Referral situation from a municipal hospital with general practitioner: a cross-sectional study

Pawan Kumar Bajaj Agrawal[1], Priyanka Gupta[2], Suraj Parajuli[3]
[1]Medical Director, [2]Consultant, Amppipal Hospital, Gorkha, Nepal; [3]Assoc. Prof., Medical University of the Americas Nevis, West Indies

ABSTRACT

Introduction: Referral rate is an important measure of performance of a healthcare institution. Analysis of referral trend helps institutions to understand their care delivery needs and plan accordingly. General practitioners (GPs) have an important role in strengthening municipal primary healthcare service. Referral pathway in Nepal has improved since the implementation of national health insurance program. This study aimed to reflect upon the referral trend from a GP led municipal hospital in Nepal.

Method: The study was carried out in the out-patient department of Amppipal, a municipal hospital in Gorkha over a duration of one year. Decision for necessity of referral was made by the practicing GP. Referral rate, proportion of referral who were insured, proportion of referral based upon clinical decision compared to patients' request and specialist-wise referral was calculated.

Result: The total number of patients' visits in OPD was 20,136. The referral percentage from OPD was 2.9%. Out of the total referrals, 95.6% were insured by national health insurance program. Only 59% percent of referrals had clinical indication for further diagnosis and/or treatment and the rest 41% requested for referral by themselves. Eighty-eight percent of referred patients were satisfied with the treatment outcome at higher center. Orthopedics (16.1% of total referred cases) was one of the mostly sought for specialists followed by ophthalmology (15.1%) and cardiology (10.5%).

Conclusion: Our study presented the referral trend in a GP led primary care hospital in Nepal. Government health insurance program has necessitated proper recording of referral, thereby strengthening referral pathway in national healthcare system. Regular analysis of referral could help in understanding the performance and needs of a healthcare institution.

Keywords: family medicine; general practitioner; low resource setting; municipal hospital; primary care; refer.

CORRESPONDENCE
Dr. Pawan Kumar Bajaj Agrawal
Dept. of General Practice & Emergency, Amppipal Hospital, Palungtar, Gorkha, Nepal
Email: agrawal.pawan@hotmail.com

Journal of General Practice and Emergency Medicine of Nepal. Issue 15: 2023. Available at: www.jgpemn.org.np, eISSN: 2363-1168

13

INTRODUCTION

Referring patients is necessary in primary care for well-being of patients who cannot be treated within the available means. National health insurance program in Nepal has strengthened the referral pathway by reducing unnecessary referral and encouraging proper recording and documentation.[1] However, referral is a costly venture even for insured patients who have to pay for travel and accommodation during referral care.[2]

Government of Nepal has forwarded its policy to establish a 15 bedded primary hospital in each municipality. Recent organogram of these hospitals show general practitioners (GPs) as their leader.[3,4] GPs are trained in wide variety of medical and surgical conditions encountered in a resource limited setting and are envisioned for community oriented care.

Regular audit of referral cases enables the institutions to gain insight on the necessary skills that need to be learned by the healthcare personnel including GPs in primary care, thereby reducing referral and out of pocket expenditure in healthcare.[5] The referral rate is also a measure of the performance of a primary care hospital.[6] It is difficult to analyze these referrals in South-Asian context because of lack of proper data recording in primary hospitals.[7] Here, we aimed to analyze referral pattern in a primary care hospital, led by a GP, and reflect upon the needs in primary care and outline the referral context being strengthened by insurance system in our country.

METHOD

This was a descriptive survey study in Amppipal Hospital, Gorkha over the duration of one year from April 2021 to March 2022. Amppipal Hospital is a primary hospital in Gorkha as per recent national categorization of government healthcare institutions with catchment population of 22,676 and daily serves around 100 patients with team of four clinicians led by a GP.[8] It has 24-hour emergency services with operational bed capacity of 50 beds. It is a comprehensive emergency obstetric and neonatal care center and also provides general orthopedic and surgical care services, basic dental care, ophthalmology care and physiotherapy services. Almost 80 percentage of the daily patients are insured with government health insurance scheme. And all the referrals are supervised by the GP. Approval was obtained from the hospital administration to access the necessary data for this study.

