care: Any guidelines for treatment of OIs and for palliative care were accepted. Management of severe pain was not specifically assessed in the SPA surveys (it is assumed that this is in the palliative care guidelines).
V. Staffing	37. % of HF staff providing client services present versus those working at facility present on day of facility visit (benchmark=all staff working should be present) 38. % of facilities with a 24 hour emergency staff roster	V.37 Clinical staff. Indicator can be broken down by qualification – e.g. physicians, nurses, midwives, HIV counselors (does not include cleaners, janitors, etc.). Collected at lower than hospital level. V.38 Disaggregated by type of facility (e.g. hospital, health center)	
VI. Health Service Statistics	% of facilities on day of interview with: 39. Up to date patient/client register for each assessed service that is offered. 40. Copy of standard monthly report 41. Evidence of data use	Items must be observed VI.39 Assess only for outpatient department (OPD) in large hospitals VI.40 Any report from the previous 3 months	

Domain	*New Indicators*	*Notes/definitions (otherwise, none)*[10]	*Notes on indicator definitions as applied in this analysis*
		VI.41 Existence of wall graphs, charts, posters, **or** at least one meeting in 3 months to review data for service implications.	
VII. Lab	% of facilities with capacity to conduct the test or a system for receiving results from tests conducted outside facility for: 42. Blood Count (CBC) 43. Hemoglobin 44. Malaria 45. Urine glucose and protein 46. HIV 47. TB microscopy 48. Syphilis serology	Equipment must be observed, reagents may be reported, otherwise systems (records) for receiving results from outside is observed. VII.42 If CBC capacity exists, hemoglobin is present as well. VII.44 e.g through rapid test or microscopy VII. 45 any tests is okay VII.46 e.g. through rapid test or ELISA VII.48 e.g. through VDRL or RPR	
VIII. Pharmaceuticals/treatments	% of facilities on day of interview with: 49. First line anti-malarial for children 50. Antibiotics for U5 pneumonia 51. Antibiotics for newborn sepsis 52. Condoms (male) 53. Any other(s) long or short-term contraceptive Method* 54. First line ARV for PMTCT * 55. Any oxytocic* 56. Mild to strong opiates (i.e., codeine, morphine)	* **Presence (observed)** of at least one drug per category with valid date of expiration at least one drug per category, VIII.49 Country specific VIII.50 Country specific * Possibly add first line ART for HIV/AIDS	

Domain	*New Indicators*	*Notes/definitions (otherwise, none)*[10]	*Notes on indicator definitions as applied in this analysis*
	57. Dextrose 5% in normal saline/normal saline/Ringer Lactate with IV infusion set 58. Oral Rehydration Salts (ORS) 59. Vitamin A 60. Folic acid 61. Iron supplement 62. All first line TB drugs * * if service is offered		
IX. Supplies	% of facilities on day of interview with <u>functional</u>: 63. Adult scale 64. Infant scale 65. Thermometer 66. Stethoscope 67. Sphygmomanometer and BP cuff 68. Resuscitation equipment (tube & mask) for newborn	Items must be observed in the outpatient service area if facility has outpatient services. IX.64 Must have gradations of 100 grams	

Appendix Table 1

Distribution of facilities by country classifications

Country Classification	Ghana 2002		Kenya 2004		Tanzania2006	
	Weighted number	Actual number	Weighted number	Actual number	Weighted number	Actual number
Hospital*	43	63	28	172	25	128
clinic	107	116	8	67		
health center	166	140	125	51	55	41
health post	18	16				
dispensary			249	69	528	437
maternity	95	93	20	46		
Stand-alone VCT			10	35	3	5
All facilities	428	428	440	440	611	611

* For Ghana hospitals and polyclinics are analyzed together since there were only 4 polyclinics.

Appendix Table 2 Domain 1: Infrastructure

Indicator number[11]	Percentage of facilities with the indicated infrastructure item								Weighted Number of facilities
	1	2	3	4	5	6	7		
Indicator name	Regular electricity or generator	On-site improved water source	Private room	Client toilet	Emergency communication	Emergency transport	Overnight beds	All items for Domain 1	
GSPA2002									
Hospital	81	93	93	88	88	42	98	21	42
Health center	39	60	94	64	20	8	84	1	166
Health post	6	17	89	50	6	0	50	0	18
Maternity	43	68	97	91	52	15	91	5	94
Clinic	29	50	86	70	20	19	62	6	106
Total	40	61	92	73	33	15	80	5	426
KSPA2004									
Hospital	89	62	100	100	97	69	97	38	29
Clinic	50	63	88	100	88	13	14	0	8
Health Centre	50	44	100	100	79	17	64	10	125
Dispensary	37	44	96	96	65	16	21	6	248
Maternity	75	65	100	100	90	30	100	19	20
Stand alone VCT	80	67	90	100	90	10	10	0	10
Total	47	47	97	97	73	20	42	10	440
TSPA 2006									
Hospital	83	96	100	100	96	68	100	58	24
Health center	56	67	100	98	78	24	98	11	54
Dispensary	30	53	98	92	50	6	72	2	528
Stand alone VCT	33	50	0	100	100	0	0	0	4
Total	35	56	98	93	55	10	75	5	610

