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Research Article

**ASSESSMENT OF REFERRAL SYSTEM AND FATE OF  
PATIENTS REFERRED TO SURGICAL AND MEDICAL  
EMERGENCY DEPARTMENT OF BAHAWAL VICTORIA  
HOSPITAL BAHAWALPUR****<sup>1</sup>Dr Kaynat Akram, <sup>2</sup>Dr Ashja Saleem, <sup>3</sup>Dr Ghulam Mujtaba.**  
<sup>1,2,3</sup>Quaid-e-Azam Medical College Bahawalpur.**Article Received:** May 2019**Accepted:** June 2019**Published:** July 2019**Abstract:**

**Introduction:** An effective referral system ensures a close relationship between all levels of the health system and helps to ensure that people receive the best possible care closest to home. In many developing countries, referral is an essential part of preventing unnecessary deaths. If practiced efficiently, it can contribute to high standards of care by improving patient outcomes and decreasing costs through optimal use of medical services. A referral decision is a clinical decision made by physicians about referral indication (whether referral is needed or not), service identification, and provider selection. The complexity of the process often causes inefficient referral decisions and referral communication, which in turn affects the quality and cost of care. Hence, it is important to improve both the decision-making as well as communication aspects of the process to enhance the overall outcome of the referral system.

**Study Place:** Surgical and Medical Emergency Department of Bahawal Victoria Hospital Bahawalpur.

**Study Design:** Cross sectional Study

**Sample Size:** At confidence level 95% anticipated population proportion of referred patient is 50% and relative precision of 10%. Sample size is 129.

**Conclusion:** Majority of the patients were referred by private sector either clinics or hospitals.

**Key Words:** referral system, complexity, referral indication.

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**INTRODUCTION:**

A referral can be defined as a process in which health care workers at one level of system having insufficient resources (drugs, equipments, skills) to manage clinical condition seek assistance of a better and differently resourced facility at the same or higher level to assist in or take over management of client's case<sup>[1]</sup>. An effective referral system ensures a close relationship between all levels of the health system and helps to ensure that people receive the best possible care closest to home. It also assists in making cost-effective use of hospitals and primary health care services.

The modern referral system was first initiated in the United Kingdom and was well established by 1948 nationalization of hospitals. Patient referral Bahawal Victoria Hospital Bahawalpur are an integral part of a well-functioning health system. The goal of referral system is to ensure that patient is dealt at an appropriate health facility level and receives cost effective & quality management. In addition, referral also serves to provide linkage between primary, secondary and tertiary care<sup>[2]</sup>. A high proportion of clients seen at the outpatient clinics at secondary facilities could be appropriately looked after at primary health care centres at lower overall cost to the client and the health system. A good referral system can help to ensure that patients receive optimal care at the appropriate level, hospital facilities are used optimally and cost-effectively, patients who need specialist services can access them in a timely way and primary health services are well utilized and their reputation is enhanced.

In many developing countries, referral is an essential part of preventing unnecessary deaths. Primary health care workers should refer life-threatening illness which they are unable to treat properly. In Tanzania, the Ministry of Health encourages referrals from dispensaries and health centres to district hospitals, although there are no official forms available for those being referred. National outpatient morbidity data shows that less than 1% of new cases attending rural clinics are referred to district hospitals. In addition, a study of referral care in Kilombero district found a referral rate of only 2.3%, which together with the national level data suggest that the health referral system in Tanzania is not functioning well<sup>[3]</sup>. A referral system at all levels is used as a mean to facilitate flow of patient referrals among healthcare providers. It is an important activity in any healthcare system as it is a critical component of quality clinical care. If practiced efficiently, it can contribute to high standards of care by improving patient outcomes and

decreasing costs through optimal use of medical services.