Purposive sampling was done and all the patients undergoing referral to a secondary or tertiary care centers from Amppipal out-patient department (OPD) within the time duration were considered for this study. All the clinicians were asked to discuss the referral cases with the GP prior to issuance of a referral letter which has been made obligatory by the insurance program. There were several instances where the patients requested for referrals even when the referral was not clinically indicated. Such instances were also provided referral notifying the referral center that the referral was entirely on patients' request and the implications were conveyed to the patients. The recording was performed accordingly for analysis. The multiple visits by the same patients were counted and included as individual visits in total OPD visits. Similarly, the multiple referrals for the same patients for recurring or separated conditions were also counted and included as individual referral in total referrals.

All the patients, who were referred, were sent for consultation with GP and necessary paper works. There, the de-identified records about the demographic profile of the patients, their primary clinical diagnosis and problem, the specialists referred to and if the referral was made on request for patient satisfaction were kept in an excel file and also in electronic health record system (EHR) in the respective clinical stations after verbal consent.[7]All the patients were referred to the recognized institutions of the national health insurance board which were assigned for specialist care. The patients were asked to report back to Amppipal within one week of return with all the documentation of their care at higher center. These patients upon their return were asked about their satisfaction with outcome of referral in person and in phone, if they lived far. The patients were considered satisfied with referral when their symptoms relieved and or improved.

The statistical analysis was performed using Statistical Package for the Social Sciences version 21.0 (IBM Inc., Armonk, New York, USA). The categorical variables like insurance enrollment (insured versus non-insured), type of referral (indicated versus self-requested) and referred specialties were expressed in numbers and percentages.

RESULT

The total number of visits in outpatient department during the study duration of one year was 20,136 and the total number of referrals from

Journal of General Practice and Emergency Medicine of Nepal. Issue 15: 2023. Available at: www.jgpemn.org.np, eISSN: 2363-1168

14

OPD during the period was 590(2.9%). Eighty percent of the total patients in OPD were insured by government insurance program and 95.6% of the total referrals were insured. Out of total referred patients, fifty-nine percent were referred based upon the clinical decision of senior GP doctor while the rest 41% requested referral by themselves and preferred treatment to be carried out in higher center of the referral pathway. Almost 578(98%) cases reported back after the referral. Eighty-eight percent of the referred patients 519 were satisfied with the treatment outcome after referral to higher center. Most of the referred patients were for orthopedics 95(16.1%) followed by ophthalmology 89(15.1%) and cardiology 62(10.5%).
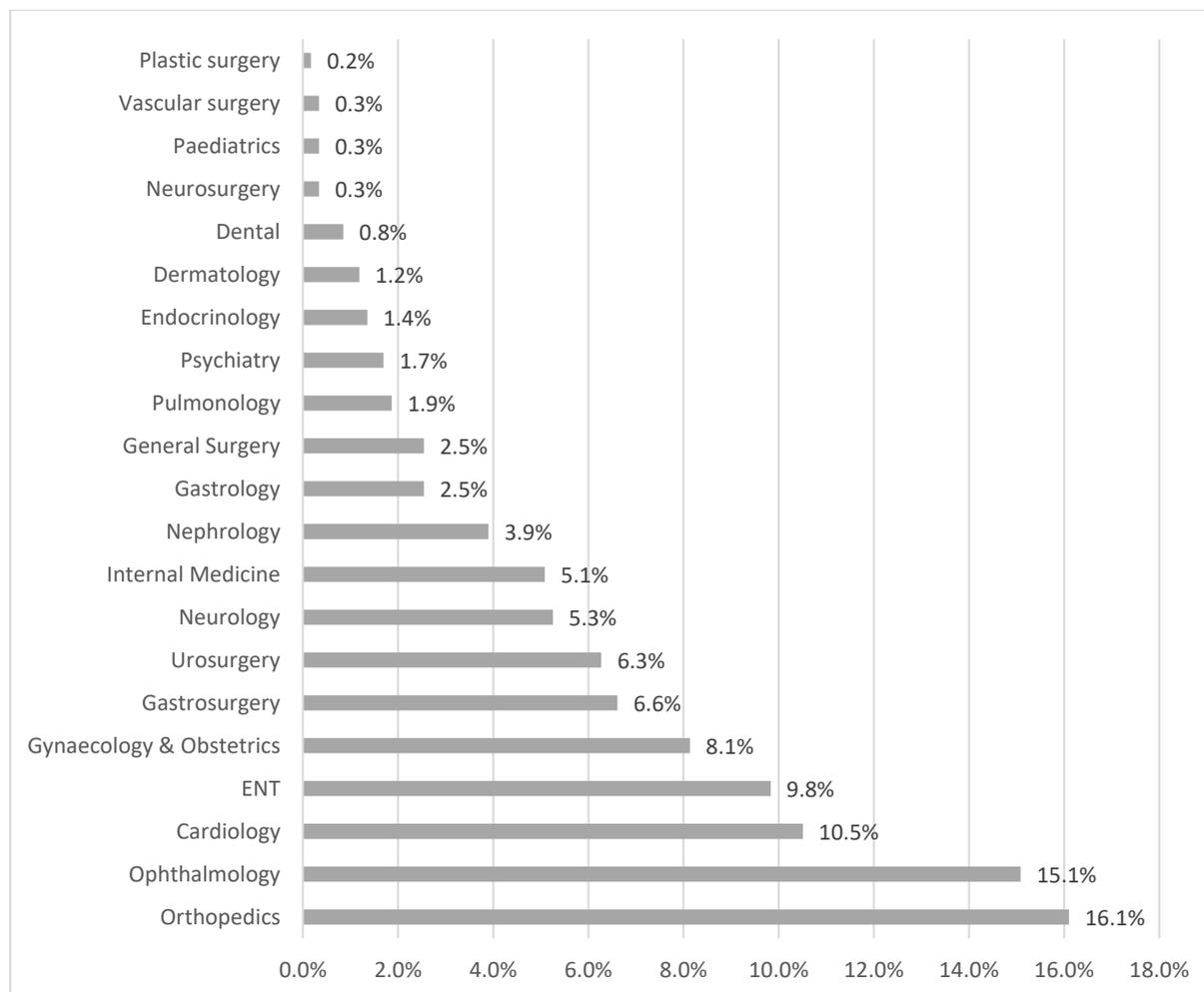

