

REASONS OF PATIENTS TRANSFER FROM PERIPHERAL TEACHING AND NON TEACHING HOSPITALS TO A SURGICAL UNIT, LADY READING HOSPITAL PESHAWAR: A PILOT STUDY

Ahmad Faraz¹, Irum Sabir Ali², Ihtisham ul Haq³, Mumtaz Khan⁴

¹⁻⁴ Lady Reading Hospital,
Peshawar - Pakistan.

Address for correspondence:
Dr. Ahmad Faraz

Registrar, Surgical "C" Unit
Lady Reading Hospital, Peshawar - Pakistan.

E-mail: drahmadfaraz_79@yahoo.co.uk

Date Received:

October 02, 2015

Date Revised:

November 19, 2015

Date Accepted:

December 03, 2015

ABSTRACT

Objective: To determine the reasons of referral/transfer of patients from other health facilities to a surgical unit of Lady Reading Hospital Peshawar.

Methodology: This is a descriptive cross-sectional study conducted in surgical unit "C" Lady Reading Hospital (LRH) Peshawar from February 28 to September 14, 2014, using consecutive non-purposive sampling technique. All patients admitted in our unit living outside the catchment area of Peshawar were included. Age, gender, address, reason for referral and perception of the patients about Lady Reading Hospital Peshawar was recorded on a proforma. Data was analyzed using SPSS version 20. Mean and standard deviation was calculated for quantitative output responses and frequency and percentages for qualitative output responses. Chi-square test was applied on the variables when compared and p value of <0.05 was considered significant.

Results: Total patients received in the study period of (six and half months) were 195. Out of these 75.4% were male. The mean age of patients was 37.2+17.49 years. The percentage admitted via emergency was 88.7%. Out of 195 patients, 147(75.4%) attended a health facility before coming to LRH. The reasons given for referral was lack of equipment, lack of staff, lack of ICU, lack of specialty, lack of out of hours services and seropositivity given in 88(59.8%), 74(50.3%), 71(48.2%), 70(47.6%), 70 (47.6%) and 04 (2.7%) patients respectively. Dissatisfaction towards the local health facilities was shown by 137 (70.3%).

Conclusion: The peripheral health care system is being underutilized resulting in excessive burden on tertiary care health facilities. It is therefore important to address the problems and to implement a structured referral system.

Key Words: Referral, Transfers, Reasons, Peripheral hospitals, Tertiary care unit

This article may be cited as: Faraz A, Ali IS, Haq I, Khan M. Reasons of patients transfer from peripheral teaching and non teaching hospitals to a surgical unit Lady Reading Hospital Peshawar: A pilot study. *J Postgrad Med Inst* 2015; 29(4): 301-7.

INTRODUCTION

The lack of basic management skills of health care providers is often considered as a main limitation to execution of primary health care. Emphasis on strengthening the referral system is an imperative approach to make a healthier use of the limited resources of the health sector in developing countries. In addition to the better organization skills and systems of the health teams, their usefulness is limited by the policy and practice existing in developing countries^{1,2}.

There are three layers of public health system in KPK. The primary health care facilities (BHUs, RHCs), the secondary care hospital (District and Tehsil Headquarter hospital) and the tertiary care/ teaching hospitals. The

tertiary health care is provided through teaching hospitals with specialized facilities. The communal priorities in relation to primary health care services are undervalued in our country. Non- systematic referral system adds to underutilization of secondary health care services and leads to unnecessary diversion of patients to the tertiary care hospitals. Tertiary care Hospitals are clogged with patients who could be otherwise more economically cured in smaller facilities. The primary health care facilities provide nothing to emergencies, while secondary facilities provide only first aid, resulting in burden borne by tertiary care hospitals^{3,4}.

This subject cannot be addressed adequately without an understanding of the basic reasons of referral. Lady Reading Hospital (LRH) is the largest tertiary care

teaching hospital amongst all the teaching hospital of the province and likewise bears the brunt. This hospital is attached to Postgraduate Medical Institute and trainees for various specialties are trained for higher qualifications. Specialties like vascular, cardiothoracic, orthopedics, pediatric medicine and surgery, gynecology/obstetrics, plastic and burns, eye, in addition to general surgical and general medical departments.

The government of KPK has divided the whole Province in zones to recruit personnel in various public sector departments including health. We have taken an advantage of this division. KPK is divided into five zones comprising the area listed below⁵:

Zone-1:- Agencies of Bajaur, Mohmand, Khyber, Kurram, Orakzai, North Waziristan, South Waziristan and Frontier Regions attached to the Districts of Peshawar, Kohat, Bannu and Dera Ismail Khan.

