ORIGINAL ARTICLE

Indian Teaching Hospitals and Quality Health Care from Global Perspective: A Reality Check in Maharashtra, India

[1]Archana Mishra, [2]Prakash P Doke

ABSTRACT

Teaching hospitals are the apex body of Indian hospital system and are expected to lead from the front in offering quality health care services in a safe environment by qualified and skilled staff. In this study, we conducted a reality check on some teaching hospitals in Maharashtra to assess gaps between declared policies and actual results achieved. We studied three parameters, i.e., human resource management (HRM), quality and safety, and communication and patient relations through three indicators, viz., policies, practices, and services from the Joint Commission International Accreditation (JCIA) standards in concurrence with National Accreditation Board for Hospitals (NABH). A total of 11 teaching hospitals were selected randomly across Maharashtra. The requisite data for the study were collected through personal interview from medical superintendents, employees, and patients. The responses were coded as: 10 (full compliance), 5 (partial compliance), and 0 (no compliance) as per NABH evaluation criteria.

The study shows that while teaching hospitals are maintaining most of the policies, they are poor in translating the standards into practices and services. Teaching hospitals need to lay greater emphasis on continuous training and development of their employees that should be focused on improving quality of patient care as per global standards as far as possible.

Keywords: Globalization, Health care, Quality, Standards, Teaching hospitals.

INTRODUCTION

With changing global economic scenario, Indian patients too expect and deserve health care of global standards.

[1]Associate Professor, [2]Professor

[1]MGM School of Biomedical Sciences, MGM Institute of Health Sciences Deemed to be University, Navi Mumbai Maharashtra, India

[2]Department of Community Medicine, Bharati Vidyapeeth Deemed to be University, Medical College, Pune, Maharashtra India

Corresponding Author: Archana Mishra, Associate Professor MGM School of Biomedical Sciences, MGM Institute of Health Sciences Deemed to be University, Navi Mumbai, Maharashtra India, Phone: +918605595389, e-mail: archu.w1@gmail.com

This calls for greater integration, transparency, and accountability in health care entities.[1,2] Teaching hospitals have to play a pivotal role in the national health care system of the country by bringing improvements in the quality of medical education and research.[1,3]

In India, there are 63,985 seats for Bachelor of Medicine and Bachelor of Science (MBBS) courses in 460 medical colleges across the country.[4] Each medical college has an integrated teaching hospital. These hospitals are pillars to the health care system in India.[5] Studies show that teaching hospitals are overburdened as referral centers.[6] Moreover, they lack adequate resources in terms of equipment and skilled manpower[7,8] due to financial constraints.[9] These hospitals also need to use their resources strategically to meet the needs of health care delivery system.[10-12]

The Medical Council of India (MCI) has given guidelines about infrastructural norms in terms of space, manpower, equipments, and other facilities. Corporate hospitals in India are continuously improving their patient care services by improving efficiency and reducing procedural errors.[13,14]

In this study, we tried to conduct reality check in some selected teaching hospitals between policies as per global standards and their actual performance.

MATERIALS AND METHODS

The study population was teaching hospitals in Maharashtra. The respondents during the survey were 11 medical superintendents, 30 employees (doctors, nurses, and others) and 30 patients from each teaching hospital.

Three parameters, HRM, quality/safety, and communication system, were measured, based on standards (chosen from JCIA and NABH)[15,16] and indicators (policies, practices, and services). These standards [HRM (16), quality (28), and communication (23)] and indicators were optimized during the pilot study (Table 1).[7] There were three questionnaires to assess the status of teaching hospitals.

- Questionnaire A: Medical Superintendent,
- Questionnaire B: Employees (doctors, nurses, and others), and
- Questionnaire C: Patients.

  The schema of the study is shown in Flow Chart 1.

