Service evaluation of the efficiency of moving discharge medicine request screening from the dispensary to hospital wards over a two-year period

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Introduction

It is a common patient perception that their discharge from hospital is delayed by waiting for medicines (1). However, it is important to consider the entire discharge process when addressing this problem (2).

In our large tertiary referral hospital, clinical pharmacy services were moved from wards to the dispensary following a staffing crisis during 2018. Ward-based services were reintroduced in 2020, but doubts remained over the practicality and benefits of doing this.

Aim

To compare the efficiency of ward and dispensary based clinical pharmacy services in our hospital in terms of interventions made and time taken.

Method

We completed an observational service evaluation. Data on the time taken to process discharge medication requests with the dispensary-based service were collected retrospectively from the hospital electronic discharge system for 12 months (2018) for five medical wards.

Equivalent data for the ward-based service were collected prospectively over three days (2020) by pharmacists delivering the service to seven medical wards, as this was considered more accurate, and several process steps did not exist in the ward-based model.

For example, *prescriber sending request to pharmacy* and *pharmacy acknowledging receipt* of a request. The prospective data collection period was curtailed by Covid-19. Descriptive statistics were produced using Excel.

Data collected in 2020 also included the following

Meds Rec Y/N	Time to screen	No of interventions	Time to resolve	Time to screen	Total time

Results

Using the dispensary-based service (2018), 4459 medicine requests were processed from 5 medical wards, during a 12-month period. The mean time between prescribing and reaching the screening pharmacist was 174.92 minutes [95%CI ± 25.4]. It took an estimated time of 31.33 minutes [95%CI ± 2.99] to screen and resolve an intervention, with a mean of 3 interventions/ward/day.

In 2020, using the ward-based approach to clinical pharmacy which screened medicine requests on the ward, 51TTAs* were screened over the three days from seven wards, with minimal delay between prescribing and clinical screening. It took a mean of 17.20 minutes [95%CI ± 10.63] to screen and resolve an intervention, with a mean of 14.67 interventions/ward/day.

Conclusion

Ward based pharmacy yielded five times more interventions, took an average of 23.13 minutes less to screen and resolve issues per request and removed 174.92 minutes of process time. The additional time required to resolve issues identified in the dispensary-based screening process was thought to be the delay in contacting either the appropriate member of the ward staff referencing a particular patient for information or identifying and contacting the prescriber, or a combination of both.

Year	TTAs / Day	Time to receive TTA	Time to screen TTA	Interventions / day	Time to resolve
2018	14.79	174.92	16.71	3	31.33
2020	17	n/a	17.2	14.67	8.2

Time is in minutes

It should be noted that the ward based pharmacists (2020) in addition to screening TTAs also reviewed 142 medication administration charts and undertook 61 medicines reconciliations. In other words, were more efficient and productive than when based in the dispensary.

This study is limited by the long delay between data collection periods and the small sample size in 2020, but the differences between the two systems were large and there had been few other changes to hospital systems. Other limitations include changes related to Covid-19 and the lack of a control group, so it is not possible to establish a causal relationship between the type of pharmacy service and study outcomes.

*TTAs (To Take Away) are discharge medicine requests

References

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