The health care system in India is plagued by overcrowding, lack of specialist doctors, paramedics and an effective referral system. There is a provision for referral of patients from subcentres, primary health centres, community health centres to subdistrict or district level and then to tertiary health facilities in medical college hospitals, superspeciality hospitals and research institutes under the public health care in India. The actual practice of referral is entirely different than that is laid down in principle. Anyone can go to any level of health care system without any referral. This poses a burden on the secondary and tertiary level hospitals or health settings where a large number of patients with minor ailments through the outpatient departments (OPD) and increases the bulk of patients who can be easily tacked at the lower level health care settings<sup>[4]</sup>. Active participation of the patient in the referral process leads to an effective outcome and high level of satisfaction for care-givers and patients, and a reduction in health costs. An optimal referral process should be in place for the effectiveness, safety and efficiency of high standard medical care.

Pakistan health care system is a three- tiered health care delivery system primary, secondary and tertiary care. In public health sector in Pakistan, the first rung in referral hierarchy is lady health worker (LHW) of National program. There are 5000 Basic health care units, 600 Rural health care centres, 7500 other health care facilities & over 100,000 LHWs<sup>[5]</sup>. There are well-equipped tertiary level teaching hospitals to manage the burden of patients referred from peripheral areas of Bahawalpur. Tertiary care is specialized consultative health care, usually on referral from primary or secondary medical care personnel and facilities for special investigation and treatment<sup>[7]</sup>. The referring physician has valuable data that can inform healthcare provider, including the history of current problem, past medical problems, medications, allergies and frequently a concrete assessment and plan for patient such as hospital admission. This profile supports the creation of a referral system including the nature of the current problem, past medical history and medications upon arrival of patient in hospital, patient is identified as referral and the transfer document should be incorporated into concerned department. Referral does not mean only the forward referrals. Equal importance should be given to the downward referrals as well. If the patients are treated at the first level referral centre they may be referred back to the original primary health care centre

with the necessary follow-up advices. This will enhance the trust towards the primary care centers by the patients from the catchment's areas.

A referral process is an inherently complex activity, which involves referral decision and referral communication. A referral decision is a clinical decision made by physicians about referral indication (whether referral is needed or not), service identification, and provider selection. Referral communication deals with subsequent interactions that exist between referring and referred-to providers once a referral decision is made. These two key aspects of a referral process require the transfer and coordination of complex and diverse forms of information distributed between providers. The complexity of the process often causes inefficient referral decisions and referral communication, which in turn affects the quality and cost of care. Hence, it is important to improve both the decision-making as well as communication aspects of the process to enhance the overall outcome of the referral system. The first nationwide study on patient referral system was conducted in Honduras. The average referral rate by the level of health facility was 15.8 % at national, 4% at regional, 2.8% at area hospitals & 0.8% at health centres. The referral rate was observed to be higher when institutional managers emphasized the importance of the referral system [8]

In the public health sector in Pakistan, the first rung in the referral hierarchy is the Lady Health Worker (LHW) of the National Programme for Family Planning and Primary Health Care, which was initiated in 1999. Apart from the various other PHC activities that LHWs undertake, they also refer patients and guide individuals from the grass-roots to the appropriate health facilities. No study has been identified by the authors that have studied referral rates by CHWs/LHWs. However, referral rates by the primary care physicians to specialists/consultants in well-structured health systems range from 2% to 28% [9]. In a cross sectional survey conducted in Karachi, a total of 347 patients referred to different health care facilities by LHWs were interviewed. An overall referral rate of 55% was found in this study out of total 347 patients interviewed, 265(76.4%) were successful while 82(23.6%) were unsuccessful referrals [10]. Effective referral requires clear communications to assure that the patient receives optimal care at each level of the system. This communication need to be on both directions, forward, describing the problem ascend at the lower level facility and backward, information back to the lower level facility describing the findings and the actions to be taken and the follow

up needs. Introduction of a well plan referral care mechanism could contribute to overcome some of the short comings and to minimize the prevailing deficiencies which ultimately leads to provide health care services to the people on an equitable basic 1. Health System 2. Initiating facility 3. Receiving Facility 4. Supervision and capacity building. The referral system needs to aim at connecting each patient through different levels of services and should assure at the appropriate level where he or she will receive optimal health care for any kind of illness. Access to hospital care should be through Primary Health centres, except for emergency cases where patients may access the hospital directly via the Emergency Department. The study aims at evaluating the barriers and constraints to the referral system in our health care system at different levels and to appraise the access to health care system provider and interaction between primary, secondary and tertiary health care centres. This will also help in determining the best disciplines to provide comprehensive and integrated health to patients.

