

# Time and Finance Consumption in Reaching Out for Neurosurgery Consultant in Outpatient Department

Sandeep Mohindra<sup>1</sup> Avondeep Dhaliwal<sup>2</sup>

<sup>1</sup>Department of Neurosurgery, Postgraduate Institute of Medical Education and Research, Chandigarh, India

<sup>2</sup>Division of Neurology and Neurosurgery Nursing, National Institute of Nursing Education, Postgraduate Institute of Medical Education and Research, Chandigarh, India

Address for correspondence Avondeep Dhaliwal, MSc, Division of Neurology and Neurosurgery Nursing, National Institute of Nursing Education, Postgraduate Institute of Medical Education and Research, Chandigarh, India (e-mail: avondhaliwal89@gmail.com).

Indian J Neurosurg 2015;4:22–25.

## Abstract

**Background** Follow-up after surgical intervention is a vital part of patient safety and it also ensures that patients with chronic conditions receive the appropriate secondary care input.

**Aims and Objective** To calculate the time and finance patient spends in reaching out to the clinician. To outline the expenditure incurred on the patients' attendants, who travel along with the patient.

**Methods** A prospective study was conducted on study subjects ( $N = 103$ ) who visited OPD Department of Neurosurgery, PGIMER, Chandigarh, India. The researcher collected details directly from the patients or from their closest available attendants by using prepared questionnaire.

**Results** The mean time spent by patients in reaching OPD complex was 9 hours, in reaching consultant chamber after reaching OPD building was 3 hours, and for standing in queue just to get their registration done was 45 minutes. The mean time spent waiting outside for treating doctor was 60 minutes and for meeting doctor face-to-face was 10 minutes. A total of 26 patients came for follow-up without attendants and they spent a mean of INR 115. Attendants came with 77 patients and mean expenditure on their transportation was INR 484.

**Conclusion** Significant time wasted by patients for registration of OPD cards can be minimized by making appointment system by using phone call or the internet. Limitation of time consumption and accuracy of data recording can also be enhanced by installing Hospital Information System (HIS) and making OPD paperless. Cost-cutting methods can include stringent criteria for calling unconscious or dependent patients for follow-up in more judicious fashion.

## Keywords

- ▶ time and finance consumption
- ▶ neurosurgery consultant
- ▶ outpatient department

## Introduction

Follow-up after surgical intervention for patients is mandatory to gauge the ongoing improvement in clinical outcome and day-to-day activities and also to make note of any deterioration while in convalescence period postoperatively. Follow-up is a vital part of ongoing patient safety. It allows for subsequent investigations to be checked and acted upon, encourages

specialist review of patients, and ensures that patients with chronic conditions receive the appropriate secondary care input.<sup>1</sup> Follow-up of surgically operated patients highly depends upon the discharge summaries the patients carry along. These may be handwritten, typed, or computerized and digitalized in electronic forms on the internet. These discharge summaries are helpful in getting a better record of follow-up and increasing the reliability of punctual follow-up.<sup>2</sup>

This study aims to highlight and quantify the current problems of time and financial resources spent by patients and their attendants in reaching out to his clinician. Indirectly, the study would outline the financial liability on the patients' attendants also, who need to travel along with the patient.

## Materials and Methods

The study was conducted using quantitative, descriptive prospective survey approach. Study subjects were conveniently selected from all follow-up patients visiting OPD complex at neurosurgery department, PGIMER, Chandigarh (tertiary care hospital, with bed strength over 1,780), who were willing to participate in the study and can understand Hindi, Punjabi, or English. A total of 103 subjects in OPD follow-up after neurosurgical interventions, including both cranial and spinal cases, were included. Patients who required opinion from multiple specialties or requiring investigations like hematological or radiological scans were not a part of this study. All patients staying at distance from their native homes just for treatment purposes were not a part of the study.

A questionnaire was prepared to collect the data. It consists of the following components: (1) demographic data sheet that has items dealing with demographic characteristics and (2) questionnaire to assess time and finance consumption in reaching out for neurosurgery consultant. It includes questions related to patient status, mode of transport, place of starting, date of starting, time of starting, and financial resources spent to reach OPD for consultation.

Demographic data including age, sex, place of origin of patients, and place of residential address including contact mobile numbers were noted. Patient status including the ability to move, wheelchair bound, or bedridden was noted. Patient status of consciousness was also noted. Mode of transport, classified into three types, namely, public transport, private personal, or hired private vehicle, was documented for all. Details included patient's place of starting, time of starting from home, time of reaching OPD complex, time spent while standing for registration, time spent while waiting to get the opinion of treating clinician, total time given by clinician to the patient, and finally total time in reaching back to residence. Additional information was drawn regarding financial resources spent to reach OPD for clinician's consultation.

Study subjects were enrolled on the basis of inclusion criteria (mentioned earlier). Patients were enrolled from two OPDs (dated January 11–18, 2014) over a span of complete day, starting at 8 AM till 3 PM. All OPD patients were part of the study and the details were noted directly from the patients or from their closest available attendants.

## Results

–**Table 1** depicts that most of the follow-up patients belonged to the fifth decade of life ( $n = 49$ , 47.6%), while least number of patients belonged to the seventh decade of

**Table 1** Sociodemographic profile of study subjects ( $N = 103$ )

Personal characteristics	<i>n</i> (%)
Age (y)	
0–10	08 (7.8)
11–20	05 (4.8)
21–30	06 (5.8)
31–40	11 (10.6)
41–50	49 (47.6)
51–60	20 (19.4)
61–70	04 (3.8)
Gender	
Male	64 (62)
Female	39 (38)

life ( $n = 4$ , 3.9%). A total of 62% were males and 38% were females.

