



ASSESSING THE WORKLOAD OF CLINICAL PHARMACOLOGISTS

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KEYWORDS

Hospital, clinical pharmacist, time study

Received: 2024/06/10

Accepted: 2024/06/30

Revised: 2024/06/13

Published: 2024/07/20

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ABSTRACT

Hospital experts having a lot of work is coincided to safety, emergency services. For 50 beds there are an average of 0.749 ± 0.583 clinical pharmacologists actively working in hospitals, which is not up to MNS 5260:2015 standards. Clinical pharmacologists not working in their asked for fields and the standards set for them was the main reason to tackle this issue. Methods: The research was done using methods such as chronometrage, content analysis and (workplace journalism). (Journalism) was done using 6 chapters of pre-prepared analysis cards. Results: The research was conducted on 100 experts from 7 national hospitals and 4 district hospitals. The research confirmed that in II and III tiertiary hospitals clinic pharmacologists work an average of 43.68 hours in 5 days, of which are an average of 4.38-15.75 hours on paperwork, 13.04-26.43 in mandated jobs, the head of the pharmacology department (HPD) had an average of 44.47 hours of which are 0.37-13.32 hours in mandated jobs, 2.97-11.22 in official talks, 10.22-31.23 in paperwork,

the supply chain managers averaged 43.90, and had 18.61-27.60 hours in mandated jobs, 4.47-18.84 in paperwork. Conclusions: When we compare the research conclusions with the working hours mandated in labor law, experts are overworked by an average of 5.57. When we look at the time spent ordered by mandated jobs, paperwork, personal time, official talks, and others, time for mandated jobs which are in the labor contract are insufficient. It is necessary to establish labor norms and standards based on research, update job descriptions, and assess work results to improve productivity.

INTRODUCTION

The hospital pharmacy department operates with the main functions of providing the necessary medications and medical supplies for medical services and providing clinical pharmacy services⁵. A study conducted in China found that the lack of software for clinical pharmacy services and insufficient human resources affect the full

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coverage of clinical pharmacy services⁶.

A high workload for medical professionals affects work performance and the quality and safety of care services. According to current legal documents, medical professionals receive additional pay for skill levels and hazardous conditions, but work performance, actual working time, knowledge, experience, and workload are not fully assessed, as found in a 2021 study by Zoljargal P. et al¹.

In specialized hospitals, an average of 0.749 ± 0.583 clinical pharmacists per 50 beds are employed, which does not meet the standard requirements of MNS 5260:2015 for pharmacies in Mongolia. A 2023 study by Ariunsaihan Ts. et al. found that clinical pharmacists are unable to perform according to the job description due to a low number of approved beds, lack of programs,

and equipment, requiring more mechanical work and time².

Therefore, the need to study the workload of professional hospital pharmacy staff has led to the selection of this topic.

MATERIALS AND METHODS

The study was conducted using methods such as time study and workplace observation with content analysis. Workplace observations were performed using a pre-prepared questionnaire with six groups of questions³.

RESULTS

Calculation of Clinical Pharmacist Workload

The average working hours of clinical pharmacists in secondary and tertiary hospitals over five days were calculated for each hospital (Figure 1).

