GLOBAL JOURNAL OF MEDICINE AND PUBLIC HEALTH

The Emergence of Hospital Accreditation Programs in East Africa: Lessons from Uganda, Kenya, and Tanzania

Jeffrey Lane[1], Scott Barnhart[2], Samuel Luboga[3], John Arudo[4], David Urassa[5], and Amy Hagopian[6]

ABSTRACT

The objective of this manuscript was to examine existing hospital accreditation systems in three East African countries (Uganda, Kenya and Tanzania), assess attitudes and opinions of key stakeholders regarding hospital accreditation systems in the region, and identify lessons regarding sustainable and effective implementation of hospital accreditation systems in resource-limited countries. National hospital accreditation systems were found in Kenya and Tanzania. Uganda's accreditation system, known as Yellow Star, had been suspended. Attitudes and opinions of key stakeholders almost unanimously supported the idea of establishing new national hospital accreditation programs, but opinions differed regarding whether that system should be operated by the government or a private independent organization. Our analysis supports the following lessons regarding accreditation systems in the region: (1) self-funding mechanisms are critical to long-term success; (2) external assessments occurred more frequently in our focus countries than accreditation systems in developed countries; (3) Kenya has established framework for providing financial incentives to highly performing hospitals, but these links need to be strengthened; and (4) automatic accreditation of governmental health facilities in Kenya and Tanzania illustrate the potential hazard of public authorities overseeing accreditation programs.

Keywords: *Quality, external quality assessment, accreditation, licensing, quality assurance, hospital, standards, policy*

GJMEDPH 2014; Vol. 3, issue 2
***Corresponding Authors**
[1]**University of Washington**
Department of Global Health
Box 357965, 1501 N.E. San Juan Road Seattle, WA, USA 98195-7965
Email: lanej3@u.washington.edu
Phone: 206-447-7266
[2] University of Washington
School of Medicine
Box 357965, 1501 N.E. San Juan Road
Seattle, WA, USA 98195-7965
Email: sbht@uw.edu
[3] Makerere University School of Medicine, Kampala, Uganda
Email: lubogasam@gmail.com
[4] Aga Khan University
Nairobi, Kenya
P.O. Box 39340-00623
Email: jarudo@gmail.com
[5] Muhimbili University of Health and Allied Sciences
Box 65489
Dar es Salaam, Tanzania,
Email: durassa@muchs.ac.tz,
[6]University of Washington
Department of Global Health
Box 357965, 1501 N.E. San Juan Road,
Seattle, WA, USA 98195-7965
Email: hagopian@u.washington.edu

Conflict of Interest— none

Funding— University of Washington Thomas Francis, Jr. Fellowship Program and the University of Washington School of Law Public Interest Law Association

INTRODUCTION

International funding for global health has grown exponentially over the past two decades[21], yet quality health care remains elusive in much of sub-Saharan Africa[19]. Many health systems in the region continue to struggle with persistent budget shortages, poorly maintained facilities and equipment, inadequate sanitation and infection controls, and regular stock-outs of essential medicines and supplies[1]. Sub-Saharan Africa also faces a critical shortage of health care workers[32], which makes implementing effective clinical supervision programs, the cornerstone of medical quality assurance, especially challenging[8,4].

In an effort to address these challenges, ministries of health across sub-Saharan Africa have adopted and disseminated comprehensive health facility quality standards. These standards address areas ranging from minimum equipment requirements to specific treatment protocols. Unfortunately, due to under-

resourced facility supervision and administrative systems, these standards are often not incorporated into clinical practice. This result is documented in the literature which has found that disseminating written standards in the absence of adequate assessment and feedback mechanisms is generally ineffective at influencing behavior[25].

In an effort to improve standard compliance, an increasing number of countries in sub-Saharan Africa are establishing national health facility accreditation programs. Accreditation programs utilize external peer reviewers to regularly assess facility compliance with pre-determined standards and provide feedback to inform quality improvement. In resource-limited settings, feedback from external assessments can also be critical in increasing the efficient use of scarce facility resources[2]. Studies examining the effectiveness of accreditation systems in sub-Saharan Africa have shown the potential for significant improvements in facility performance[28, 27, 20].

