

# Maximising Pharmacists' efficiency and improving Patient care in Cancer Outpatient Clinics. CP-110

D.Turley, K.Kantilal

Guy's and St Thomas' NHS Foundation Trust (GSTFT), Oncology Pharmacy, London, United Kingdom

## Introduction

One of the greatest challenges facing the UK's National Health Service is the need for increased productivity and provision of patient-centred care, while reducing costs. Due to an ageing population, cancer patients are on the increase. It is thus imperative that resources are used efficiently, to ensure sustainability. Pharmacy teams need to adapt to these changing healthcare demands. Previously, chemotherapy was clinically checked by pharmacists in the pharmacy department. More recently, pharmacists have made the transition to working in cancer outpatient clinics to improve patient experience and optimise pharmacy workflow and capacity. This is a baseline service evaluation to obtain information that may aid development of the outpatient service.

The current service consists of two band 7 pharmacists based full time in clinic supported by five band 8 pharmacists that screen remotely. Pharmacists spend their time;

- planning for clinic (attending a pre-clinic meeting or preparing a clinic list)
- screening prescriptions

Screening refers to the key clinical checks undertaken by a pharmacist to ensure safety of prescriptions. It involves checking the regimen is appropriate for the patients diagnosis, calculating the patients body surface area, checking the doses and the method of administration are correct. It also involves checking blood results are within accepted limits for treatment. Each time a pharmacist reviews a prescription this is defined as a 'screening episode'. One prescription can have multiple screening episodes (Figure 1).

Figure 1: A depiction of multiple screening episodes



## Aim and Objectives

**Aim:** To ascertain how pharmacists spend their time in cancer outpatient clinics in order to support capacity planning and identify potential areas for improvement.

**Objectives:**

1. To ascertain the length of time a pharmacist spends per week preparing for all of the oncology (22) and haematology (4) clinics.
2. To ascertain the length of time a pharmacist spends screening prescriptions in each of the 22 oncology and 4 haematology clinics per week.

## Method

All oncology/haematology clinics with patients on chemotherapy were included in the study. Trust service evaluation approval was received, research and ethics approval was not required.

A data collection tool was designed and piloted in all clinics on 10/04/15. Amendments were made to the data collection tool following the pilot.

The service evaluation was carried out over a one week period in 22 oncology and 4 haematology clinics on 16<sup>th</sup>, 17<sup>th</sup>, 20<sup>th</sup>, 21<sup>st</sup> and 22<sup>nd</sup> of April 2015.

- All pharmacists based in clinics and those who screen remotely were included.
- Pharmacists that did not screen chemotherapy prescriptions were excluded.

Data was collected prospectively; pharmacists recorded the length of time it took them to plan for clinic, time spent screening prescriptions, interruption time and the nature of interruptions.

Descriptive statistics were calculated using Excel 2010. Paired sample t tests were conducted, using IBM SPSS v.2.1, to evaluate the impact of the interruptions.

## Acknowledgements

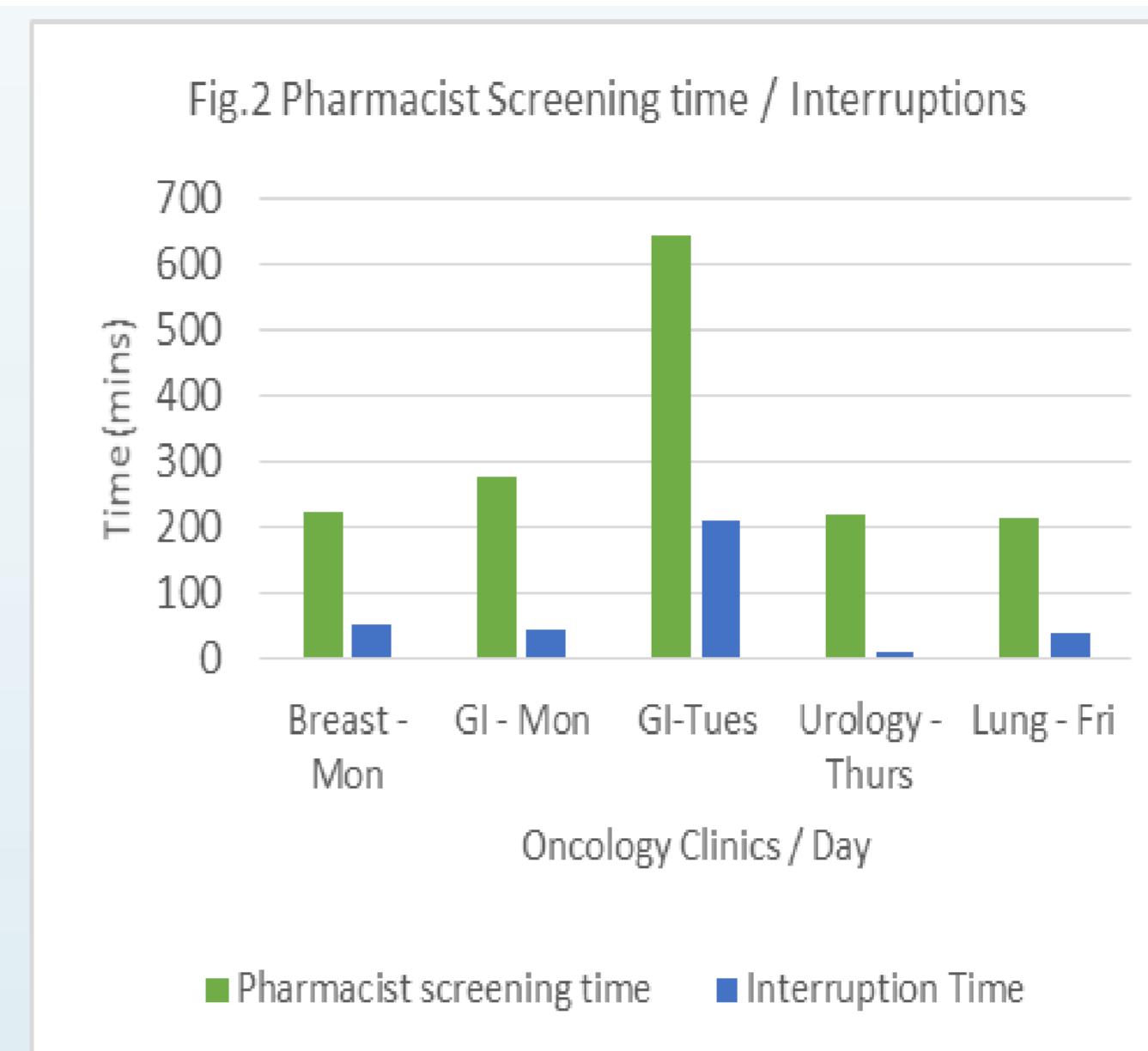
The author would like to thank the pharmacists who supported this service evaluation.