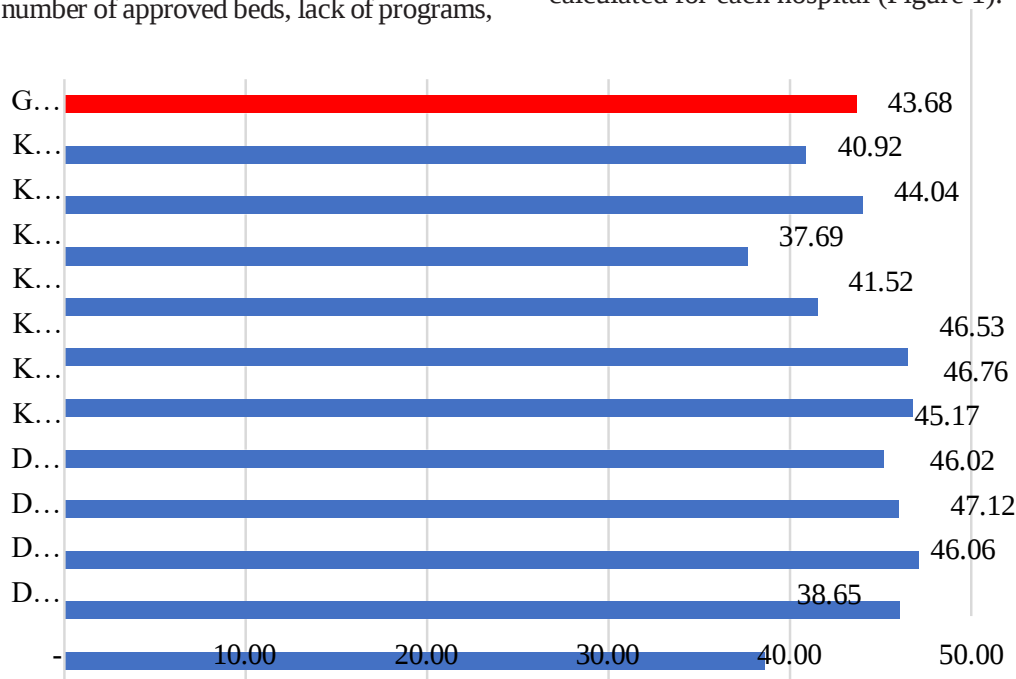


Figure 1. Average Working Hours of Clinical Pharmacists in Secondary and Tertiary Hospitals

From Figure 1, it can be seen that clinical pharmacists in hospitals with codes D03 and K02 worked the most, 47.12 hours over five days, violating the relevant provisions of the labor law by working 6-7 hours more.

Breakdown of working hours of clinical pharmacists in secondary and tertiary hospitals over five days (Figure 2) From Figure 2, it can be seen that clinical pharmacists in hospitals with code D03 worked the most, 47.12 hours over five days, spending 25.74 hours on primary activities, 10.27 hours on documentation, and 7.89 hours on personal

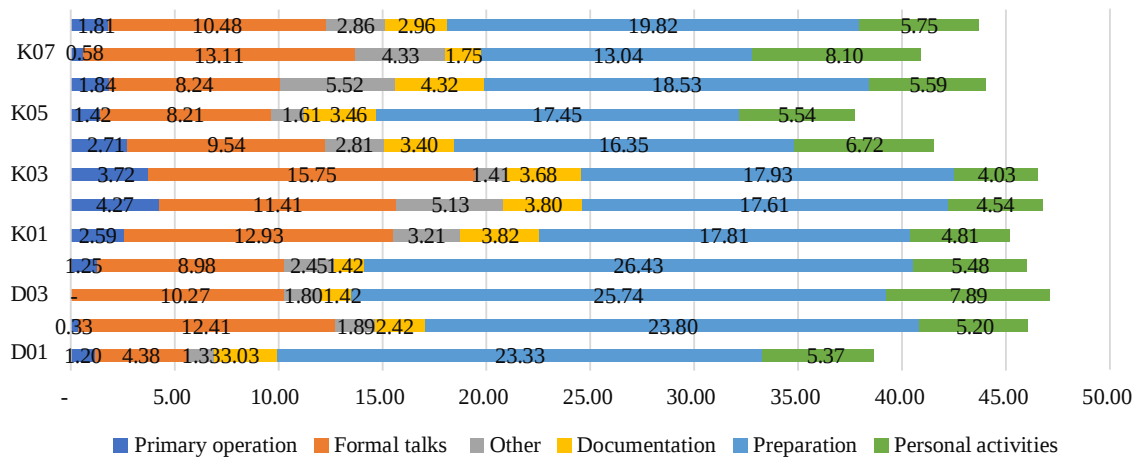


Figure 2. Breakdown of Working Hours of Clinical Pharmacists in Secondary and Tertiary Hospitals

needs. Clinical pharmacists in hospitals with code K02 worked 46.76 hours, spending 17.61 hours on primary activities, 11.41 hours on documentation, and 5.13 hours on other tasks.

Calculation of Pharmacy Department Head Workload:

The average working hours of pharmacy department heads in secondary and tertiary hospitals over five days were calculated (Figure 3).

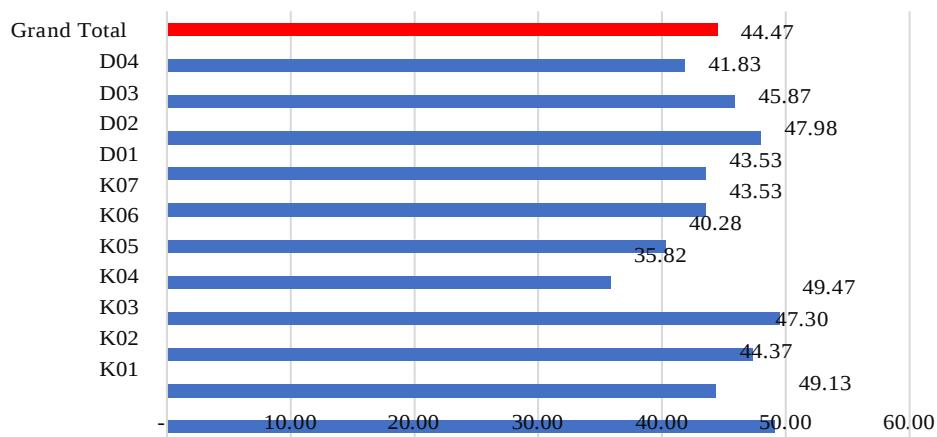


Figure 3. Average Working Hours of Pharmacy Department Heads in Secondary and Tertiary Hospitals