While the data suggest accreditation systems hold promise, the collapse of hospital accreditation programs in Zambia and Uganda has called into question whether accreditation programs can be implemented effectively in the region. To identify lessons regarding sustainable implementation of accreditation systems, we conducted a qualitative review of the design, administration, and financing of national accreditation programs in three East African countries: Uganda, Kenya, and Tanzania.

1. ***Health facility external quality assessment models***

Accreditation is a form of external quality assessment system. The World Health Organization defines *external quality assessment* as any process in which an external organization assesses health facility compliance with pre-determined quality standards[11]. The standards utilized by external quality assessment systems vary, but generally fall into three categories: input, process, and outcome standards (see **Table 1**)[11]. These standards provide a framework for the systematic assessment of health facilities.

Table 1 Categories of health facility standards

Categories of Health Facility Standards		
Category	***Description***	***Example Standards***
Input standards	Typically assess facility resources	**The presence of adequate equipment, supplies, or staff**
Process standards	Assess the adequacy of organizational systems	**The existence of an infection control committee and appropriate procedures**
Outcome standards	Assess results	**Hospital-acquired infection or patient satisfaction rates**

Source: Endnote 12

Rooney and van Ostenberg have identified three traditional categories of external quality assessment models: licensure, accreditation, and certification[5]. Licensure is a mandatory process and typically signifies that a facility has met the minimum standards necessary to protect public health and safety. Licensure systems are typically administered by a public agency and involve an initial on-site assessment.

Accreditation is usually a voluntary process in which an accrediting body, usually non-governmental, assesses and certifies that an institution meets the quality standards adopted by the accreditation body[24]. Facilities that receive a satisfactory score are accredited, usually for a period of two to three years. Accreditation programs typically adopt standards that are considered optimal yet achievable to encourage continual quality improvement. Health insurance plans often require health facility

accreditation as a condition for approved provider status.

Certification is similar to accreditation, and the terms are often used interchangeably, but certification is often used to signify that a facility offers specialized services (e.g. specialty cardiology services). Under certification, an authorized body, usually non-governmental, certifies that an institution meets the quality standards adopted by the certifying body.

Hybrid external quality assessment systems are also becoming increasingly common in resource-limited countries where compliance with quality standards is especially challenging and traditional external quality assessment systems are either absent or ineffective[11]. These hybrid systems are often adapted to local needs and may be incorporated into existing health facility oversight mechanisms.

2. **Evidence base for accreditation systems in sub-Saharan Africa**

Literature assessing the effectiveness of accreditation systems in developed countries has been mixed[5,29]. In contrast, a small number of studies examining the effectiveness of health facility accreditation systems in sub-Saharan Africa have shown the potential for significant improvements in facility performance. This difference could be a result of health facilities in developed countries typically participating in multiple internal and external quality assurance processes[30]. In contrast, quality assurance and even basic clinical supervision systems in sub-Saharan Africa are generally weak due to budgetary and human resource shortages[4]. Thus, the relative absence of rigorous quality assurance systems in sub-Saharan Africa may allow national accreditation systems to have a more observable effect.

A summary of studies examining external quality assessment systems in South Africa, Zambia and Rwanda follows.

a) ***South Africa – Council for Health Services Accreditation of Southern Africa***

The Council for Health Service Accreditation of Southern Africa (COHSASA) is an independent, non-profit accrediting body based in South Africa. More than 500 health facilities, mostly located in South Africa, have participated in COHSASA's programs. An unpublished study from 2003 evaluated the results of participating in the COHSASA accreditation process on hospitals in KwaZulu-Natal Province, South Africa[28]. In this study, hospitals were randomized into participating and control groups, and average compliance scores for each group were compared before and after the intervention period. The study found the average compliance score for the participating hospitals improved from 48 percent to 78 percent, while the average score for non-participating hospitals remained static at 43 percent.