Zone-2:- Districts of Peshawar, Charsadda, Nowshera, Swabi and Mardan.

Zone-3:- Districts of Swat, Buner, Dir, Chitral, Kohistan, Shangla Par and Malakand Areas (Swat Ranizai and Sam Ranizai and backward areas of hazara Division i.e. (1) Ilaqa Upper Tanawal composed of Darband Area of Tehsil Haripur and Shergarh area of District Mansehra and (2)merged Areas composed of Battagram including Hill Nilshang and Thakot, Allai Kaya Khabbal and Gadoon Area.

Zone-4:- Districts of Dera Ismail Khan, Tank, Bannu, LakkiMarwat, Kohat and Karak.

Zone-5:- Districts of Haripur, Abbottabad, Mansehra excluding their backward areas included in Zone-3.

The aim of this study was to find out the reasons of referral of patients to a (single) surgical unit of LRH. This would help us in identifying the problems in the referral system. Improper referrals lead to the un-necessary burden of patients on LRH and patients care is affected.

METHODOLOGY

This descriptive cross-sectional, pilot study was conducted in surgical unit "C" LRH Peshawar from February 28, 2014 to September 14, 2014. All patients admitted in our unit living outside the district of Peshawar were included by consecutive non-purposive sampling technique. Patients admitted/ referred to other sister units/ specialties of the Hospital were excluded.

Data collection and analysis: All the demographic data was collected from the patients including age, gender, reason for referral and perception of the patients about Lady Reading Hospital Peshawar and was recorded on a proforma. The areas were further categorized into the zones used by the government for allocation of health personnel and facilities.

Data was entered and analyzed by using SPSS version 20. Descriptive statistics (mean and standard deviation) was calculated for quantitative output response and frequency and percentages for qualitative output response. Chi-square test was applied on the variables when compared and p value of <0.05 was considered significant.

RESULTS

We had a total of 195 patients referred in six and half months in 45 on take days. About three fourth of our patients i.e. 75.4% (n=147) were male. The mean age of our patients was 37.2 years (S.D +/- 17.49). A total of 183 (93.3%) were of Pakistani origin while 12(6.2%) were Afghan nationals. The frequencies of patients referred from various districts included in the study are shown in table 1. In terms of Zonal distribution, the number of patients was 34(17.4%), 99 (50.8%), 28 (14.4%) and 24 (12.3%) from Zone 1, 2, 3, and 4 respectively (no patient from zone 5 were referred). Majority of our patients came through emergency i.e. 173(88.7%) and 22(11.3%) patients were admitted from outpatients department. For various conditions/diseases with which these patients were referred, see table-2. For Zonal distribution of patients referred to LRH, see table-3. (Excluding Peshawar in zone 2).

The number of patients who attended a local medical facility was 147(75.4 %). Out of 147 patients, 132(89.7 %) patients were given referral chit with no significant information. Those who came directly to LRH were 48(24.6%). When questioned about the various reasons given for referral by local health facilities, multiple reasons were noted. The most common reason was lack of equipment given to 88 of the 147(59.8 %) patients. This was followed by Lack of staff mentioned by 74(50.3%) patients. The other reasons given included lack of ICU in 71(48.2%), lack of specialty in 70(47.6%), lack of out of hours service in 70(47.6%) and seropositivity in 04 (2.7%) (Table-4). When these reasons were cross-tabulated against the various districts of patient influx, the relationship was found to be statistically insignificant; the reasons given were almost of similar nature.

The number of patients who showed displeasure towards their local health facilities was 137(70.3%) and the most common reason for choosing Lady Reading hospital given by patients was personal choice 79 (40.5 %), this was followed by lack of trust at local health facility by 66(33.8%), next was past experience at LRH given by 35(17.9%), then was the hope of free medical treatment i.e. 24 (12.3%). While recommendation by peers was 21(10.8 %). Whereas 16 (8.2 %) patients were unaware of presence of any local health facilities at all. Finally 13 (6.7%) of our patients chose LRH because they had contacts at LRH to facilitate their treatment process. (Table 5).

Regarding the perception of LRH, 91.3% (n=178) regarded LRH to be good as a whole, 1 % (n=2) said it is well equipped, 5.1% (n=10) said only the doctors are good, whereas 2.6 % (n=5) considered promptness of treatment as the only good attribute of LRH.

DISCUSSION

In our study about a three quarter patients were male. This high proportion is probably due to the cultural gender disparity that exists in our part of the world. This difference is more pronounced in lower socioeconomic groups^{6,7,8}.