From Figure 3, it can be seen that the pharmacy department head of a hospital with code K04 worked the most, 49.47 hours, followed by K01 with 49.13 hours and D02 with 47.98 hours, working 8-9 hours more. Breakdown of working hours of pharmacy department heads in secondary and tertiary hospitals over five days (Figure 4)

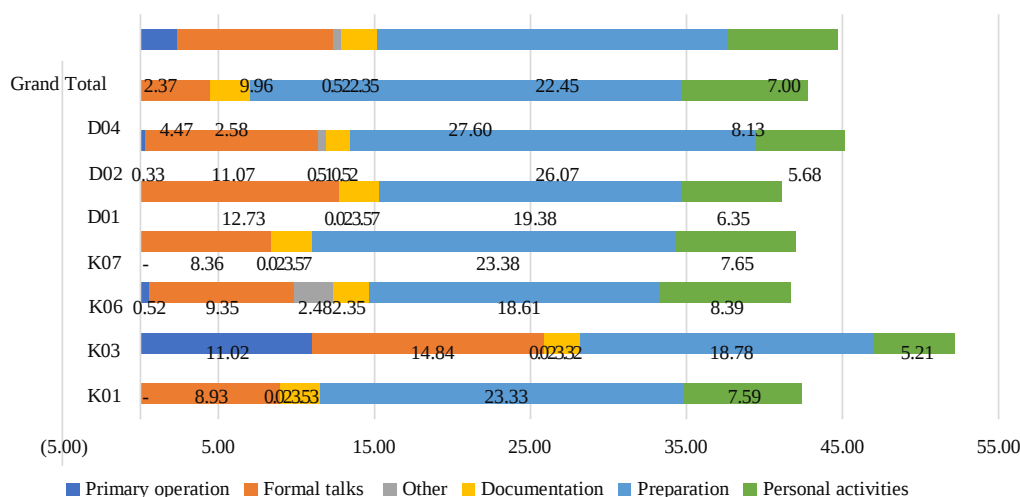


Figure 4. Breakdown of Working Hours of Pharmacy Department Heads in Secondary and Tertiary Hospitals

From Figure 4, it can be seen that the pharmacy department head of a hospital with code K04 worked the most, spending 16.62 hours on documentation, 9.83 hours on other tasks, and 9.62 hours on primary activities. The pharmacy department head of a hospital with code K01 worked 22.22 hours on documentation, 9.20 hours on primary activities, and 5.67 hours on other tasks. The pharmacy department head of a hospital with

code D02 spent 19.12 hours on documentation, 9.95 hours on official communication, and 7.33 hours on primary activities.

Calculation of Supply Chain Managers Workload

The average working hours of pharmacy department supply chain managers in secondary and tertiary hospitals over five days were calculated (Figure 5).

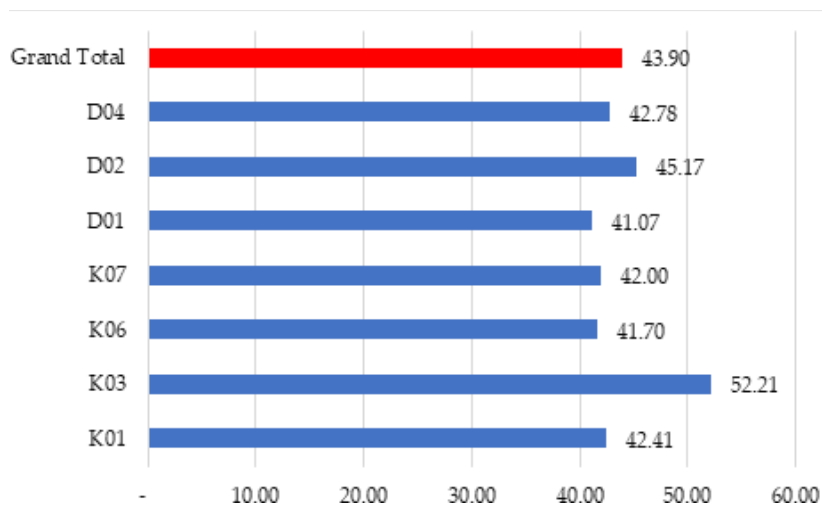


Figure 5. Average Working Hours of Pharmacy Department Supply Chain Managers in Secondary and Tertiary Hospitals

From Figure 5, it can be seen that the supply chain manager of the hospital with code K03 worked the most, 52.21 hours over five days, followed by D02 with 45.17 hours, working 5-12 hours more.