b) ***Zambia – Zambian Health Accreditation Council***

Zambia established a hospital accreditation program known as the Zambian Health Accreditation Council (ZHAC). ZHAC was established in 1997 with financing from USAID and was administered by a council with representation from government agencies and health professional associations. A 2005 study randomized hospitals into participating and control groups and the average score for each group was compared scores following an intervention period[20]. The average compliance score for participating hospitals was 48%, compared to 38% for non-participating hospitals. Two other studies examining the ZHAC system identified a number of weaknesses, including that ZHAC had no centralized Secretariat, no independent funding, and no legal mandate.[2] In addition, attendance at ZHAC council meetings was poor[3]. The studies warned ZHAC needed a long-term financing plan to replace USAID funding,[2] which proved prophetic as ZHAC was suspended following the end of USAID funding[11].

c) ***Rwanda – Linking Quality Assessments with Financial Incentives***

Instead of establishing a traditional accreditation system, Rwanda created a Performance Based Financing (PBF) scheme whereby facilities underwent quarterly external quality assessments and the results were used to set payment rates. A 2009 study examined the effect of the PBF system

on Rwanda's public sector health centers[27]. The study found facility quality scores at the beginning of the PBF phase ranged between 10% and 55%. However, after participating in the PBF system, all participating health centers achieved sustained quality scores between 80% and 95%.

In Rwanda, hospitals and health centers were scheduled to undergo quality assessments once per quarter by a team of peer reviewers[23]. District supervisors employed by the Ministry of Health assessed health centers. Hospitals were assessed by a team of peer reviewers from a similarly situated hospital. The majority of the monthly bonuses received by health centers was used for salary top-ups. In 2007, PBF bonuses accounted for approximately 40% of annual salaries of health center workers[27]. The portion of the PBF payment not used for salary top-ups was used for facility improvements.

The study authors concluded that participating in the process led to "enormous improvements on quality of health care services.[27]" The study authors also speculated that strengthening other components of the health system, such as data collection, monitoring, and integrated supervision, may have contributed more to the observed quality improvements than the financial incentives.

METHODS

We conducted a qualitative review of the design, administration and financing of health facility accreditation systems in three focus countries: Uganda, Kenya, and Tanzania. Focus countries were selected because each country had implemented a national accreditation system. Between July 10, 2009 and August 10, 2009, we conducted in-country interviews in our three focus countries (Uganda, Kenya, and Tanzania). Key informant interviews were conducted with a total of 27 stakeholders (Kenya: 9; Uganda: 9; Tanzania: 9) who had personal knowledge regarding accreditation systems in our focus countries. Ministry of health officials, representatives of private hospital associations, and hospital administrators were interviewed in each country. Health insurance fund administrators, representatives of regional multilaterals, physician and nurse supervisors were also interviewed. Ethics review boards from the following institutions approved this study: University of Washington (USA), Muhimbili University of Health and Allied Sciences (Tanzania), National Council for Science and Technology (Kenya), and Makerere University (Uganda).

A questionnaire was used as an interview guide and an audio recording device was used for the majority of interviews. Interviews lasted between 30 and 45 minutes and interview responses were analyzed using observer impression. In addition to interviews, we collected relevant policies, reports, manuals, guidelines, and other documents relating to accreditation systems in the region. A limitation of the study was that we were not able to collect actual facility assessment scores from our focus countries or conduct a cost-effectiveness analysis.

RESULTS

1. ***Uganda***

Uganda launched a health facility accreditation system in 2000 known as the Yellow Star Programme. The goal of Yellow Star was to "improve and maintain quality of services through a system of certification and recognition.[22]" Yellow Star was modeled on similar efforts in Egypt, Brazil, and West Africa.