#### **OBJECTIVE:**

To assess the formal referral system in Surgical and Medical Emergency Bahawal Victoria Hospital Bahawalpur

To assess the fate of patients referred to Surgical and Medical Emergency Department of Bahawal Victoria Hospital Bahawalpur

#### **METHODOLOGY:**

**Study Design:** Cross sectional Study.

**Study Setting:** Study will be conducted at Surgical and Medical Emergency Department of Bahawal Victoria Hospital Bahawalpur, Pakistan.

**Study Duration:** From July, 2018 to December, 2018.

**Sample Size:** Sample size is estimated by WHO statistical software S size using formula for estimating a population proportion with specified related precision. At confidence level 95% anticipated population proportion of referred patient is 50% and relative precision of 10%. Sample size is 129.

**Sampling Technique:** Non-probability (convenient) sampling.

**Inclusion criteria:** Referred patients coming to Surgical and Medical Emergency department of Bahawal Victoria Hospital Bahawalpur

**RESULTS AND ANALYSIS:****Table.1 Patients referred to surgical and medical emergency having any history of previous disease**

| Past History of illness of referred patients |            |             |
|----------------------------------------------|------------|-------------|
|                                              | Frequency  | Percent     |
| Patients with past history                   | 77         | 59.7%       |
| Patients without history                     | 52         | 40.3%       |
| <b>Total</b>                                 | <b>129</b> | <b>100%</b> |

**Inference:** Above table shows that out of 129 patients who were interviewed 77(59.7%) had previous history of medical or surgical illness while 52(40.3%) were interacted by disease or trauma for the very first time.

**Table.2 Health care facilities from which patients are referred**

| First visit to health care facility |            |             |
|-------------------------------------|------------|-------------|
|                                     | Frequency  | Percent     |
| BHU                                 | 14         | 10.9%       |
| RHC                                 | 19         | 14.7%       |
| DHQ                                 | 19         | 14.7%       |
| Private                             | 77         | 59.7%       |
| <b>Total</b>                        | <b>129</b> | <b>100%</b> |

**Inference:** Out of 129 patients who were interviewed 14(10.9%) first reported to BHU, 19(14.7%) reported to RHC, 19(14.7%) visited DHQ and 77(59.75%) went to private clinics or hospitals respectively.

**Table.3 Time period of previous stay before referral in health care facility**

| Duration of stay in health care facility |            |             |
|------------------------------------------|------------|-------------|
|                                          | Frequency  | Percent     |
| Less than 6 days                         | 87         | 67.4%       |
| More than a week                         | 31         | 24%         |
| More than one month                      | 11         | 8.52%       |
| <b>Total</b>                             | <b>129</b> | <b>100%</b> |

**Inference:** Above table shows that out of 129 patients 87(67.4%) stayed less than a week in health care facility, 31(24%) stayed more than a week and 11(8.52%) stayed more than a month.

**Table.4 Reasons for referral of patients to emergency department of Bahawal Victoria Hospital Bahawalpur.**

| Reasons for referral decision |            |             |
|-------------------------------|------------|-------------|
|                               | Frequency  | Percent     |
| No Specialist                 | 59         | 45.7%       |
| No Medicine                   | 11         | 8.5%        |
| No Equipment                  | 25         | 19.4%       |
| Any other reason              | 34         | 26.4%       |
| <b>Total</b>                  | <b>129</b> | <b>100%</b> |

**Inference:** Above table shows that out of 129 patients who were interviewed 59(45.7%) were referred because no specialist was available, 11(8.5%) were referred because of no medicine, 25(19.4%) were referred because of no equipment and 34(26.4%) were referred because of any other reasons. i.e no improvement.