**Table 1:** Selected parameters and standards from JCIA and NABH

Indicators	Code	
Standards of HRM		
Policy (Questionnaire: A)	HRM1	Recruitment and selection policies (need assessment, advertising, interview, selection, and induction)
	HRM 2	Policies for defining/documenting job description for all employees
	HRM 3	Policies for maintaining personnel file for all employee
	HRM 4	Policies for handling grievances of employees
	HRM 5	Policies defined/documented for employees' education/training
	HRM 6	Performance appraisal/career development policies for employees
Practices (Questionnaire: B)	HRM 7	Existing recruitment and selection procedures as per defined policies
	HRM 8	Employees' knowledge/awareness about job description
	HRM 9	New employees' induction/orientation program
	HRM 10	Clarity of mission/goal of the hospital among employees
	HRM 11	Awareness among employees about Standard Operating Procedures of the department
	HRM 12	Employees' awareness and participation in performance appraisal/career development program
	HRM 13	Employees' involvement in organization through suggestions/complaints
Services (Questionnaire: C)	HRM 14	Assessment of competency of doctors through patients' feedback
	HRM 15	Assessment of competency of nurses through patients' feedback
	HRM 16	Assessment of competency of other staff through patients' feedback
Standards of quality/safety		
Policy (Questionnaire: A)	Qua 1	Defined quality assurance and continuous monitoring policies
	Qua 2	Defined managerial policies for continual improvement
	Qua 3	Policies for communicating to staff and patient for safety norms
	Qua 4	Defined and documented preventive and breakdown maintenance
	Qua 5	Defined and documented hospital infection control policies
	Qua 6	Defined and documented biomedical waste management
Practices (Questionnaire: B)	Qua 7	Awareness in employees for quality assurance plan in hospital
	Qua 8	Awareness in employees for risk management initiatives in hospital
	Qua 9	Education activities for staff and patient for safety
	Qua 10	List of personnel responsible for quality program
	Qua 11	Awareness among employees for cleaning and sterilization
	Qua 12	Preventive and breakdown maintenance procedures
	Qua 13	Awareness among employees for hospital infection control
	Qua 14	Awareness among employees for biomedical waste management
	Qua 15	Maintaining dignity and privacy of patients in the hospital
	Qua 16	Awareness among employees for informed consent
	Qua 17	Awareness for risks/benefits of informed consent
Services (Questionnaire: C)	Qua 18	Emergency and patient information support system for patients
	Qua 19	Effective front office facilities
	Qua 20	Importance of cleanliness and better ambiance in the hospital
	Qua 21	Effective diagnosis facilities
	Qua 22	Effective treatment facilities
	Qua 23	Effective food and beverages facilities
	Qua 24	Effective security and parking facilities
	Qua 25	Effective waste management and sterilization services
	Qua 26	Hospital is safe from fire, security threats, etc.
	Qua 27	Staff washes hands, wear gloves, mask, and gowns for the procedures
	Qua 28	Employees guide for necessary precautions for infection safety to the patients
Standards of communication (information to patients)		
Policy (Questionnaire: A)	Com 1	Defined policies for patient and family's rights during the care plan
	Com 2	Defined policies for patient/family involvement in decision making
	Com 3	Defined policies for grievances redressal of patients
	Com 4	Defined policies for patient's follow-up and feedback
	Com 5	Defined policies for confidentiality/security of information.
	Com 6	Defined policies for communication of financial implications

(Cont'd…)

(Cont'd…)

Indicators	Code	
Practices (Questionnaire: B)	Com 7	Practices of patient's follow-up and feedback
	Com 8	Maintaining confidentiality and security of information
	Com 9	Access to information from the medical records
	Com 10	Practices for communication of financial implications
Services (Questionnaire: C)	Com 11	Information for treatment and involved in decision-making
	Com 12	Hospital pay attention to privacy/confidentiality
	Com 13	Proper attention for complaints/feedbacks
	Com 14	Inform for course of treatment/follow-up
	Com 15	Informed about financial expenses for treatment plan
	Com 16	Cost-effective services
	Com 17	Visit again/recommend to others
	Com 18	Doctor informed you for treatment and procedures
	Com 19	Nurses informed you for treatment and procedures
	Com 20	Other staff informed you about the procedures
	Com 21	Doctors are courteous and genuine
	Com 22	Nurses are courteous and genuine
	Com 23	Other employees are courteous and genuine