[11] Refer to Annex 1 for the full definitions for the indicators

Appendix Table 3 Domain 2: Infection Control

Indicator number	Percentage of facilities having the indicated item for infection control								Weighted Number of facilities
	8	9	10	11	12	13	14	All items for Domain 2	
Indicator name	Sterilization equipment	Safe waste disposal	Disinfectant	Latex Gloves	Sharps container	Sterile single use syringes	Hand washing soap		
GSPA2002									
Hospital	86	31	95	98	93	100	100	28	42
Health center	7	8	84	88	87	97	96	1	166
Health post	0	0	67	67	67	83	89	0	18
Maternity	4	20	98	98	66	97	97	0	94
Clinic	12	14	73	82	78	91	91	1	106
Total	15	14	85	89	80	95	95	4	426
KSPA2004									
Hospital	86	48	93	86	100	79	72	29	29
Clinic	25	38	75	88	75	88	75	17	8
Health Centre	38	23	92	89	97	90	69	10	125
Dispensary	19	15	91	91	97	92	76	8	248
Maternity	50	50	75	85	95	90	80	15	20
Stand alone VCT	0	50	10	10	10	10	10	7	10
Total	30	22	89	88	95	89	72	10	440
TSPA2006									
Hospital	96	48	84	96	96	92	76	28	24
Health center	33	33	74	87	95	93	78	7	54
Dispensary	6	25	73	95	84	89	77	1	528
Stand alone VCT	0	0	0	0	0	0	0	0	4
Total	12	26	73	94	85	89	77	3	610

Appendix Table 4 Domain 3: MCH and Reproductive Health Services

Indicator number	Percentage of facilities offering the indicated services												Weighted Number of facilities
	15	16	17	18	19	20	21	22	23	24	25	All item for domain 3	
Indicator name	ANC	Delivery	Family Planning	Child immunization	Sick child care	STI treatment	PMTCT	HIV counseling and testing	AIDS palliative care	ART	TB		
GSPA2002													
Hospital	98	95	91	84	98	100	24	79	79	5	86	2	42
Health center	93	88	95	66	98	73	5	4	3	0	2	0	166
Health post	67	44	83	39	100	28	0	6	0	0	0	0	18
Maternity	98	97	97	13	99	76	7	12	2	0	4	0	94
Clinic	80	65	86	46	95	46	4	12	7	0	5	0	106
Total	90	83	92	50	98	68	7	15	11	0	11	0	426
KPA2004													
Hospital	97	93	83	96	86	97	18	96	90	71	86	7	29
Clinic	50	13	63	38	88	100	0	38	38	0	13	0	8
Health Centre	94	67	86	86	88	97	12	47	40	14	49	0	125
Dispensary	79	15	68	82	82	92	6	22	24	0	26	0	248
Maternity	90	86	86	70	85	100	10	62	67	15	29	0	20
Stand alone VCT	0	0	0	0	0	10	0	100	0	10	0	0	10
Total	83	38	73	81	83	92	8	38	35	10	36	1	440
TSPA2006													
Hospital	96	96	80	92	88	100	64	88	100	68	92	38	24
Health center	93	87	85	87	96	100	29	51	95	9	78	5	56
Dispensary	81	72	77	79	91	97	5	11	80	1	49	0	528
Stand alone VCT	0	0	0	0	0	0	0	100	67	0	0	0	3
Total	82	74	78	80	91	97	10	18	82	4	53	2	611