**Table.5 Referral decision at previous health care center made by health care providers**

| Frequency of referral decisions made by health care providers |            |             |
|---------------------------------------------------------------|------------|-------------|
|                                                               | Frequency  | Percent     |
| Dispenser                                                     | 2          | 1.6%        |
| Lady Health Worker                                            | 7          | 5.4%        |
| Quack                                                         | 32         | 24.8%       |
| Medical Officer                                               | 73         | 56.6%       |
| Consultant                                                    | 15         | 11.6%       |
| <b>Total</b>                                                  | <b>129</b> | <b>100%</b> |

**Inference:** Above table shows that out of 129 patients who were interviewed, 2(1.6%) were referred by dispenser, 7(5.4%) were referred by LHW, 32(24.8%) were referred by Quack, 73(56.6%) were referred by medical officer and 15(11.6%) were referred by consultant.

**Table.6 Transport facility availed by referred patients**

| Mode of transport |            |             |
|-------------------|------------|-------------|
|                   | Frequency  | Percent     |
| Ambulance         | 44         | 34.1%       |
| Government        | 09         | 6.9%        |
| Private           | 76         | 58.9%       |
| <b>Total</b>      | <b>129</b> | <b>100%</b> |

**Inference:** Above table shows that out of 129 patients who were interviewed 44(34.1%) used ambulance service to reach hospital, 09(6.9%) reached hospital

through Govt. public transport and 76(58.9%) used private means of transport to visit hospital.

**Table.7 Mode of documentation used by previous facility for referral**

| Mode of Documentation |           |         |
|-----------------------|-----------|---------|
|                       | Frequency | Percent |
| Discharge slip        | 38        | 29.5%   |
| Referral letter       | 30        | 23.3%   |
| Verbal                | 61        | 47.3%   |
| Total                 | 129       | 100%    |

**Inference:** Above table shows that out of 129 patients who were referred 38(29.5%) were provided by discharge slip, 30(23.3%) were given a referral letter and 61(47.3%) were referred verbally.

### RESULTS:

Above study shows that out of 129 patients who were interviewed 77(59.7%) had previous history of medical or surgical illness while 52(40.3%) were interacted by disease or trauma for the very first time. 14(10.9%) first reported to BHU, 19(14.7%) reported to RHC, 19(14.7%) visited DHQ and 77(59.75%) went to private clinics or hospitals respectively.

It shows that 59(45.7%) were referred because no specialist was available, 11(8.5%) were referred because of no medicine, 25(19.4%) were referred because of no equipment and 34(26.4%) were referred because of any other reasons. i.e no improvement. It also describes that 2(1.6%) were referred by dispenser, 7(5.4%) were referred by LHW, 32(24.8%) were referred by House Officer, 73(56.6%) were referred by medical officer and 15(11.6%) were referred by consultant. After referral decision, 38(29.5%) were provided by discharge slip, 30(23.3%) were given a referral letter and 61(47.3%) were referred verbally. Bahawal Victoria Hospital Bahawalpur, 22(17.1%) were attended by house officer, 52(40.35%) by medical officer, 42(32.6%) by PGR, 11(8.5%) by registrar and 02(1.6%) by Consultant. It shows that majority of the patients had their first interaction with Medical officers. 55(42.6%) were advised Laboratory tests and 74(57.4%) were asked for radiological tests i.e ultra- sound and X-rays etc 16 (12.4%) said that they were not satisfied with basic facilities provided while 113(87.6%) said they were well diagnosed and treated.

Fate of 10(7.8%) patients was decided by house officer, 63(48.8%) by Medical officer, 33(25.6%) by consultant, 15(11.6%) by Assistant Professor and

08(6.2%) by Professor. It shows that fate of most of the cases is decided by medical officers.

### DISCUSSION:

A two-way referral system is advocated from lowest level of health care to highest except in emergency when patients can be referred to any of the facilities for immediate treatment. This is hardly the case in many of the developing countries. The current study attempts to point out deficiencies in the referral system of public sector. 129 patients who were interviewed went through referral system. 70 males and 59 female patients arrived in medical and surgical emergency department of Bahawal Victoria Hospital Bahawalpur during the conduction of study.