–**Table 2** depicts that majority of patients were ambulatory, while 11% patients were bedridden and were brought on trolleys. A total of 8% of patients were wheelchair bound and required assistance for ambulation. Most of the patients were fully conscious (91%), whereas rest of the patients were unconscious (9%).

–**Table 3** depicts that public transport like buses, trains, and auto rickshaws were utilized by majority (79.6%) of follow-up patients, while 11.6% patients hired private vehicles like taxicabs for reaching their destinations. Only 8.7% patients came by personal private vehicles like personal cars or two-wheelers.

–**Table 4** depicts that the mean time taken by patients for reaching OPD complex was 9 hours; the mean time taken for

**Table 2** Distribution of study subjects according to health status ( $N = 103$ )

Patient status	<i>n</i> (%)
Ambulatory	84 (81)
Wheelchair bound	08 (8)
Bedridden	11 (11)
Conscious	94 (91)
Unconscious	09 (9)

**Table 3** Distribution of study subjects according to mode of transport used for reaching OPD complex ( $N = 103$ )

Mode of transport	<i>n</i> (%)
Public transport	82 (79.6)
Private personal	09 (8.7)
Hired private	12 (11.6)

**Table 4** Time consumption in reaching for neurosurgery consultant ( $N = 103$ )

Event	Mean time spent	Range of time spent
From residence to doctor	9 h	4–48 h
Hospital main gate to doctor	3 h	1–6 h
Time spent in queue for card registration	45 min	15 min to 3 h
Waiting period outside doctor's chamber	1 h	15 min to 4 h
Time duration of doctor–patient face-to-face meeting	10 min	2–30 min
Total time spent for OPD visit	18 h	8–96 h

**Table 5** Finance consumption in reaching for neurosurgery consultant ( $N = 103$ )

Financial burden	Mean	Range
Patient visiting OPD alone ( $n = 26$ )	INR 115	INR 50–2,000
Attendant expenditure ( $n = 77$ )	INR 484	INR 25–7,200

reaching consultant chamber after reaching OPD building was 3 hours. The mean time spent by patients standing in queue just to get their registration done was 45 minutes and the mean time spent waiting for treating doctor was 60 minutes, while the mean time spent face-to-face with treating doctor was 10 minutes.

► **Table 5** depicts that 26 patients came for follow-up without any attendants and they spent a mean of INR 115, while 77 patients came along with attendants and the mean expenditure incurred on their transportation was INR 484.

## Discussion

As the OPD follow-up was taken from neurosurgical patients, majority belonged to the fifth decade of life. Neurosurgical procedures and disorders render a huge number of patients bodily disabled. So, gathering data regarding their physical status becomes of utmost importance, as it has an important bearing on time taken by these patients to reach OPD. Ambulatory patients tend to spend less time in reaching OPD when compared with bedridden patients, and similarly unconscious patients would require more time in reaching for their follow-up visits. The mode of transport was public transport for 82 patients, which obviously contributed to more time consumption for OPD follow-up.

Patients spent a huge amount of time in reaching their doctors, which was as high as 48 hours for one patient, while locally residing patients could reach their doctors in 4 hours. Still, the mean time taken by patients was 9 hours. This massive time of transportation is attributed to the huge distances or far-off places these patients come from for their follow-ups. The mean time spent within the hospital only for fulfilling all the paperwork formalities was 3 hours. The patients spent a mean of 45 minutes standing in queue to get their card registered. This significant waste of time is mainly due to absence of any system of appointment fixation by telephone or the internet. Further, there is no fax system by

which patient records can be assessed by the doctor in digitalized manner, causing more wastage of time. The patients carry handwritten discharge summaries and not the computer printout summaries, which leads to difficulty in interpreting the exact registration numbers of patients, thereby increasing queue timings. The waiting time of patient outside OPD chambers ranged from 15 minutes to 4 hours (mean = 60 minutes). This timing can also be curtailed if prior appointment schedules are done via phone call or Web sites. Scheduling appointment system would drastically cut down patient waiting time and rush during specific hours of OPD timing and would help to scatter all patients uniformly over the whole day.

As 26 patients had come alone without attendant, expenditure on transportation remained meager and was just INR 115 (mean), but this was at the cost of huge time that patients wasted in reaching for follow-ups using public transport systems. The addition of attendants increased the cost from INR 25 to INR 7,200, putting a huge financial burden on already physically disabled patient. This particular cost is specific for neurosurgical patients and sums up travelling costs by huge amounts. Hence, OPD follow-ups for such patients should be meticulously charted out and planned, so as to minimize this additional financial burden.

## Conclusion

As majority of patients utilize public transport system to reach their doctors for follow-ups, a lot of time is consumed for transportation. Significant time is wasted by patients for administrative jobs like registration of OPD cards, and this can be minimized by making appointment system mandatory by using phone call or the internet. Limitation of time consumption and accuracy of data recording can also be enhanced by installing HIS and making OPD paperless. Token system can be put to use, so

as to make patients comfortable while waiting for their turns. Digital display of patients' turn outside doctors' chamber also makes time to be utilized more efficiently. Cost-cutting methods can include stringent criteria for calling unconscious or dependent patients for follow-up in more judicious fashion.

### References

- 1 Wimble K, Yeong K. Improving patient follow-up after inpatient stay. *BMJ Qual Improv Report* 2012;1: 10.1136/bmjquality.u474.w148
- 2 Barr R, Chin KY, Yeong K. Improving transmission rates of electronic discharge summaries to GPs. *BMJ Qual Improv Report* 2013;2: 10.1136/bmjquality.u756.w1013