Flow Chart 1: Schema of the study
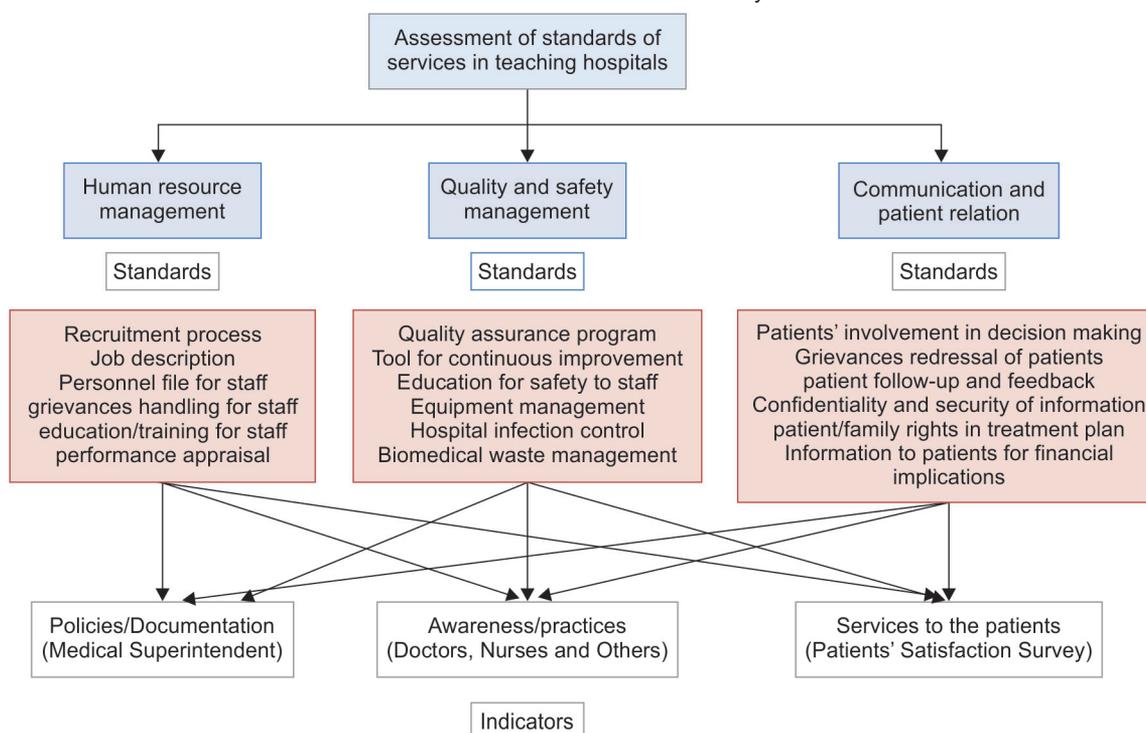
Data Analysis and Interpretation

Data were quantified as per JCIA scoring criteria as shown in Table 2.

Evaluation of Feedbacks

All three questionnaires (A, B, and C) were evaluated together statistically, considering 10 as an ideal score. The operational definition of gap was adopted from JCIA as follows:
• One or more standards were scored less than 5.