## References

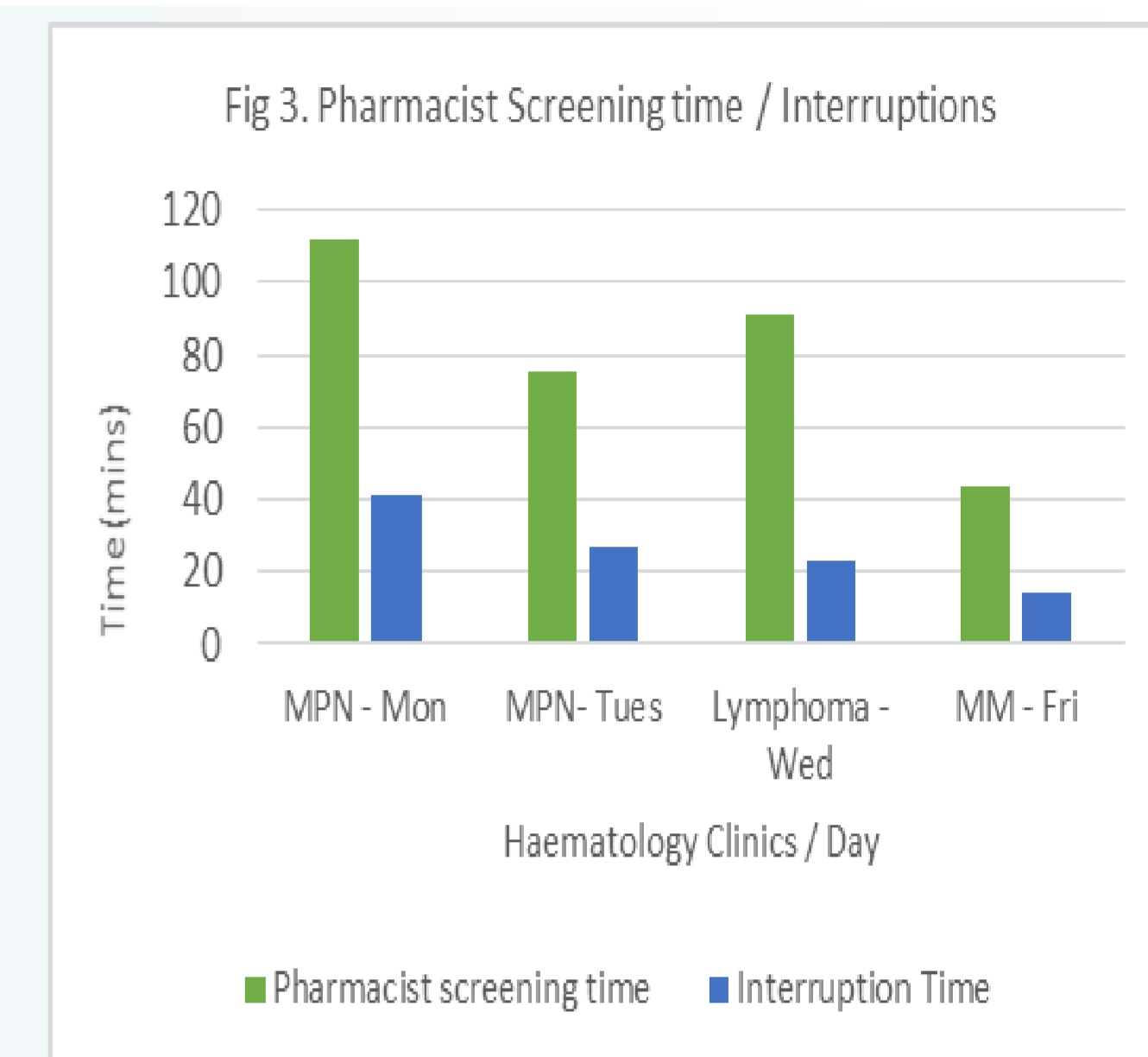
1. Chemotherapy Service Specification, Medicines Optimisation, Safety and Clinical Pharmacy workforce plan, British Oncology Pharmacy Association, Jan 2015'

