



SATISFACTION AMONG USERS (DOCTORS & NURSES) WITH LABORATORY SERVICES AT A TERTIARY CARE HOSPITAL

Malik Aubid¹, Manhas Anil K.², Haroon Rashid¹, Qadri G. J.¹, Malik Amina³, Hamid Shah Nawaz¹

¹Hospital Administration, Sher-I-Kashmir Institute of Medical Sciences, Srinagar, India; ²Hospital Administration, JK Health Services, Srinagar, India; ³Govind Ballabh Pant Hospital, New Delhi, India.

ABSTRACT

Objective: To study satisfaction among users (doctors and nurses) with laboratory services at a tertiary care hospital.

Material and Methods: a cross sectional study was carried out for a period of six months among the cadre of professionals who utilized the services of central laboratory at skims, where biochemistry and hematological investigations are performed. Simple Random sampling was used for selection of users.

Results: the satisfaction survey had a response rate of 96%. Among faculty the overall satisfaction score ranged from 1.31 to 2.88 with mean score of 2.04. Among residents the overall satisfaction score ranged from 1.37 to 2.7 with a mean score of 2.17. Satisfaction score in nursing supervisors ranged from 2.17 to 2.55 with a mean score of 2.37. Among incharges/nursing staff, the satisfaction score ranged from 1.7 to 2.6 with a mean score of 2.04.

Conclusion: communication of laboratory services which included communication of relevant information and notification of significant abnormal results was considered weak by both faculty and resident doctors (17.77% and 14.03% of satisfaction respectively). This highlights the need for improving the communication skills among laboratory staff and users (doctors and nurses) to improve quality in laboratory services. Further researches must be conducted on communication in laboratories to identify the communications.

Key Words: User satisfaction, Laboratory communication

INTRODUCTION

A laboratory is a place of specialized work, research, clinical or diagnostic procedures and also a place for teaching and training. There are different types of laboratories and great number of hazards which may be found in them. Codes of practice and Guidelines are documented which specify safe practices for particular task or occupations⁽¹⁾.

The developments in clinical laboratory medicine in recent years have been impressive, clinical laboratories have evolved from relatively simple structures to facilities of great complexity. In many modern clinical laboratories the extensive use of instrumentation, automation and computerization has created a commercial and industrial atmosphere. Regardless of the sophistication of the clinical laboratory, we, as clinical laboratory professionals, must remember that the goal of clinical

laboratories is to provide services and not products. By offering the five services namely, analysis, data processing, consultation, education and research, it will ensure that the clinical laboratory will be recognized as an integral part of health care team⁽²⁾.

Many recent changes in clinical chemistry including automation, increasing data processing capability, and increasing regulation of laboratory performance have brought about a search for better ways to quantify the quality of patient results coming out of clinical laboratory. This has resulted in a great diversity of approaches related to the definition and measurement of quality in clinical chemistry. (3)

The modern quality system in an institution today is agreed organizational – wide, detailed operating work structure of technical, Scientific, and managerial procedures for guiding the coordinated actions of humans, the

Corresponding Author:

Dr. Aubid Malik, Senior Resident, Hospital Administration, Sher-I-Kashmir Institute of Medical Sciences, Srinagar, India.

E-mail: aubidmalik@rediffmail.com

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equipment and the information of the institutions in the best and most practical ways, to assure user quality satisfaction and reasonable cost of quality.(4)

A high quality organization meets customer's needs. Clinical laboratory managers often assume they know what customers want (accuracy, precision, speed, economy etc.) and set out to directly measure laboratory performance in each specific area. Another approach to measuring qualities to assess customer satisfaction with services without making any assumptions about the relative importance of specific functions.

Each approach to assessing quality has advantages. Direct assessment of accuracy, precision, and turnaround time helps managers understand whether local performance is improving and how it compares to published norms⁽⁵⁾.

Today assessing customer satisfaction with laboratory services is considered an important component of laboratory quality assurance programme and is required for accreditation by the college of American pathologists (CAP) and the Joint Commission on Accreditation for Health care Organization ^(6,7). Physicians are one of the primary customers of laboratory services and obtaining their feedback provides laboratory managers with opportunities to identify areas for improvement.

METHODOLOGY

The study was carried out in a tertiary care institute Sher-i- Kashmir Institute of Medical Sciences (SKIMS) after a proper clearance taken from an ethical committee of the institute. It is a cross sectional study conducted for a period of six months among the cadre of professionals who utilized the services of central laboratory at SKIMS where Biochemistry and Hematology investigations are performed. The users (doctors and nurses) were selected for interview by simple random sampling. The total number of subjects included 217. It included doctors (All Heads of concerned departments and 20% of faculty, senior residents, post graduates and junior residents involved with the investigations of Central laboratory and Nurses (100% supervisor, 100% in charges and 20% staff nurses) a predesigned Performa was used for data collection. Statements regarding appropriate location, adequacy of staff for receiving and processing samples, proper communication which included communication of relevant information and notification of significant abnormal results between users and laboratory staff, conformity of tests with the clinical diagnosis, proper reporting, repeat testing on account of erroneous reports and timeliness of reports were asked. The satisfaction was measured on 3 point scale from 1 = dissatisfied to 3 = satisfied.