Appendix Table 5 Domain 4: Guidelines for offered service

Among facilities offering the indicated service, percentage having guidelines in the service area													Weighted Number of facilities
Indicator number	26	27	28	29	30	31	32	33	34	35	36	All item for domain 4	
Indicator name	ANC	Delivery	Family Planning	Child immunization	Sick child care	STI treatment	PMTCT	HIV counseling and testing	AIDS palliative care	ART	TB		
GSPA2002													
Hospital	51	76	79	**	74	49	100	6	9	50	100	0	42
Health center	62	56	66	**	83	5	100	0	0	*	100	10	166
Health post	67	25	71	**	44	0	*	0	*	*	*	19	18
Maternity	82	71	83	**	68	6	100	0	0	*	100	8	94
Clinic	44	30	62	**	61	12	100	15	0	*	100	12	106
Total	62	57	70	**	72	13	100	6	6	50	100	10	426
KPA2004													
Hospital	32	22	39	**	40	75	60	67	31	55	76	4	29
Clinic	25	0	40	**	29	50	Na	33	0	.	.	0	8
Health Centre	34	7	28	**	19	89	40	62	22	47	75	2	125
Dispensary	29	13	33	**	23	71	100	42	27	0	50	5	248
Maternity	11	6	24	**	12	60	100	23	29	0	20	0	20
Stand alone VCT	*	*	*	*	*	100	*	90	*	*	*	0	10
Total	30	11	31	**	23	76	69	54	26	48	63	6	440
TSPA2006													
Hospital	63	29	79	**	36	72	60	77	80	94	78	4	24
Health center	51	4	55	**	54	73	50	57	60	80	91	0	56
Dispensary	39	5	52	**	41	61	24	43	28	50	46	2	528
Stand alone VCT	*	*	*	**	*	*	*	33	0	*	*	33	3
Total	42	6	53	**	42	63	40	53	34	88	54	2	611

* Not applicable, service not offered. **Information not available 33

Appendix Table 6 Domain 5: Health manpower and Domain 6: Health Information System components

	Percentage of facilities having the indicated items related to health manpower and health information systems[12]				Weighted Number of facilities
Indicator number	38	39	40	41	
Indicator name	Observed duty roster for 24-hour staff coverage	Up-to-date register for each service offered	Standard monthly report for some service statistics	Evidence of data use: monitoring community level coverage of ANC, immunization or delivery services	
GSPA2002					
Hospital	98	2	**	79	42
Health center	57	32	**	83	166
Health post	28	29	**	50	18
Maternity	56	23	**	75	94
Clinic	41	18	**	62	106
Total	55	24	**	74	426
KSPA2004					
Hospital	97	18	83	36	29
Clinic	25	29	50	0	8
Health Centre	76	37	87	28	125
Dispensary	53	34	82	9	248
Maternity	90	10	65	15	20
Stand alone VCT	20	100	100	**	10
Total	63	34	82	16	440
TSPA2006					
Hospital	99	78	68	71	24
Health center	90	72	64	64	56
Dispensary	66	58	69	50	528
Stand alone VCT	0	33	0	**	3
Total	69	60	68	51	611

** Information not available

[12] Information on indicator 37, percentage of assigned staff present the day of the survey, not available

Appendix Table 7 Domain 7: Laboratory

Indicator number	Percentage of facilities having the indicated laboratory test capacity								Weighted Number of facilities
	42	43	44	45	46	47	48	All items for Domain 7	
Indicator name	Blood count	Hemoglobin	Malaria	Urine	HIV	TB	Syphilis		
GSPA2002									
Hospital	**	90	93	98	84	93	53	44	42
Health center	**	45	8	43	2	8	2	0	166
Health post	**	28	0	44	0	0	0	0	18
Maternity	**	64	2	71	0	2	1	0	94
Clinic	**	37	10	49	7	10	4	3	106
Total	**	51	16	56	11	16	7	5	426
KSPA2004									
Hospital	59	79	93	86	96	89	89	46	29
Clinic	25	38	63	50	38	25	63	0	8
Health Centre	22	33	58	36	50	40	44	2	125
Dispensary	8	8	31	23	23	12	27	3	248
Maternity	40	40	76	70	57	45	75	24	20
Stand alone VCT	0	0	0	0	100	0	0	0	10
Total	17	22	44	33	39	27	38	7	440
TSPA2006									
Hospital	52	96	96	88	100	92	88	40	24
Health center	11	55	67	55	62	56	44	2	54
Dispensary	2	19	26	15	15	4	14	1	528
Stand alone VCT	0	25	0	0	100	0	0	0	4
Total	5	26	33	21	23	13	20	2	610

** Information not available.

Appendix Table 8 Domain 8: Pharmaceuticals

	Percentage of facilities with the indicated pharmaceutical available[13]													Weighted Number of facilities
Indicator number	49	50	52	53	54	55	56	57	58	59	60	61	62	
Indicator item	Anti-malaria	Antibiotic (respiratory)	Con-dom	contraceptive[2]	ARV for PMTCT[2]	Oxytocic[2]	Opiate	Intravenous	ORS	Vitamin A	Folic acid	Iron	TB[2]	
GSPA2002														
Hospital	98	95	63	86	2	95	**	91	98	28	95	88	30	42
Health center	91	87	70	92	0	81	**	79	81	25	75	74	0	166
Health post	72	67	67	83	0	44	**	44	67	22	50	67	0	18
Maternity	69	67	69	91	0	91	**	81	64	13	79	73	0	94
Clinic	83	76	52	79	0	54	**	55	69	21	65	58	0	106
Total	84	80	65	88	0	76	**	73	75	22	74	71	3	426
KSPA2004														
Hospital	100	100	72	96	40	93	24	86	90	50	96	90	48	29
Clinic	88	88	50	100	*	100	0	38	50	38	63	63	*	8
Health Centre	100	92	77	96	29	80	3	53	92	70	94	85	31	125
Dispensary	98	94	56	89	50	79	0	38	89	63	92	86	14	248
Maternity	90	85	75	100	0	83	10	80	62	45	85	70	0	20
Stand alone VCT	10	10	0	*	*	*	0	0	10	0	10	10	*	10
Total	96	91	63	93	39	82	3	46	86	62	90	83	26	440
TSPA2006														
Hospital	100	100	80	90	69	88	4	92	92	44	92	75	77	24
Health center	98	93	69	85	7	51	0	75	74	44	87	76	86	56
Dispensary	95	89	70	92	14	57	0	52	82	36	84	70	81	528
Stand alone VCT	0	0	100	*	*	*	0	0	0	0	0	0	*	3
Total	95	90	71	91	27	58	0	56	81	37	84	71	81	611