Table 2: Scoring criteria for the responses of the policies, practices, and services in teaching hospitals

Evaluation criteria	Answered	If the response were/ compliance	Score
Fully met	Promptly yes	"Always/mostly"/90%	10
Partially met	Partly/hesitantly yes	"Usually/sometimes"/ 50–89%	5
Not met	No/not answered	"Rarely/never"/less than 49%	0
Not available	Do not know/ missing data	Do not know/missing data	0

Table 3: Human resource management score (policies, practices, and services) for teaching hospitals in Maharashtra from 2010 to 2013

Indicator	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	Average
Policies	5.83	5.83	5.83	5.83	5.83	5.83	6.67	7.50	6.67	5.83	7.50	6.29 ± 1.96
Practices	4.05	3.57	3.57	3.55	3.76	3.71	4.19	4.10	4.26	4.05	4.40	3.93 ± 2.1
Services	3.94	2.33	3.83	4.44	3.56	3.00	4.44	2.44	3.50	3.61	6.11	3.75 ± 0.76
Mean score for policies, practices, and standards with standard deviation												4.65 ± 1.42
Mean	4.61	3.91	4.41	4.61	4.38	4.18	5.10	4.68	4.81	4.50	6.01	4.65 ± 0.55

Table 4: Quality score (policies, practices, and services) for teaching hospitals in Maharashtra from 2010 to 2013

Indicator	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	Mean
Policy	4.17	3.33	4.17	3.33	4.17	3.33	6.67	6.67	6.67	5.00	7.50	5.00 ± 1.58
Practices	4.73	4.15	4.24	4.21	4.24	4.11	4.47	4.95	4.45	4.56	5.00	4.47 ± 0.32
Services	1.76	0.74	1.11	1.05	1.24	1.09	1.76	1.02	1.62	1.79	2.76	1.45 ± 0.56
Mean scores for standards (with standard deviation)												3.64 ± 1.85
Mean	3.55	2.74	3.17	2.86	3.22	2.84	4.30	4.21	4.25	3.78	5.09	3.64 ± 0.76

Table 5: Communication (policies, practices, and services) for teaching hospitals in Maharashtra from 2010 to 2013

Indicator	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	Mean
Policy	3.33	0.83	0.83	0.83	0.83	0.83	5.00	5.00	5.00	5.00	5.00	2.95 ± 2.09
Practice	3.83	3.83	3.83	3.92	4.04	3.83	5.42	5.17	5.17	5.58	6.08	4.61 ± 0.87
Service	2.99	1.90	2.58	2.81	2.69	2.32	3.37	2.08	3.35	3.56	4.86	2.95 ± 0.83
Mean score for indicators (with standard deviation)												3.51 ± 1.56
Mean	3.38	2.19	2.41	2.52	2.52	2.33	4.60	4.08	4.50	4.72	5.31	3.51 ± 1.16

- Aggregate score of one or more parameters of the study was less than 8.

Limitations of the Statistical Analysis

The data were categorized into three codes: 0, 5, and 10; so, statistical test does not register significant gap in many cases.

RESULTS AND DATA ANALYSIS

Human Resources Management

Table 3 shows the indicators and hospitals (H1, H2, …, H11). The mean scores of HRM for the policies, practices, and services are shown in the last column and mean scores for each hospital are in the last row in Table 3. The statistical test ($F_{(2, 30)} = 39.90$, $p < 0.001$) confirmed that the policy/documentation standards were rated significantly different from knowledge/awareness/practices and services of HRM.

Quality/Safety

Table 4 shows the indicators and hospitals (H1, H2, …, H11). The mean scores of quality/safety for the policies, practices, and services are shown in the last column and the mean scores for each hospital are in the last row in Table 4. The statistical tests were also conducted to ascertain the gaps among the employees based on their profile, which shows that there was a significant difference between nurses and other staff ($t_{(20)} = 2.1$; $p < 0.05$) in practicing quality and safety standards. The test ($F_{(2, 30)} = 41.383$, $p < 0.05$) confirmed that the standards of policies were rated significantly different from practices and services of quality/safety.

Communication and Patient Relation

Table 5 shows the indicators and hospitals (H1, H2, …, H11). The mean scores of communication system for the policies, practices, and services are shown in last column and mean scores for each hospital are in the last row in Table 5. The statistical test confirmed that there was a significant gap among standards of practices and services.