RESULTS

Out of 226 questionnaires distributed, there was response from 217 subjects comprising of 45 faculty members, 57 resident doctors, 45 supervisors and 70 incharge/staff nurses, with a response rate of 96% and revealed that 66.66% of faculty, 56.14 % of resident doctors, 55.5% of nursing supervisors and 45.72 % of incharge/staff nurses were satisfied with location of laboratory staff (table 1). 11.11% of faculty, 24.56% of resident doctors, 64.44% of nursing supervisors and 51.42% of incharge/staff nurses were satisfied with adequacy of staff (table 2). 17.77% of faculty, 17.54% of residents, 64.44% of nursing supervisors and 44.28% of incharges/staff nurses were satisfied with proper communication (table 3). 93.33% of faculty, 85.96% of resident doctors, 73.33% of supervisors and 54.28% of incharges/staff nurses were satisfied with proper reporting (table 4). 64.44% of faculty, 85.96% of resident doctors were satisfied with conformity of results (table 5). 44.44% of faculty, 35.08% of resident doctors were satisfied with repeat testing (table 6). 37.77% of faculty, 52.63% of resident doctors, 62.22% of supervisors and 71.42% of incharges/staff nurses were satisfied with reporting on time (table 7). Among faculty the overall satisfaction score ranged from 1.31 to 2.88 with mean score of 2.09. Faculty were most satisfied with proper reporting (2.88), proper location (2.46), conformity of results (2.40) and were least satisfied with reporting on time (1.97), communication (1.57) and adequacy of staff (1.31) (table 8). Among residents the overall satisfaction score ranged from 1.37 to 2.7 with a mean score of 2.12. Residents were most satisfied with conformity of test results (2.7), proper reporting (2.65), location (2.19) and least satisfied with repeat testing (1.91), adequacy of staff (1.89) and communication (1.37) (table 9). Satisfaction score in nursing supervisors ranged from 2.17 to 2.55 with a mean score of 2.36. the nursing supervisors were most satisfied with proper reporting (2.55), communication (2.42) and were least satisfied with location (2.17) (table 10). Among incharges/nursing staff, the satisfaction score ranged from 1.7 to 2.6 with a mean score of 2.09. incharges/staff nurses were most satisfied with reporting on time (2.6), adequacy of staff (2.26) and were least satisfied with proper reporting (1.70) (table 11).

Table 1: Satisfaction with appropriate location

Designation	Total	Satisfied		Dis satisfied		Mildly Dis-satisfied	
		n	%	n	%	n	%
Faculty	45	30	66.66	9	20.00	6	13.33
Residents	57	32	56.14	21	36.85	4	07.01
Nurse Supervisor	45	25	55.55	17	37.77	3	06.66

Table 1: (Continued)

Designation	Total	Satisfied		Dis satisfied		Mildly Dis-satisfied	
		n	%	n	%	n	%
Ward Incharge/ Staff	70	32	45.72	29	41.42	9	12.86
	217	119		76		22	
χ^2	P						
8.1	0.23						

Table 2: Satisfaction with adequacy of staff

Designation	Total	Satisfied		Dis satisfied		Mildly Dis-satisfied	
		n	%	n	%	n	%
Faculty	45	5	11.11	36	80.00	4	8.89
Residents	57	14	24.56	20	35.09	23	40.35
Nurse Supervisor	45	29	64.44	14	31.11	2	04.44
Ward Incharge/Staff	70	36	51.42	19	27.14	15	21.44
		84		89		44	
	217						
χ^2	P						
63.8	0.02						

Table 3: Satisfaction with proper communication

Designation	Total	Satisfied		Dis satisfied		Mildly Dis-satisfied	
		n	%	n	%	n	%
Faculty	45	8	17.77	27	60.00	10	22.23
Residents	57	10	17.54	40	70.17	7	12.29
Nurse Supervisor	45	29	64.44	10	22.22	6	13.34
Ward Incharge/ Staff	70	31	44.28	28	40.00	11	15.72
	217	78		105		34	
χ^2	P						
37.1	0.02						

Table 4: Satisfaction with proper reporting

Designation	Total	Satisfied		Dis satisfied		Mildly Dis-satisfied	
		n	%	n	%	n	%
Faculty	45	42	93.33	2	04.44	1	02.23
Residents	57	49	85.96	7	12.28	1	01.76
Nurse Supervisor	45	33	73.33	8	17.78	4	8.89