The mean age of our study population was 37.2 years (S.D +/- 17.49), with the maximum number of patients were in their 3rd decade of life. The reason behind is that families may consider it sufficient whatever treatment is available locally for the elderly patients. On the other hand they would be willing to travel far distances in the hope of better care for those who are young, and are the bread-earners of the family^{6,7}. Age and socioeco-

nomics factors involved in preferences for seeking treatment have been mentioned in other studies as well⁸. It was reported in a recent study conducted in Sweden that younger patients seek more referrals than the older ones⁹. This study hence supports our findings. However this relationship between the younger age and referral rate does not exist in the higher socioeconomic group where equal utilization of health facilities is seen for all age groups⁷.

The maximum number of patients were from Charsadda, a district about 47km from Peshawar. It has 03district surgeons appointed in the 06 healthcare facilities, fully equipped operation theaters and having district surgeon too⁴. However due to good transport facilities and a variety of reasons mentioned in Table 2, while some patients are not entertained at these centers and immediately referred, others well aware of the paucity of the facilities voluntarily just make a self-referral to LRH. The geographical distance is again a very important factor involved in underutilization of local

Table 1: District-wise Stratification of referred patient

S.no	Address	Frequency	Percent
1	Afghanistan	12	6.2
2	Bajour A	7	3.6
3	Bannu	5	2.6
4	Bunair	3	1.5
5	Charsadda	45	23.1
6	Dir	13	6.7
7	Hangu	1	.5
8	Karak	4	2.1
9	Kohat	10	5.1
10	Kurram A	9	4.6
11	lakimarwat	1	.5
12	MalakandA	6	3.1
13	Mardan	22	11.3
14	Mohmand A	6	3.1
15	Nowshera	21	10.8
16	Orakzai A	4	2.1
17	Shangla	3	1.5
18	Swabi	11	5.6
19	Swat	6	3.1
20	Waziristan A	6	3.1
	Total	195	100.0

A= Agency

Table 2: Frequency of Diagnosis

S.NO	Diagnosis	Frequency	Percent
1	Acute abdomen	48	24.6
2	Acute appendicitis	21	10.8
3	Acute cholecystitis	6	3.1
4	Acute Pancreatitis	3	1.5
5	Torsion Testis	1	.5
6	Appendicular Mass	1	.5
7	Blunt trauma abdomen	12	6.2
8	Breast lump	1	.5
9	Cellulitis limb	7	3.6
10	Chronic Abdomen	1	.5
11	Diabetic foot	3	1.5
12	Enlarged prostate	1	.5
13	Fournier gangrene	3	1.5
14	Hemorrhoids	2	1.0
15	Injection abscess	1	.5
16	Malignancy	4	2.1
17	Obstructed Hernia	1	.5
18	Penetrating injury abdomen	51	26.2
19	Penile Fracture	1	.5
20	Perianal abscess	6	3.1
21	Post laparotomy	18	9.2
22	Undescended Testes (UDT)	1	.5
23	Ventral Hernia	2	1.0
	Total	195	100.0

health facilities. If patients know that they can be treated at a bigger hospital with more facilities by travelling a few extra kilometers, they would rather prefer going there than to stop at their local facility. This practice is exploited by the staff of those centers and can very conveniently save them from effort by referring the patient on to the other hospitals¹⁰. The distance factor has also been stated upon in a Scandinavian study¹¹. According to this study and a study from Lithuania, distance less than 40 km from tertiary care hospital and higher socio-economic status shows lower use of secondary health care services^{1,12,13}.

The spectrum of diseases for which the patients were referred ranged from minor wounds that required debridement to post-operative cases that had developed complications. As seen in table-2 and 3; the reasons for referral at Serial numbers 4, 7, 10, 16 and 18 (acute

pancreatitis, blunt trauma abdomen, chronic abdomen, malignancy, penetrating injury abdomen) are more or less acceptable reasons for referral of patients. However other reasons in table 2 i.e. 18 in number are not valid enough to refer these patients to LRH. The surgical procedures required in the referred patients are not technically demanding and can easily be done at secondary level.

In our study we could see that about three quarters of our patient were dissatisfied from the primary and secondary care provided locally. Our figure is in accordance with a local study reported in 2007 in the *Sarhad Journal of Agriculture* that mentions dissatisfaction in 64.45 % of their patients¹⁴. Their reasons were quite similar to the ones we came across in our study.

When we went in the details of the reasons given by the local healthcare facilities for referral; we found that

Table 3: Stratification of diseases against zonal distribution.

