

Out come of audit on delays in patients arrival at daycare oncology unit of tertiary care hospital in Karachi, Pakistan

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ABSTRACT:

Aim: There were delays found in patient's arrival at daycare oncology unit, for which it was decided to conduct an audit. The purpose of this audit was to identify the reason of delays, so that we can reduce patients' waiting time and improve daycare services.

Material and method: There were four processes which were taken as check points that included booking time, token time, admission time and arrival time of the patient to the daycare unit. Data was collected from 15th Oct 2018

till 19th Oct 2018. Institutional benchmark was taken for the comparison in order to review the results. Sample size was 100 patients.

Results: Total number of 100 patients were audited, out of 100 patients 47 patients arrived late in the hospital which showed the compliance rate of only 53%.

Conclusion: Almost 50% of the patients did not reach on time for their procedure due to which beds remained vacant till 1100 hrs which resulted in increased in waiting time for other patients especially who will be adjusted in second shift.

Key Words: *Arrival time; Delays time; Booking time; Token time*

INTRODUCTION

Chemotherapy unit is a complex unit and requires vigilance for the processing and administration of chemotherapeutic drugs. Daycare oncology at Aga Khan University hospital is a 54 bedded unit, which deals with all medical oncology and hematology patients, both adult and pediatric. Day care timings are from 8 am till 7 pm, apart from chemotherapy administration, blood and blood product transfusions, procedures like bone marrow aspirate and trephine biopsy, Lumbar puncture intrathecal chemotherapy and out patient clinic and other out patient services are also provided in this unit. Day care unit runs in two shifts morning and evening, and seventy patients per day on an average are adjusted. Outpatient services are also provided to oncology patients at day care oncology. Both long and short infusions are catered at daycare oncology. As we know that cancer patients are already in stress when they are coming for chemotherapy, increase in waiting time can cause dissatisfaction in patients and families and also increase stress and anxiety [1]. Therefore it is very important to start chemotherapy procedure early in ambulation services so that timely completion of infusion takes place in the presence of the whole team available in first half of the day [1,2]. Early starting of treatment can cause less error because additional time gives chance to paramedical staff to take appropriate information from the patients resulting in higher patient satisfaction rate and can also keep the patients under observation for at least thirty minutes post chemotherapy. Patient satisfaction is considered as an important aspect of health care quality [3]. There was a feeling amongst physicians and nurses of day care oncology that patients were not reporting on time which ultimately resulted in more delay for patients who were already in the waiting list (i.e., patients who were to be catered after the booked patients were adjusted) and if patients in waiting were accommodated late then there will be delay in adjustment of evening shift, hence delay in discharge of patients. Delay in discharges can also lead to financial burden because it might cause further shifting of patient for continuation of their treatment from day care to inpatient area [4,5]. Furthermore patient safety may also be compromised because all senior doctors, nurses and pharmacists are available in morning shift from 8 am till 5 pm and evening shift which is from 10 am till 7 pm, evening shift which is two more hours after 5 pm have limited man power available so if any patient gets anaphylactic reaction with chemotherapeutic drugs it creates a stressful situation for the medical and paramedical staff and patients as well, for their immediate intervention and early transportation

to the emergency unit, if needed. This situation become worse when there is limited staff after 5 pm. In order to provide safe and timely care it was decided to conduct an audit, which would find how much delays are there in patient arrival and what steps hospital administration should take to make timely arrival of patients at day care oncology and expedite the process of admission [6].

MATERIAL AND METHOD

Audit tool was made with the consensus of team which included daycare supervisor, physician and head nurse. Audit of 100 patients from 15th till 19th October 2018 was conducted in which four processes were audited. Patients of all ages were considered in this audit. Data was collected in different days in order to segregate the reasons for delay. All four processes were documented in the audit tool sheet which comprised of booked time, token time, admission time and arrival time of the patient. Booked time was verified from the booking folder, token time was noted from the token slip which was taken by the patient when they arrived at the admission office, admission time was specified in patient admission phase sheet by admission staff when they processed admission and patient arrival time was noted when patient arrived at the daycare unit. All these checkpoints were recorded at daycare unit reception in audit tool sheet when patient handed over their admission form to daycare counter staff. Timelines of all the processes were counter checked against institutional benchmark, 45 minutes grace period was decided amongst the team, after which it was considered as late arrival. Reasons of late arrival were also asked from the patients. Duration of admission process in specific timings was also noted, so that peak time can be identified in which there are delays in admission.

RESULTS

Timings of each component was documented in audit tool sheet of 100 patients. There are certain benchmarks which institution has made in order to check the compliance. Timing of each variable was analyzed and checked against the institutional benchmarks. Benchmarks are as follows:

Booked time to token time: 45 minutes (grace period)

Token time till admission time: 25 minutes

We have collected data of 100 patients for the audit, out of which 47 patients

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reported late i.e. after grace period. We have also calculated the average delays in minutes while analyzing our audit results, which was 39 minutes after grace period.

Blocks are as follows:

0800-0830, 0830-0900, 0900-0930, 0930-1000 and after 1000 hrs (Table 2).