Designation	Total	Satisfied		Dis satisfied		Mildly Dis-satisfied	
		n	%	n	%	n	%
Ward Incharge/ Staff	70	38	54.28	21	30.00	11	15.72
	217	162		38		17	
χ^2	P						
28.6	0.05						

Table 5: satisfaction with conformity of results

Designation	Total	Satisfied		Dis satisfied		Mildly Dis-satisfied	
		n	%	n	%	n	%
Faculty	45	29	64.44	9	20.00	7	15.56
Residents	57	49	85.96	7	12.28	1	01.76
Total	102	78		16		8	
χ^2	P						
		8.59		0.014			

Table 6: satisfaction with repeat testing

Designation	Total	Satisfied		Dis satisfied		Mildly Dis-satisfied	
		n	%	n	%	n	%
Faculty	45	20	44.44	18	40.00	7	15.56
Residents	57	20	35.08	25	43.85	12	21.07
	102	40		43		19	
χ^2	p						
1.1	0.59						

Table 7: satisfaction with reporting on time

Designation	Total	Satisfied		Dis satisfied		Mildly Dis-satisfied	
		n	%	n	%	n	%
Faculty	45	17	37.77	18	40.00	10	22.33
Residents	57	30	52.63	20	35.08	7	12.29
Nurse Supervisor	45	28	62.22	13	28.88	4	08.88
Ward Incharge/ Staff	70	50	71.42	8	11.42	12	17.16
	217	125		59		33	
χ^2	P						
19.40	0.004						

Table 8: Mean scores of satisfaction among faculty

Lab parameters	Score
Location	2.46
Adequacy of staff	1.31
Communication	1.57
Proper Reporting	2.88
Conformity of results	2.40
Repeat testing	2.04
Reporting on time	1.97

Table 9: Mean scores of satisfaction among Residents

Lab Parameters	Score
Location	2.19
Adequacy of staff	1.89
Communication	1.37
Proper Reporting	2.65
Conformity of results	2.7
Repeat testing	1.91
Reporting on time	2.17

Table 10: Mean scores of satisfaction among Supervisors

Lab Parameters	Score
Location	2.17
Adequacy of staff	2.37
Communication	2.42
Proper Reporting	2.55
Reporting on time	2.33

Table 11: Mean scores of satisfaction among In-charges/staff

Lab Parameters	Score
Location	1.88
Adequacy of staff	2.26
Communication	2.04
Proper Reporting	1.70
Reporting on time	2.6

DISCUSSION

“User (doctors and nurses) satisfaction” which was studied by a pretested questionnaire for an assessment of satisfaction with laboratory services revealed that 45.07% of the faculty staff, 48.36% of resident doctors and 67.99% of nursing staff were satisfied with most of the parameters used in the satisfaction survey. 93.33% of the faculty staff was satisfied with the “proper reporting” of tests and 85.96% of residents were satisfied with proper reporting of tests “Communication” of laboratory services was considered weak by both faculty and resident staff (17.77% and 14.03% satisfaction respectively), in comparison to Nursing Supervisors and Incharges / Staff which reported 64% and 45 % satisfaction respectively for the same. Faculty and residents were least satisfied with communication with satisfaction score of (1.57) and (1.37) respectively. Resident doctors were most satisfied with conformity of test results (2.7) proper reporting (2.65) location (2.19) reporting on time (2.17). Incharges/staff were most satisfied with reporting on time with score of (2.6). In line with the findings of the present study research by Zarbo RJ et al; to study the physician and patient satisfaction with laboratory services revealed that the median(50th percentile) laboratory had an overall median satisfaction score of 4.4; the lowest satisfaction scores that were obtained all related to poor communication, which included timeliness of reporting, communication of relevant information and notification of significant abnormal results⁽⁸⁾. In a study by Nakhleh R E et. al the overall satisfaction for surgical pathology reports as well as satisfaction with report test turnaround time, completeness and style were high. Report turnaround time received the lowest scores of all parameters⁽⁹⁾.

In another study by Zarboo RT et.al in 2003 showed that the median (50th percentile) laboratory had an overall median satisfaction score of 4.4. the lowest scores that were obtained are related to poor communication⁽¹⁰⁾.

CONCLUSION

User (Doctors and Nurses) satisfaction which was studied by a pretested questionnaire for an assessment of satisfaction with laboratory services revealed that communication of relevant information and notification of significant abnormal results was considered weak by faculty and resident doctors with satisfaction score of 1.57 and 1.37 respectively. Faculty and resident doctors were most satisfied with proper reporting with a score of 2.88 and 2.65 respectively.

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