S.NO	Diagnosis	Zone					Total
		Zone 1	Zone 2	Zone 3	Zone 4	Afghanistan	
1	Acute abdomen	8	20	11	4	5	48
2	Acute appendicitis	4	15	1	1	0	21
3	Acute cholecystitis	1	4	0	1	0	6
4	Acute Pancreatitis	0	2	0	1	0	3
5	Acute scrotum	0	0	1	0	0	1
6	Appendicular Mass	0	1	0	0	0	1
7	Blunt trauma abdomen	2	6	4	0	0	12
8	Breast lump	0	1	0	0	0	1
9	Cellulitis limb	3	1	2	1	0	7
10	Chronic Abdomen	0	0	0	0	1	1
11	Diabetic foot	3	0	0	0	0	3
12	Enlarged prostate	0	1	0	0	0	1
13	Fournier gangrene	0	1	0	2	0	3
14	Hemorrhoids	0	2	0	0	0	2
15	Injection abscess	0	0	0	0	1	1
16	Malignancy	0	1	1	0	2	4
17	Obstructed Hernia	0	1	0	0	0	1
18	Penetrating injury abdomen	9	33	2	7	0	51
19	Penile Fracture	0	1	0	0	0	1
20	Perianal abscess	0	3	1	2	0	6
21	Post laparotomy	3	4	4	4	3	18
22	UDT	0	1	0	0	0	1
23	Ventral Hernia	0	1	1	0	0	2
	Total	33	99	28	23	12	195

*no patients from zone 5 received.

*UDT=undescended testes

the differences in the reasons given by patients were not statistically different amongst all the areas. This means that irrespective of the location and the facilities provided, the reasons for referral by the local staff are not much different. The most common of all reasons was lack of equipment. The patients either on arrival or after being treated for a while were told that the health care facility lacks the equipment or the service required for their care.

Surprisingly the same patients when admitted at LRH did not require more than the basic facilities available at all of those hospitals. Even patients requiring minor debridement of wound were referred to tertiary care hospital. Next to equipment was the lack of staff i.e. although the patient was taken there but the staff re-

quired to deal with it was not available. In such cases referrals were made by the paramedical staff without any treatment. In other instances patient was being treated in the secondary health care facilities but took his own discharge to come to LRH, as according to him no medical staff was attending him. Other reasons for referral were lack of specialty and lack of out of hours service.

A Canadian study has mentioned that referrals were 14% higher in cities where there were Medical Schools⁹. The first referral hospitals have the key to the delivery of basic services and all the services that come in their domain. When there is a need of making a referral, it should be made by the head of the treating team, after complete liaison with the tertiary hospital. It should be ensured that firstly the treatment needs of the patient

Table 4: Reasons of referral given to patients by other health facilities

S.NO	Reasons	Frequency	percentage
1	Lack of Equipment	88	59.8%
2	Lack of Staff	74	50.3%
3	Lack of ICU	71	48.2%
4	Lack of Specialty	70	47.6%
5	Out of Hours service	70	47.6%
6	Seropositivity for HCV and HBsAg	04	2.7%

Table 5: Referral Reasons: Patients Perspective on Choosing LRH

S.no	Reasons	Frequency	Percentage
1	Not satisfied with local facilities	137	70.3%
2	Personal Choice for LRH	79	40.5%
3	Lack of Trust over local facilities	66	33.8%
4	Better Past Experience at LRH	35	17.9%
5	Hope of Free medical treatment	24	12.3%
6	Recommended by Peers to go to LRH	21	10.8%
7	Contacts at LRH	13	6.7%

surpass facilities at the center and that the patient is stable enough to be transported in case he is critically ill. Patients should be referred to specialist care either when the investigations or the therapeutic options have exhausted in primary/secondary care or a more highly specialized care is needed. Referral has substantial repercussions on the health care system of a country¹⁵. It is a known fact that overload of patients, who could be very easily and economically managed at peripheral/local facilities is one of the main dilemmas that the tertiary care hospitals face in most of the developing world^{1,2,16}. On one hand it results in diversion of financial, logistic and personnel resources from areas of specialized care, training and research, which should be the primary aim of the teaching hospitals¹⁷. On the other hand it wastes huge amount of funds that are being given to the periphery hospitals every year without any anticipated outcome. This is a global problem and a multitude of factors are recognized for it^{2,6,12,18,19}.

According to the department of health KPK website, there are 3 hospitals and 3 rural health centers in the district of Charsadda. Similar facilities are available at all the districts as well. A total of PRs. 8280 million has been allocated to health in the KPK. What needs to be looked into; is to ensure that the specialist, equipment etc. are available round the clock in secondary health care facilities.

CONCLUSION

The peripheral health care system is being underutilized resulting in excessive burden on tertiary care health facilities. It is therefore important to address the problems and to implement a structured referral system.