Yellow Star was administered by the Uganda Ministry of Health, but was primarily financed by USAID[1]. All hospitals, including private and faith-based hospitals, were required to participate if their district opted into the program. Yellow Star assessed health facilities using a set of 35 Basic Standards for Quality Health Care Services, which had more than 100 sub-standards. The standards contained input and process standards covering areas including: infrastructure, equipment, management systems, infection prevention, and communication skills. As the name indicates, these standards were set at a basic level, similar to facility licensure standards (e.g., access to a reliable supply of clean water).

Teams of 2-4 supervisors from district health offices scheduled assessments on a quarterly basis. The

Ministry of Health recorded assessment data using a paper records system, making it difficult to aggregate and analyze data across facilities. A facility that met all of the Yellow Star standards for two consecutive quarters was presented with a Yellow Star Award at a publicized ceremony. Following certification, facilities continued to undergo quarterly assessments. Yellow Star certification could be revoked if a facility became non-compliant.

At the time of our visit in July of 2009, Yellow Star had recently been suspended by the Ministry of Health, citing the end of USAID funding. The Ministry reported it was attempting to fund a new version of the program. Stakeholder interviews illustrated that there may have been a lack of country ownership of the Yellow Start Program. For example, one stakeholder noted the new Yellow Star would be "our own" program.

The Ministry of Health also convened a working group to evaluate standards for a more comprehensive hospital accreditation system[1,9]. When asked about potential barriers to establishing an effective national accreditation system, interviewees cited a lack of financing and the inability of accreditation programs to address upstream causes of non-compliance (e.g., budget and staff shortages). Many stakeholders also responded that they preferred the accreditation body be independent of the Ministry of Health, such as an independent state corporation. These interviewees noted a concern that an accreditation body within the Ministry of Health would not be objective in assessing public hospitals. One policymaker also stated that Uganda was seeking to establish a national public health insurance fund, and that this new insurance fund would "drive accreditation" by requiring participating hospitals to be accredited.

2. ***Kenya***

In Kenya, the National Hospital Insurance Fund (NHIF) administered a hospital accreditation system. The NHIF was a public health insurance scheme with approximately 14 million beneficiaries, covering almost one-third of Kenya's population. Hospitals were required to participate in the NHIF's accreditation system to receive NHIF reimbursement. As of 2009, the NHIF had accredited more than 400 hospitals[14]. Private, faith-based, and public hospitals were eligible for accreditation. Private hospitals were required to undergo an initial assessment to obtain accreditation. However, public hospitals were automatically accredited. Following accreditation, all participating facilities were scheduled to undergo external quality assessments every three months and a full accreditation assessment every two years[16]. The NHIF accreditation activities were primarily financed by NHIF member premium payments, and, therefore the program was self-funded.

The NHIF employed two cadres of full time quality assessment officers to conduct quality assessments. NHIF surveyors were stationed at more than twenty NHIF field offices across Kenya. In addition to conducting assessments, NHIF staff also conducted trainings at NHIF accredited hospitals regarding the development of internal quality improvement committees.

The NHIF assessed compliance with the Kenya Health Standards, which consisted of input, process and outcome standards. Input standards covered areas such as: staff, facility, supplies, equipment, and transport. Process standards assessed compliance with Ministry treatment guidelines, referral systems, financial management, and internal quality improvement systems. Outcome standards assessed patient, staff, and community member satisfaction rates.

A hospital's assessment score significantly affected its NHIF reimbursement rates. Depending on its score, a hospital's reimbursement rate could vary from 400 KSH to 2,000 KSH per day[17] - a difference of 500%. Quality assessment scores also determined whether private hospitals were categorized as Category B or C hospitals, which determined whether they could seek reimbursement for surgery services or charge patient co-pays[14].

Hospital administrators we interviewed noted that the potential for an increase in NHIF reimbursement rates was a strong incentive to improve standard compliance, but the links between how a specific improvement in assessment scores would increase reimbursement rates was not clear. This may be due to the fact that the NHIF's Board of Management retained the ultimate authority to set reimbursement rates for specific hospitals. One interviewee noted that reimbursement rates for public hospitals were kept relatively similar to avoid creating large disparities between public facilities.