There was a significant difference among hospitals in terms of compliance with communication policies ($F_{(10, 55)} = 10.455$; $p < 0.05$), especially between public and private hospitals ($t_{(10)} = 4.88$; $p < 0.05$). Graph 1 shows compliance with standards of HRM, quality, and communication in public and private hospitals respectively. The x-axis shows the number of standards and the y-axis shows the score (0, 5, and 10). The last 23 standards of communication can be seen near the baseline in public hospitals.

DISCUSSION

As per operational definition of the gap in standards in teaching hospitals, data were analyzed as follows:
- One or more standards were scored less than "5": Table 6 indicates the number of standards scored less
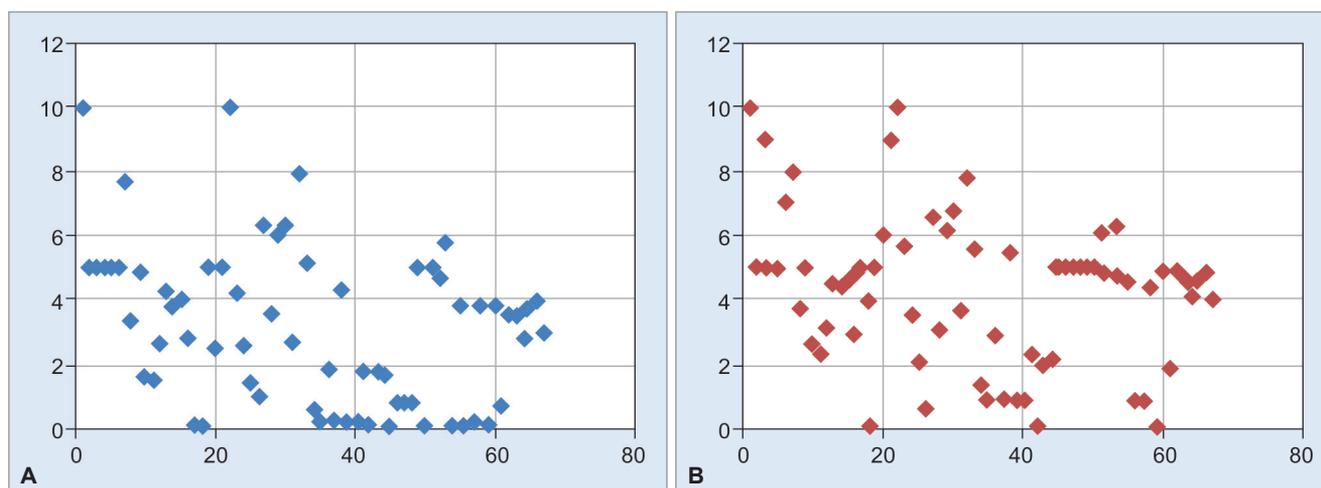
Graphs 1A and B: Standards for HRM, quality, and communication in public and private teaching hospitals

Table 6: Matrix (indicator-parameter) of standards received < 49% compliances

Parameters Indicators	Human resource management	Quality/ safety	Communication	Total standards	Percent of standards <5
Policy/documentation	0	3	5	8 out of 18	44.44
Knowledge/awareness/practices	6	6	2	14 out of 22	63.64
Services to the patients	3	11	13	27 out of 27	100
Total standards	9 out of 16	20 out of 28	20 out of 23	49/67	73.13
Percent of standards scored <5	56.25	71.43	86.96		

than 5 in each of the three parameters, namely HRM, quality, and communication. The last row denotes the number/percentage of standards, which received less than score 5 overall.

- Aggregate score of one or more parameters of the study was less than "8": Average (including all indicators, policies, practices and services) was calculated for the parameter HRM, quality, and communication. In the current study, all these standards have scored 5, i.e., less than 49% compliance as per the global norms.