It is obvious from above analysis that majority of patients 59.7% are being referred by private sector. In Pakistan, private medical care is omnipresent in both urban and semi urban areas and extends also to rural areas. It enjoys significantly reputation and utilization than public services. However, it is primary role of Health Services Academy to strengthen public sector. These results are in accordance with T.M. Akande who carried out a study in a tertiary care hospital in Nigeria about the referral system of patients, although there is a well-defined three level system of health facilities for the patient but according to the survey carried out it was pointed that most of patients directly attend the tertiary care units on their own without any prior visit to primary or secondary units, furthermore the private practitioners also refer patients to the tertiary health care without referral to basic setups, all these breaches in the regular referral system leads to compromise on the effectiveness of the system by creating overload on tertiary units<sup>[16]</sup>.

This study also implores that patients were not diagnosed properly at previous health care centers or they were not satisfied with the therapeutic interventions. Patients seeing physicians with less tolerance of clinical uncertainty were referred more commonly than those seeing physicians more tolerant of uncertainty. But according to A.D Dunmade, O.A Afolabi and A.P Eletta in their article challenges of otolaryngology referral in a Nigerian tertiary hospital it is presented that the challenges to referral in otolaryngology department are huge thus there is need to develop confidence in family practitioner and physicians who are first point of call on getting to tertiary center and there is need to organize medical education for family physician in treatment of simple ORL disease, the need for early referral shows that family physician has doubt in forming diagnosis.<sup>[28]</sup>



These results are in line with our study and we should make proper arrangements to improve this situation.

In our study only 5.4 % patients were referred by LHW's while 56.6 % were referred by medical officers. This was in accordance with Mumtaz Z who states in an article Health planning that the limitations in health care system in context of the health care providers in the basic health units. He said there is a marked observed barrier in area wise gender discrimination, therefore in some areas only the lady health workers to some extent can guide and educate the population of the same gender, furthermore the strong feudal and political deep-rooted system also create barrier in the distribution of health care facilities to the general public.<sup>[19]</sup>.

94.6% respondents thought that referral was necessary while 5.4% were not in favor of this decision. This is contrary to Christopher B.Forrest, Paul A.Nutting, Sarah von Schrader, Charles Rohde and Barbara Starfield who presented their view that in general referral system of developed countries only very small percentage of patients attending the primary health unit needs to be referred to secondary or tertiary units as most of them are medicated in the primary units except those in emergency or severe ailment.

This study also illustrates that main cause of referral is non-availability of specialist doctors at primary and secondary health care facilities. Patients often used to visit their nearby private clinics where emergency facilities and professional staff is absent, so they immediately refer patients to tertiary care hospitals verbally (47.3%) and very few provide discharge slips (29.5%). These results are contrary to Article published by Keith H Bachman and Donald K Freeborn titled HMO Physicians use of referrals was conducted in territory of USA. It presented observation that due to clinical confusion there is stress and difficulty in physician's decision-making ability. Younger physicians had higher referral rates like pointed in Maryland research previously. Stress from uncertainty, heavy work load and loss of control over practice environment were associated with heavy referrals<sup>[25]</sup>

### CONCLUSION:

This study was conducted in Surgical and Medical emergency department of Bahawal Victoria Hospital Bahawalpur. 129 referred patients were interviewed, and it is concluded from their responses that

- Majority of the patients were referred by private sector either clinics or hospitals.

- The main reason for referring a patient is lack of availability of specialist doctors at their available health care facility.
- Health personnel carrying out referrals are not trained to recognize problems that can be treated at their health facility centers.
- Although most of the people were not satisfied with the quality of treatment provided and behavior of staff but still they were admitted.
- Necessary steps to make clients utilize primary and secondary health facilities need to be put in place and create disincentives for patients by passing these levels.