3. ***Tanzania***

Similar to Kenya, Tanzania's National Health Insurance Fund (NHIF) operated a health facility accreditation system. Tanzania's NHIF was a public health insurance fund with a benefit package that included both inpatient and outpatient services[12]. As a result, all levels of health facilities, including health centers, dispensaries, and pharmacies, were eligible for accreditation.

Health facilities were required to participate in the NHIF's accreditation program to receive reimbursements. Private and faith-based health facilities were required to undergo an initial accreditation survey and regular assessments thereafter. However, as in Kenya, all public health facilities in Tanzania were automatically accredited. As of 2007, 3,574 facilities had been accredited by the NHIF.[7] Although by the same year, the NHIF had not rejected a single accreditation application[7]. Tanzania's NHIF did not adjust reimbursement rates based assessment scores.

NHIF employees, known as Zonal Supervisors, conducted accreditation surveys and quality assessments. The Tanzania Ministry of Health developed the quality standards used by the NHIF. These standards included both input standards (e.g. staff, equipment, and laboratory) and process standards (e.g. establishing an internal quality assurance program). The NHIF was funded primarily through premium payments from the fund's members and appeared fiscally solvent[12]. However, the NHIF Act that created the fund limited the amount the NHIF could spend on administrative costs to 8%[18]. This cap reportedly limited the ability of the NHIF to adequately administer the fund, including conducting accreditation and quality assessment activities.[13]

At the time of our visit, the Tanzania Ministry of Health was developing an accreditation system separate from the NHIF. It was unclear how this Ministry of Health-based accreditation program would interact with the NHIF's accreditation activities.

Table 2 provides a summary of the national accreditation programs in Uganda, Kenya and Tanzania.

Table 2 Summary of Health Facility Accreditation Systems in East Africa

Country	Implementing Body	Eligible Facilities	Scheduled External Quality Assessments	Voluntary or Mandatory?	Participation Incentives?	Incentives for Continuous Quality Improvement?
Uganda	Ministry of Health	Hospitals, Health Centers, and Dispensaries	Every three months	Mandatory if district opts in	N/A - Mandatory participation	None
Kenya	National Hospital Insurance Fund	Hospitals only	Every three months	Mandatory for public facilities Voluntary for private facilities	Yes – Participation in NHIF	Yes - Increase in reimbursement rates
Tanzania	National Health Insurance Fund	Hospitals, Health Centers, Dispensaries, and Pharmacies	"Regular"	Mandatory for public facilities Voluntary for private facilities	Yes – Participation in NHIF	None

Source: Compilation of interview responses and above references

4. ***International accreditation programs***

Two international health facility accreditation programs, the International Organization for Standardization (ISO) and COHSASA were active in our focus countries. A small number of large hospitals in Kenya had obtained or were seeking ISO 9000 certification. At least one major hospital in Rwanda was seeking accreditation through COHSASA. A number of government officials and hospital administrators interviewed noted that international accreditation processes were perceived favorably in the region. However, they also reported that fees from these international bodies were likely cost prohibitive for most hospitals in the region.

The East African Community (EAC) was also in the process of designing a regional hospital accreditation system. Under the proposed EAC program, a regional body would develop uniform quality standards, but each country would be responsible for assessing compliance with the EAC standards. It was unclear which national bodies would be responsible for conducting the on-site assessments; however, national medical councils were one option being considered.

DISCUSSION

Our interviews found almost unanimous enthusiasm for an active national or regional hospital accreditation program in our focus countries. While there was some difference in opinion regarding whether an accreditation body should be public or private, every hospital administrator we interviewed said the assessing body should be independent of the Ministry of Health. This unanimous concern among hospital administrators illustrates that an accreditation program independent of the Ministry of Health would likely receive more support from this key stakeholder group.

Not surprisingly, our interviews also found that a key barrier to establishing independent accreditation

bodies in the region was a lack of financing. The accreditation program in Uganda was initially funded by foreign assistance, but the end of this foreign assistance for that program appears to have led to the suspension of that program. The end of foreign assistance also appears to have been the cause of the collapse of the accreditation program in Zambia.