Figure 1. Distribution of referral according to specialities

DISCUSSION

The referral rate in our study was 590(2.9%) out of 20,136 patients. Most of the referrals were for orthopedic consultation followed by ophthalmology and cardiology. Lack of major orthopedic surgeries and cataract surgeries, unavailability of MRI scans for chronic pains and echocardiograph for cardiac evaluation and lack of confidence in a relatively small operating team might have been the major contributors for these referrals. The referral rate in this study was, however, quite less compared to other primary care centers. Average referral rate in primary care setting in other studies ranged from 15 to 20%.[5,6,9] The low referral rate might be because these GPs were equipped with basic surgical skills required in general surgery, obstetrics and orthopedics.[10,11] Further, the ability to pay for indirect expenses of travel and accommodation incurred during referral could be a confounding factor in the setting of low income countries.[2]

In resource limited country like Nepal, the annual budget expenditure in health is quite low.[12] Strengthening referral system has an essential role in ensuring proper healthcare delivery with optimal utilization of available resources in this context. It is not possible and not rationale to have tertiary centers at every corner of the country. Implementation of national health insurance

Journal of General Practice and Emergency Medicine of Nepal. Issue 15: 2023. Available at: www.jgpemn.org.np, eISSN: 2363-1168

15

scheme has a pivotal role in building up the referral system. The insurance system in order to be valid requires referral. Proper referral saves unnecessary expenditure while seeking health service.[13] The referring medical personnel at every tier of healthcare delivery system almost always have an idea of the best course of referral for his/her patients so that the patients do not end up visiting irrelevant specialists. It prevents loss of time and financial resources for the patients.

Nearly half of the referred patients asked for referral by themselves and preferred treatment at tertiary center. Since most of the referred patients were insured, the affordability of referral would have been the major reason for these type of referrals. Further, in the context of rural areas, often the young caregivers of the patients resided in the cities which could have motivated them to ask for referrals as well. It was likely that the referral letter issued in these referrals might not work to bear the expenses because of lack of evidence of optimal treatment in the referring primary care center. This implication was conveyed to the patients. However, the high satisfactory rate in terms of referral outcome supported the fact the referral letter was accepted in the referral center without consideration on the treatment at referring primary care center. This could be one of the areas for intervention by national health insurance board. In the other hand, while most of the patients were insured and seeking referral letters prior to referral, it also motivated the uninsured to receive proper referral letter as they planned to seek healthcare at tertiary center, strengthening the referral chain during health seeking.