### REFERENCES:

1. Tawkif A.M. Khoja, Ali M.Al shehri, Abdul-Aziz and Khwaja M.S. Aziz, 1997, patterns of referral from centres to hospitals in Riyadh region, in Eastern Mediterranean health journal, vol.3, issue 2, 1997, page 236-243, 2017;
2. Mariker M. The referral system. J R Coll Gen Pract 1998; 38: 478 –91. 2017;.
3. Morbidity Profile And Drug Distribution Pattern At A Newly Established Tertiary Care Hospital. The Internet Journal of Health. 2009;9(2).
4. Coulter A. shifting the balance from secondary to primary care. BMJ. 1995; 311(7018):1447-1448.
5. George J. Community hospitals...and district general hospitals. Age and Ageing. 1999; 28(2):240a-240tinternet]. 2017 [cited 23 March 2017]. Available from: <http://www.emro.who.int/pak/programmes/health-system-strengthening-hss.html>.
6. List of recognized medical colleges in Pakistan, [Internet]. 2017 [cited 23 March 2017]. Available from: [http://www.pmdc.org.pk/list\\_colleges.htm](http://www.pmdc.org.pk/list_colleges.htm)
7. Pakistan health system strengthening, [Internet]. 2017 [cited 23 March 2017]. Available from: <http://www.emro.who.int/pak/programmes/health-system-strengthening-hss>.
8. John Hopkins Med. patient care; tertiary care definition accused 27 june 2011. 2017
9. Alisjahbana A, Williams C, Dharmayanti R, Hermawan D, Kwast BE and Koblinsky M. 1995. An integrated village maternity service to improve referral patterns in rural area in West Java. International Journal of Gynaecology and Obstetrics Suppl. 48: S83\_S94. 2017;.
10. Afsar HA, Qureshi AF, Younus M, Gul A, Mahmood A. Factors effecting unsuccessful referral by the Lady Health Workers in Karachi, Pakistan. J Pak Med Assoc 2003; In press. 2017.
11. Khoja TA, Al Shehri AM, Abdul Aziz AAF, Aziz K. Patterns of referral from health centres to hospitals in Riyadh region. 1997;3(2):236-243.

12. Omaha K, Meléndez V, Uehara N, Ohi G. Study of a Patient Referral System in the Republic of Honduras. *Health Policy and Planning*. 1998;**13**(4):433-45.
13. Sanders D, Kravitz J, Lewin S, McKee M. Zimbabwe's hospital referral system: does it work? *Health Policy and Planning*. 1998;**13**(4):359-70.
14. Gröne O, Garcia-Barbero M. Integrated care. *International journal of integrated care*. 2001; **1**(2):1-10.
15. Forrest CB, Nutting PA, von Schrader S, Rohde C, Starfield B. Primary Care Physician Specialty Referral Decision Making: Patient, Physician, and Health Care System Determinants. *Medical Decision Making*. 2016; **26**(1):76-85.
16. Akande T. Referral system in Nigeria: study of a tertiary health facility. 2004; **3**(3):130-133. World Health Organization <http://www.emro.who.int/pak/programmes/health-system-strengthening-hss/Print.html> (assessed on 22nd July, 2017).
17. Siddiqi S, Kielmann A, Khan M, Ali N, Ghaffar A, Sheikh U, et al. The effectiveness of patient referral in Pakistan. *Health Policy and Planning*. 2001;**16**(2):193-8.
18. Mumtaz Z. Gender-based barriers to primary health care provision in Pakistan: the experience of female providers. *Health Policy and Planning*. 2003;**18**(3):261-9.
19. Wilkin D, Smith A. Explaining variation in general practitioner referrals to hospital. *Fam Pract*. 1987;**4**:160-9.
20. Reynolds GA, Chitnis JG, Roland MO. General practitioner outpatient referrals: do good doctors refer more patients to hospital? *BMJ*. 1991;**302**:1250-2.
21. Crombie DL, Fleming DM. General practitioner referrals to hospital: the financial implications of variability. *Health Trends*. 1988;**20**:53-6. page|35
22. Noone A, Goldacre M, Coulter A, Seagroatt V. Do referral rates vary widely between practices and does supply of services affect demand? A study in Milton Keynes and the Oxford region. *J R Coll Gen Pract*. 1989;**39**:404-7.
23. Sobal J, Muncie HL Jr, Valente CM, Levine DM, DeForge BR. Self-reported referral patterns in practices of family/general practitioners, internists, and obstetricians/gynecologists. *J Community Health*. 1988;**13**:171-83.
24. Bachman KH, Freeborn DK. HMO physicians' use of referrals. *Soc Sci Med*. 1999;**48**(4):547-57.