In contrast to Uganda and Zambia, the accreditation programs in Kenya and Tanzania were tied to national health insurance funds, which utilized member premiums to fund their accreditation activities. This financing mechanism appeared sustainable and may be a financing model for other countries. However, our interviews also revealed that having the national health insurance funds actually administer the accreditation program led to significant conflicts of interest that led to all public hospitals automatically being accredited. The NHIFs also appeared to be torn between wanting to expand the number of facilities and beneficiaries participating and the desire to maintain and improve compliance with quality standards.

One model for using national health insurance plans to drive accreditation activities, while avoiding conflicts of interest, may be for national health insurance plans to require participating facilities to be accredited by a local, independent accrediting body that charges fees to participating facilities. International accrediting organizations such as COHSASA and ISO use this model, but their fees appeared to be cost prohibitive for most hospitals in East Africa. Thus, a locally operated independent accrediting body may be able to provide this service at a significantly lower cost.

Our study also found that financial incentives can be linked with quality assessment scores, as in Kenya, but that clarifying the link between quality improvement and reimbursement rates may make these financial incentives more effective. These financial incentives should be structured carefully to avoid penalizing poorly performing facilities that require additional funding to improve performance or otherwise care for difficult to treat populations[27, 30]. One option may be to provide bonus payments to facilities that serve a disproportionate share of poor or underserved populations. This has been done by the United States' Medicare insurance system[6].

CONCLUSION

The emergence of health facility accreditation programs in East Africa illustrates the increased focus of a range of stakeholders on improving the quality of health care available in the region. Evidence suggests that accreditation programs could play an important role in this effort, but effective, sustainable, and impartial administrative systems will be critical to their success. One promising model may be for national health insurance plans to drive accreditation by requiring facilities to be accredited by a local, independent accrediting body.

ACKNOWLEGEMENTS

The authors would like to acknowledge the contributions of Dr. Deo Mwingizi to this manuscript. Funding for this project was provided by the University of Washington Thomas Francis, Jr. Fellowship Program and the University of Washington School of Law Public Interest Law Association.

REFERENCES

1. Bateganya M, Hagopian A, Tavrow P, Luboga S and Barnhart S (2009). Incentives and barriers to implementing national hospital standards in Uganda. Int'l. J. Qual. Health Care. 21: 421-26.
2. Bukonda N, Tavrow P, Abdallah H, Hofner K and Tembo J (2002). Implementing a national hospital accreditation program: the Zambian experience. Int'l. J. Qual. Health. 14:7-16.
3. Bukonda N, Abdallah H, Tembo J and Jay K (2000). Setting up a national hospital accreditation program: The Zambian experience. Operations Research Results. 8: 1.
4. Chopra M, Munro S, Lavis J, Vist G and Bennett S (2008). Effects of policy options for human resources for health: an analysis of systematic reviews. Lancet. 371:668-74.
5. Greenfield D and Braithwaite J (2008). Health sector accreditation research: a systematic review. Int'l. J. Quality in Health Care. 20(3):172-83.