DISCUSSION

There is great stress on the chemotherapy unit to give treatment timely and safely, but it was observed that patients are coming late from their scheduled booking time. Delays are mostly seen in morning shift patients coming for chemotherapy administration which results in vacant beds at day care oncology till 1100 hr [1]. An audit was conducted at day care oncology to figure out whether there were delays in patient arrival to the hospital and then how much time was taken to get the admission done. On average 47% patients came late from scheduled time for their treatments to the hospital. This has significant effects on the day to day proceedings of daycare services as there is more waiting for other patients who are on the waiting list and are not booked. Additionally, as daycare oncology unit runs evening shift too therefore late morning admission ends up in late discharges which results in late accommodation of evening patients and number of bookings for evening shift also decreases. This delay also increases patient's frustration and some patients start feeling nausea and vomiting too [7,8]. Furthermore it compromises the quality of care of patients services. Through audit we have identified some reasons of delays in arrival and main reasons for delay were personal reasons such as waking up of patient late in the morning [9] and traffic jams on roads. Table 1 show that 47% of patients came on an average of 39 minutes after the 45 minute grace period, 53% patients came on time i.e., within the grace period. It also shows that the time taken for admission to be processed is within the benchmark of 25 minutes, so there are no significant delays found in admission process (Figure 1).

Table 2 further divides the admission process in 30 minute blocks, to analyze at which time of day there are most delays in admission process. Only time which had a slight delay compared to benchmark (2 minutes delay) was from 0900 hours to 0930 hours. This is due to the fact that most patients come around this time to the admission office and the number of staff at admission office remains the same. This delay not only increases the patient flow at day care, but also every single step of the process gets disturbed, which includes delay in admission, delay in assessment time, delay in order entry,

TABLE 1

To further investigate the reasons of delays, token time to admission time was divided into 30 minute blocks, to assess whether any specific time has more delays or not. In daily routine we start giving bookings to the patients from 0800 am till 1000am and these timings were given to the patients as per duration of their infusions. Long infusions are accommodated early as compared to short infusions. Hence, we audited these timings for identification of delays.

	Benchmark	Average Delay in minutes	Compliance	Non compliance
Token time after Grace period	45 min	39 min (total 84 min delay)	53%	47%
Token till admission time	25 min	22 min	100%	0%

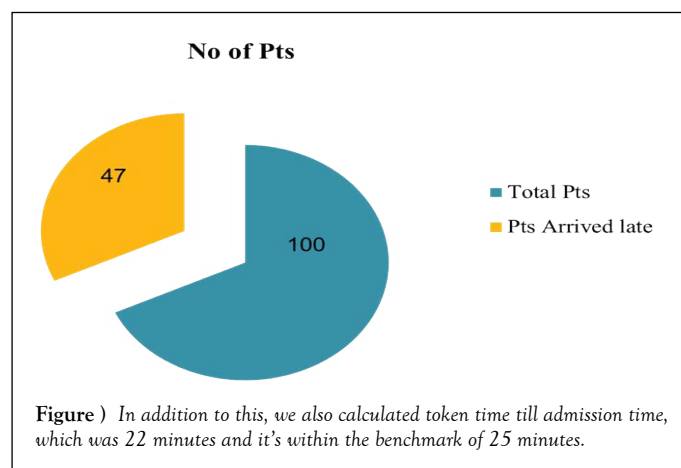


Figure) In addition to this, we also calculated token time till admission time, which was 22 minutes and it's within the benchmark of 25 minutes.

TABLE 2

Delay is only seen in specific timings between 0900-0930 in admission process as shown in Table 2. It is considered a peak time in which minimal delay in admission has occurred which was 27.1 minutes as compared to benchmark of 25 minutes. This delay happened because majority of patients reported between 0900-0930.

Time	Duration
08:00-08:30	19.5 min
08:30-09:00	23 min
09:00-09:30	27.1 min
09:30-10:00	22.5 min
After 10:00hrs	13.25 min

late pharmacy dispensation and late starting of chemotherapeutic drugs. Delay in all these processes, leads to late discharges of patients and due to this we are unable to cater more patients at our daycare center. Besides, in late hours we have limited man power available so if any patient gets anaphylactic reaction with chemotherapeutic drugs it will create a stressful situation for the staff and patients as well for their immediate intervention and early transportation to the emergency unit, if needed. Also, as mentioned above that long infusions are supposed to be taken early for timely completion of chemotherapy, so late arrival of patients with long infusions results in late discharges and exceeds the closing time of daycare which is 1900 hrs. If chemotherapy not finished till 1900 hrs then medical and paramedical staff has to stay and sometimes patient is shifted to the inpatient area for completion of chemotherapy infusions which may lead to extra financial burden on patient.

CONCLUSION

From data analysis almost 50% of patients came late. This is a significant number and immediate steps should be taken to bring this number down. Firstly, patients and families should be counseled about coming on time and they should be made aware about risks of coming late. Secondly, we have planned that the beds will be given to the waiting patients if the booked patients come late. Posters will be displayed at daycare counter and waiting area of patients, that if they come late, their admission will be cancelled. They should also be reminded of coming on time when confirmation call is made one day before their admission.

WAY FORWARD

- 1-Patients coming 30 minutes late after grace period from their schedule time, should be charged extra.
- 2- Patients coming late for long infusions of chemotherapeutic drugs administration will be cancelled and booking time rescheduled.
- 3-Medical and paramedical staff if stay late, should be compensated for their extra hours either monetarily or in the form of leaves.

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