RECOMMENDATIONS

Out of 23 reasons for referral (table-2) only 5 were such that those patients needed referral to tertiary care hospitals. Rest 18 reasons were not acceptable for referral. Presently all 26 districts in KPK have qualified specialists. These specialists must be made accountable if a patient is referred to or come to tertiary care for minor problems. A patient coming to LRH must have a proper referral document mentioning the reason why the patient is referred to LRH. A large amount of finances are also incurred on these patients. Beds are occupied by patients that can easily be treated at districts (secondary) health facilities. Similar studies are required to know un-necessary burden in these department / units and to streamline a set protocol of referral system from district hospitals to Lady Reading Hospital. This will save time, cost and lives.

REFERENCES

1. Stefanini A. District hospitals and strengthening referral systems in developing countries. *World Hosp Health Serv* 1994; 30:14-9.
2. Conn CP, Jenkins P, Touray SO. Strengthening health management: experience of district teams in The Gambia. *Health Policy Plan* 1996; 11:64-71.
3. Government of Khyber Pakhtunkhwa, Health Department. Health Statistics: DHIS 2010. Available from: www.health-kp.gov.pk/healthstatistics.asp
4. Khyber Pakhtunkhwa, Health sector strategy 2010-2017. Available from: www.trfpakistan.org/LinkClick.aspx?fileticket=OBY59mUoEGs%3D
5. Government of Khyber Pakhtunkhwa, Kpk Pub Serv Comm 2015. Available from: <http://www.kppsc.gov.pk/zone/index.php>
6. Agerholm J, Bruce D, Ponce de Leon A, Burström B. Socio-economic differences in healthcare utilization, with and without adjustment for need: an example from Stockholm, Sweden. *Scand J Public Health* 2013; 41:318-25.
7. Roy K, Chaudhuri A. Influence of socioeconomic status, wealth and financial empowerment on gender differences in health and healthcare utilization in later life: evidence from India. *Soc Sci Med* 2008; 66:1951-62.
8. Leung AY, Bo A, Hsiao HY, Wang SS, Chi I. Health literacy issues in the care of Chinese American immigrants with diabetes: a qualitative study. *BMJ Open* 2014; 4:5294.
9. Chan BT1, Austin PC. Patient, physician, and community factors affecting referrals to specialists in Ontario, Canada: a population-based, multi-level modelling approach. *Med Care* 2003; 41:500-11.
10. Gjessing K, Faresjö T. Exploring factors that affect hospital referral in rural settings: a case study from Norway. *Rural Remote Health* 2009; 9:975.
11. Molarius A, Simonsson B, Lindén-Boström M, Kaland-Blomqvist M, Feldman I, Eriksson HG. Social inequalities in self-reported refraining from health care due to financial reasons in Sweden: health care on equal terms? *BMC Health Serv Res* 2014; 14:605.
12. Zielinski A, Borgquist L, Halling A. Distance to hospital and socioeconomic status influence secondary health care use. *Scand J Prim Health Care* 2013; 31:83-8.
13. Zielinski A1, Håkansson A, Jurgutis A, Ovhed I, Halling A. Differences in referral rates to specialised health care from four primary health care models in Klaipeda, Lithuania. *BMC Family Pract* 2008; 9:63.
14. Rehman M, Khan N, Abbas M. Availability and utilization of primary health care services in the rural areas of district Peshawar – a case study. *Sarhad J Agric* 2007; 23:4.
15. Akbari A, Mayhew A, Al-Alawi MA, Grimshaw J, Winkens R, Glidewell E, et al. Interventions to improve outpatient referrals from primary care to secondary care. *Cochrane Database Syst Rev* 2008:5471.
16. Furber AS. Referral to hospital in Nepal: 4 years' experience in one rural district. *Trop Doct* 2002; 32:75-8.
17. Geitona M, Zavras D, Kyriopoulos J. Determinants of healthcare utilization in Greece: implications for decision-making. *Eur J Gen Pract* 2007; 13:144-50.
18. Scott A1, Sivey P, Ait Ouakrim D, Willenberg L, Naccarella L, Furler J, et al. The effect of financial incentives on the quality of health care provided by primary care physicians. *Cochrane Database Syst Rev* 2011:8451.
19. Clough J, Lee S, Chae DH. Barriers to health care among Asian immigrants in the United States: a traditional review. *J Health Care Poor Underserved* 2013; 24:384-403.

CONTRIBUTORS

AF conceived the idea, planned the study, and drafted the manuscript. ISA helped literature review and did statistical analysis. IH helped in data collection. MK conceptualization, abstract writing. All authors contributed significantly to the submitted manuscript.