6. Hadley J and Holahan J (2004). The Cost of Care for the Uninsured: What Do We Spend, Who Pays, and What Would Full Coverage Add to Medical Spending? Washington (DC).
7. Kiwara AD, Minja G, Stormer M and Enemark U (2006). Review of claims status for the National Health Insurance Fund. December 2006 Report. Dar es Salaam: Tanzania Ministry of Health.
8. Lane J (2008). The Need for Effective Licensure Laws for Mid-Level Health Care Providers in Countries Facing Chronic Physicians Shortages: A Case Study of the Marshall Islands' Health Assistants. Pac. Rim. Law & Pol'y. J. 17:767-94.
9. Luboga S and Barnhart S (2008). Workshop Report - Developing Hospital Standards in Uganda. Kampala, Nov. 12-13.
10. MacKellar L (2005). Priorities in Global Assistance for Health, AIDS, and Population. Pop. Dev. Review. 31:293-312.
11. Montagu D (2003). Accreditation and Other External Quality Assessment Systems for Healthcare: Review of experience and lessons learned. London: Department for International Development.
12. Mtei G, Mulligan J, Ally M, Pallmer N and Mills A (2007). An Assessment of the Health Financing System in Tanzania: Report on SHIELD Work Package 1.
13. National Health Insurance Fund (2005). Health Care Financing in Tanzania 2005 Fact Sheet No. 2. Dar es Salaam.
14. National Hospital Insurance Fund (cited 2010 March 1). Internet. Nairobi. Available from: http://www.nhif.or.ke/healthinsurance/hospitals/.
15. National Hospital Insurance Fund (cited 2001 March 1) Internet. Nairobi. Available from: http://www.nhif.or.ke/healthinsurance/hospitals/.
16. National Hospital Insurance Fund (2005). Accreditation Manual.
17. National Hospital Insurance Fund (Claims and Benefits) Regulations (2003).
18. Parliament of the United Republic of Tanzania (1999). National Health Insurance Fund Act No. 8 of 1999. Section 33(b).
19. Peabody JW, Taguiwalo MM, Robalino DA and Frenk J (2006). Improving the Quality of Care in Developing Countries. In: Jamison DT, Breman JG, Measham AR, Alleyne G, Claeson M, Evans DB et al. (2006), editors. Disease Control Priorities in Developing Countries. 2nd ed. New York: Oxford University Press. pp. 1293-1307.
20. Quality Assurance Project (2005). The Zambia Accreditation Program Evaluation. Bethesda (MD): Quality Assurance Project.
21. Ravishankar N, Gubbins P, Colley RJ, Leach-Kemon K, Michaud C, Jamison DT et al. (2009) Financing of global health: tracking development assistance for health from 1990 to 2007. Lancet. 373:2113-24.
22. Republic of Uganda Ministry of Health (2004). Yellow Star Programme Health Facility Manual. Kampala.
23. Republic of Rwanda Ministry of Health (2008). Ministry of Health Annual Report 2008.
24. Rooney A and van Ostenberg P (1999). Licensure, Accreditation and Certification: Approaches to Health Services Quality Evaluation and Management. Bethesda (MD): Quality Assurance Project.
25. Rowe AK, Savigny D, Lanata C and Victora C (2005). How can we achieve and maintain high-quality performance of health workers in low-resource settings? Lancet. 366:1026-1035.
26. Rusa L, Schneidman M, Fritsche G and Musango L. Rwanda: Performance-Based Financing in the Public Sector. In: Eichler R, Levine R, Performance-Based Incentives Working Group, editors. Performance Incentives for Global Health: Potential and Pitfalls. Washington, DC: Brookings Institution Press. pp. 189-214.
27. Rusa L, Dieu Ngirabega J, Janssen W, Van Bastelaere S, Porignon D and Vandenbulcke W (2009). Performance-based financing for better quality of services in Rwandan health centres: 3-year experience. Tropical Medicine and Int'l Health. 14:830-37.
28. Salmon JW, Heavens J, Lombard C and Tavrow P (2003). The Impact of Accreditation on the Quality of Hospital Care: KwaZulu-Natal Province, Republic of South Africa. Operations Research Results. 2:17.
29. Shaw C (2001). External assessment of health care. BMJ. 322:851-54.
30. Viswanathan HN, Pharm B and Salmon JW (2000). Accrediting Organizations and Quality Improvement. Am J Manag Care. 6:1117-1130.
31. Wang CJ, Conroy KN and Zuckerman B (2009). Payment Reform for Safety-Net Institutions – Improving Quality and Outcomes. New England Journal of Medicine. 361(19): 1821-23.

32. World Health Organization (2006). World Health Report 2006 – Working together for health. Geneva: World Health Organization.

 ISSN#- 2277-9604