This study revealed that the orthopedics was sought for the most followed by ophthalmology, cardiology, otorhinolaryngology and gynecology. This suggested that some kind of training and relevant equipment in these specialties, to the available medical personnel in the hospital or short term specialist visits with priority in task-shifting, could further reduce the referral. These type of analysis of referral helps the institutions to understand their needs in healthcare delivery.

The total number of orthopedic, ophthalmology or cardiology cases encountered in the hospital during the study would have clarified the burden of the cases referred and efficiency of a GP better but was not obtained during this study. The referral rate in inpatient department and emergency was not considered in this study, so that the obtained referral rate only approximated the institutional referral rate. Further studies should be carried out considering overall referral rate of the institution.

CONCLUSION

Recording of referral was important as referral rate was also a measure of quality of healthcare delivery of an institution. The referral rate in our study was 2.9%. Most of the referrals were for orthopedic consultation followed by ophthalmology and cardiology. Though majority of the referrals were clinically indicated, a significant number of referral were made upon patients' request. Need based trainings would be helpful to reduce the referrals further.

Conflict of Interest
None

REFERENCES

1. Khanal GN, Bharadwaj B, Upadhyay N, Bhattarai T, Dahal M, Khatri RB. Evaluation of the national health insurance program of Nepal: are political promises translated into actions? Health Res Policy Systems. 2023;21(1):1-26. | Full Text |
2. Fleming M, King C, Rajeev S, Baruwal A, Schwarz D, Schwarz R, et al. Surgical referral coordination from a first-level hospital: a prospective case study from rural Nepal. BMC Health Serv Res. 2017;17:676. | Full Text |
3. Publichealthupdate.com [Internet]. Nepal: MoFAGA; [cited 2023 Jul 12]. | Weblink |
4. Ministry of Health & Population, Nepal. National health policy 2076. Kathmandu: Ministry of Health & Population; 2019. p9-13. | Full Text |
5. Porter M, Malaty J, Michaudet C, Blanc P, Shuster JJ, Carek PJ. Outpatient referral rates in family medicine. Am J Account Care. 2018;6(1):25-8. | Full Text |
6. Steinmann P, Baimatova M, Wyss K. Patient referral patterns by family doctors and to selected specialists in Tajikistan. Int Health. 2012;4(4):268-76. | Full Text |
7. Agrawal PK, Giri B, Gupta P, Khatri R, Devkota S. Integrated electronic health record system in a tertiary care centre: a single centre implementation experience. JNMA J Nepal Med Assoc. 2022;60(248):413-5. | Full Text |
8. Ministry of Health, Nepal. Categorization of health facilities as per health infrastructure development standards 2074 (BS). Kathmandu, Ministry of Health & Population; 2017. 33p. | Full Text |
9. Ringberg U, Fleten N, Deraas TS, Hasvold T, Førde O. High referral rates to secondary care by general practitioners in Norway are associated with GPs' gender and specialist qualifications in family medicine, a study of 4350 consultations. BMC Health Serv Res. 2013;13:147. | Full Text | DOI |
10. Porter DC, Bezuidenhout J, Du Toit RS, Adefuye AO. Surgical skills deficiencies and needs of rural general

Journal of General Practice and Emergency Medicine of Nepal. Issue 15: 2023. Available at: www.jgpemn.org.np, eISSN: 2363-1168

16

practitioners in South Africa. South Afr Med J. 2018;108(3):210-6. | Full Text |

11. Marsden J, Lipp A, Kumar V. Day surgery: implications for general practice. Br J Gen Pract. 2016;66(646):232-3. | Full Text |

12. Federal Ministry of Health & Population, Nepal. Health sector budget analysis: first five years of federalism. Kathmandu: Federal Ministry of Health & Population; 2022. 40p. | Full Text |

13. Bashar MA, Bhattacharya S, Tripathi S, Sharma N, Singh A. Strengthening primary health care through e-referral system. J Family Med Prim Care. 2019;8(4):1511-3. | Full Text |

Journal of General Practice and Emergency Medicine of Nepal. **Issue 15: 2023.** Available at: www.jgpemn.org.np, eISSN: 2363-1168

17