* Not applicable, service not offered. ** Information not available

[13] Indicator 52, antibiotics for newborn sepsis not assessed.

Appendix Table 9 Domain 9: Equipment

Indicator number	Percentage of facilities having the indicated equipment							Weighted Number of facilities
	63	64	65	66	67	68	All items for Domain 9	
Indicator name	Adult scale	Infant scale	Thermometer	Stethoscope	Sphygno-manometer and cuff	Newborn resuscitation equipment		
GSPA2002								
Hospital	60	81	71	86	84	65	34	42
Health center	73	67	73	81	79	20	14	166
Health post	33	33	44	61	50	0	0	18
Maternity	80	82	87	91	91	17	15	94
Clinic	59	52	60	76	70	18	12	106
Total	68	67	71	82	79	23	15	426
KSPA2004								
Hospital	72	100	83	93	93	86	47	29
Clinic	50	50	88	75	75	13	0	8
Health Centre	68	92	82	78	79	38	17	125
Dispensary	60	75	75	80	75	5	2	248
Maternity	75	80	90	90	90	40	30	20
Stand alone VCT	0	0	0	0	0	0	0	10
Total	63	80	77	79	77	21	10	440
TSPA2006								
Hospital	92	71	76	96	92	20	8	24
Health center	93	78	91	93	76	2	2	56
Dispensary	70	58	91	76	67	0	0	528
Stand alone VCT	0	0	0	0	0	0	0	3
Total	73	60	90	78	68	1	1	611

Annex 3 Related HFA/IFHAN Working Papers and Additional Readings

The following is a list of selected papers and reports produced by IFHAN participants or their institutions, including items referenced in this working paper. Most of these documents are available from the MEASURE Evaluation Web site at: http://www.cpc.edu/measure/publication

Fapohunda, Bolaji, Nancy Fronczak, Shanthi Noriega Minichiello, Bates Buckner, Catherine Schenck Yglesias, and Priya Patil. The use of facility surveys/censuses in Health Workforce analysis. Chapter draft to be included in *Handbook on Monitoring and Evaluating Health Workforce with Special Application for Low and Middle Income Countries.* Geneva: World Health Organization; forthcoming.

Health Facility Assessment Technical Working Group. Guidance for selecting and using core indicators for cross-country comparisons of health facility readiness to provide services [working paper WP-07-97]. Chapel Hill, NC: MEASURE Evaluation; 2007.

Health Facility Assessment Technical Working Group. Guidance for collecting the health facility assessment core indicators. [Manuscript in preparation.]

Health Facility Assessment Technical Working Group. The signature domain and geographic coordinate: a standardized approach for uniquely identifying a health facility [working paper WP-07-91]. Chapel Hill, NC: MEASURE Evaluation; 2007.

International Health Facility Assessment Network. Flow chart of steps to conduct health facility assessment. [Manuscript in preparation.]

Other documents

Ghana Statistical Service (GSS), Noguchi Memorial Institute for Medical Research (NMIMR), and ORC Macro. *Ghana Demographic and Health Survey 2003.* Calverton, MD, USA: GSS, NMIMR, and ORC Macro; 2004. Available at (http://www.measuredhs.com/pubs).

National Bureau of Statistics (NBS) [Tanzania] and Macro International Inc. *Tanzania ServiceProvision Assessment Survey 2006*. Dar es Salaam, Tanzania: NBS and Macro International Inc.; 2007. Available at http://www.measuredhs.com/pubs.

National Coordinating Agency for Population and Development (NCAPD), Ministry of Health (MOH), Central Bureau of Statistics (CBS), ORC Marcro. *Kenya Service*

Provision Assessment Survey 2004. Nairobi, Kenya: NCAPD, MOH, CBS, and ORC Macro; 2005. Available at http://www.measuredhs.com/pubs.