Significance Level

The gap is analyzed as per the operational definition. The test of significance shows that HRM ($t_{(15)} = 9.835$, $p < 0.05$), quality/safety ($t_{(27)} = 13.388$; $p < 0.05$), and communication ($t_{(22)} = 20.076$; $p < 0.05$). Therefore, it is accepted that there is a significant gap in the current HRM, quality/safety, and communication system of teaching hospitals with respect to international standards.

CONCLUSION

In this study of 11 teaching hospitals of Maharashtra, India, standards of patient care were analyzed as per global standards and existing gaps were assessed. Three parameters (as per JCIA and NABH), viz., human resource, quality/safety and communication, and three indicators (policies, practices, and services), were chosen. Data gathered were quantified, scored, and statistically analyzed. In all three parameters, significant gaps were found as compared with international standards. It was found that while most of the policies of the patient care are being maintained by all these hospitals as per global standards what they lacked was their strict and complete implementation. Since teaching hospitals are the places where our health care professionals are trained, they have to be the role model for rest of the hospitals in providing world-class health care. This can only happen if the administrative authorities of these hospitals translate policies into action not-withstanding our limited resources.

REFERENCES

1. Wartman, SA. Academic Health Centers: a time to respond to the new global economy. Annual report 2012. Washington (DC): Association of Academic Health Centre; 2012.
2. Whitcomb ME. Academic health centers: sustaining the vision. Acad Med 2004 Nov;79(11):1015-1016.
3. Lozon JC, Fox RM. Academic health sciences centres laid bare. Healthc Pap 2002;2(3):10-36.
4. Medical Council of India. List of colleges teaching MBBS. New Delhi: MCI; 2018. [cited 2018 Feb 2]. Available from: https://www.mciindia.org.

5. Mishra A, Bhattacharyya R. Assessment of services of teaching hospitals in the changing global scenario. Int J Res Comput Appl Manage 2012 Jan;2(1):58-62.

6. Supe A, Burdick WP. Challenges and issues in medical education in India. Acad Med 2006 Dec;81(12):1076-1080.

7. Chandramohan P. Medical education in India at cross-roads: Issues and solutions. Arch Med Health Sci 2013 Jan-Jun;1(1):80-84.

8. Jaggi, OP. Western medicine in India: Public health and its administration. History of science and technology in India. Vol. 14. New Delhi: Atma Ram and Sons; 1979.

9. KPMG. Emerging trends in healthcare: a journey from bench to bedside. New Delhi: KPMG an Indian Partnership and a member firm of the KPMG; 2011. [cited 2011 Feb 17]. p. 50. Available from: http://indiainbusiness.nic.in/newdesign/upload/news/Emrging_trends_in_healthcare.pdf.

10. Mishra A, Doke PP. Assessing the gap in policies of human resources, quality and communication for Indian teaching hospitals. MGM J Med Sci 2015 Jan-Mar;2(1):7-12.

11. Ojha, KC. Hospital management in India: a special reference to financial and manpower planning. Pune: Pune University; 1983.

12. Purohit BC. Private initiatives and policy options: recent health system experience in India. Health Policy Plan 2001 Mar;16(1):87-97.

13. Liu LL, Forgione DA, Younis MZ. A comparative analysis of the CVP structure of nonprofit teaching and for-profit non-teaching hospital. J Health Care Finance 2012 Fall;39(1):12-38.

14. Kruk ME. Globalization and global health governance: implications for public health. Glob Public Health 2012 May;7(Suppl 1):S54-S62.

15. Joint Commission International. JCI accreditation hospital survey process guide. 3rd ed. Oak Brook (IL): JCI; 2008. Available from: https://www.jointcommissioninternational.org.

16. National Accreditation Board for Hospitals & Healthcare Providers. Accreditation standards for hospitals. 4th ed. New Delhi: NABH; 2011. [cited 2017 Apr 29]. Available from: http://www.nabh.co/NABHStandards.aspx.