## Results

Pharmacists spent **5 hours and 55 minutes** preparing clinic lists for 18 clinics over a 5 day period. Mean preparation time per clinic was 20 minutes. Pharmacists spent **1 hour and 20 minutes** in pre-clinic meetings for 2 of the clinics. Mean time per pre-clinic meeting was 40 minutes.



Key: GI – Gastroenterology



Key: MPN – Myeloproliferative Neoplasms; MM – Multiple Myeloma

Pharmacists' activity for the top 5 busiest oncology clinics is represented in Figure 2 and for the 4 haematology clinics is represented in Figure 3.

Time spent screening prescriptions per clinic varied from 6 to 645 minutes and from 44 to 112 minutes for oncology and haematology clinics, respectively. Interruptions made a significant difference ( $p \leq 0.05$ ) in the time taken to screen prescriptions in all clinics, except head and neck clinic. Interruption time varied from 0 to 212 min and from 14 to 41 for oncology and haematology, respectively.

Tables 1 and 2 show the mean time per screening episode for the oncology and haematology clinics. The mean time per screening episode for oncology prescriptions was 5.4 minutes and 3.88 minutes for haematology prescriptions.

Table 1. Mean time for screening episodes for oncology clinics

Oncology Clinics	No. of screening episodes	Mean screening time	
		without interruptions (mins)	with interruptions (mins)
Breast (M,Tu,W)	57	5.77	7.93
GI (M,Tu,Th)	132	5.23	7.2
Gynae (M,W,Th,F)	34	5.51	6.8
QMS (M,Th)	32	4.13	4.72
Urology (M, Th)	44	6.3	7.68
Lung (Tu,W,F)	52	6	7.18
Derm (W,Th)	17	3	4.41
Head&Neck(W)	11	6.18	7.27
Neurology (Th)	4	5.25	5.25
Thyroid/Skin (Th)	1	6	11

Table 2. Mean time for screening episodes for haematology clinics

Haematology Clinics	No. of screening episodes	Mean screening time	
		without interruptions (mins)	with interruptions (mins)
MPN (M,Tu)	30	4.1	6.45
Lymphoma	20	3.4	4.55
MM	7	4.29	6.29

Key: Oncology clinics – GI = Gastroenterology, Gynae = Gynaecology, QMS= Queen Marys Hospital, Sidcup, Derm = Dermatology and Haematology clinics – MPN = Myeloproliferative Neoplasms, MM = Multiple Myeloma

M = Monday, Tu = Tuesday, W = Wednesday, Th = Thursday, F=Friday,

## Discussion

- A significant amount of time was spent planning for clinics (7.25hour). The mean time preparing a clinic list was 20min this doubled to 40min when pharmacists attended a pre-clinic meeting.
- The mean time per oncology screening episode was 5.4mins. For some clinics this was shorter (3mins for Dermatology) and for some it was longer (6.3mins for Urology). This is likely due to the type of prescriptions in those clinics.
- The mean time per haematology screening episode was 3.88mins. However it is widely accepted that haematology prescriptions are more complex than oncology<sup>1</sup>. The sample size for haematology may be too small to reflect reality.
- Interruptions had a significant impact on clinics. These included clinical (queries from prescribers, patient counselling and pharmacist interventions) and non-clinical (administrative tasks, technical issues and supply issues).
- Limitations of the study: pharmacists self-reporting of time per screening episode, varied experience/grades of pharmacists and short study duration.

## Conclusions

- Pharmacists' time could be used more efficiently by reducing clinic planning time and interruptions. This may allow pharmacists to spend time on direct patient care activities and supporting healthcare professionals.
- Pharmacy technicians could be used to help with planning and for non-clinical queries.
- In order to help reduce the number of screening episodes a recommendation would be for patients to have their bloods taken before their clinic appointment.