Breakdown of working hours of pharmacy department supply chain managers in secondary and tertiary hospitals over five days (Figure 6)

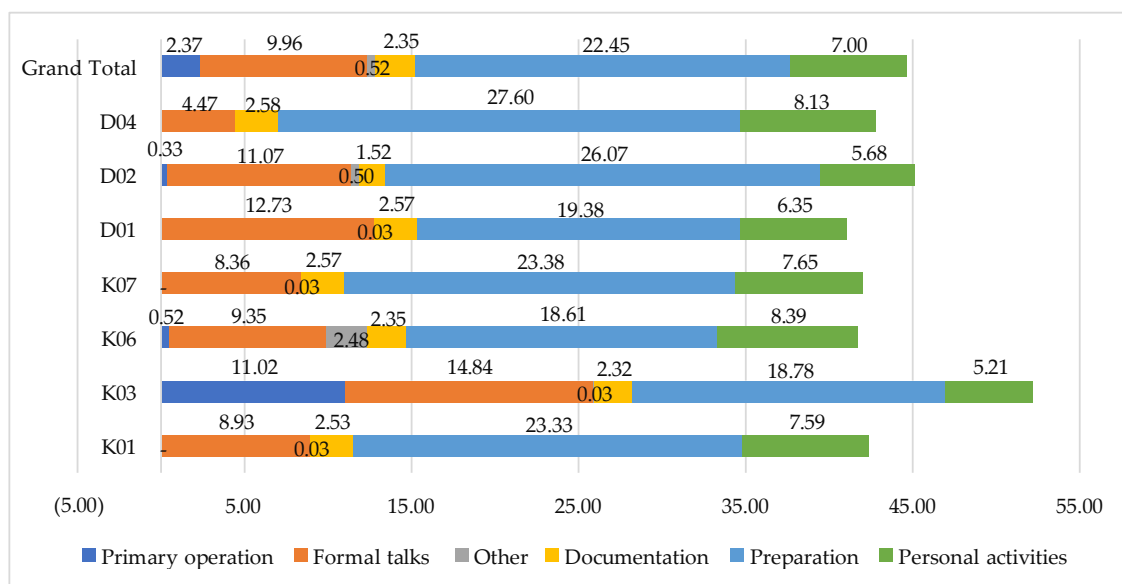


Figure 6. Breakdown of Working Hours of Pharmacy Department Defectors in Secondary and Tertiary Hospitals

From Figure 6, it can be seen that the defector of a hospital with code K03 worked the most, spending 18.78 hours on primary activities, 14.84 hours on documentation, and 11.02 hours on official communication. The defector of a hospital with code D02 worked 26.07 hours on primary activities, 11.07 hours on documentation, and 5.68 hours on personal tasks.

DISCUSSION

In 2009, the American Society of Health-System Pharmacists (ASHP) conducted a survey by randomly selecting pharmacy directors from 1364 general and pediatric surgical hospitals in the US through mail. Most hospitals reported that nurses (89.0%) were responsible for patient medication education, but many hospitals (68.9%) also indicated that pharmacists provided medication education to 25% of patients. Pharmacists were highly involved in monitoring medication therapy but were less involved in medication education activities. The role of pharmacists in hospital pharmacy operations is increasingly expanding to include both distribution and clinical responsibilities⁷. (ASHP national survey of pharmacy practice in hospital settings: Monitoring and patient education – 2009)

Numerous international studies have focused on determining the outcomes of clinical pharmacy services. The findings indicate that clinical pharmacists play a significant role in identifying, resolving, and preventing medication-related issues, thus improving the quality of care and achieving economic savings by avoiding unnecessary treatments and providing personalized care. By being part of the intensive care team, clinical pharmacists have been able to identify and prevent adverse drug reactions, leading to a reduction in daily costs, avoiding an average expense of \$1293P<0.5 per day⁸.

A 2021 study by Zoljargal P. et al. determined that although medical professionals are granted additional pay for skill levels and hazardous conditions under the current legal framework, the assessment of work performance outcomes, actual working time, knowledge, experience, and workload is not comprehensive¹.

A 2023 study by Ariunsaihan Ts. et al. found that, on average, 0.749±0.583 clinical pharmacists are employed per 50 beds in specialized hospitals, which does not meet the standard requirements of MNS 5260:2015 for pharmacies in Mongolia. Consequently, clinical pharmacists are unable to perform according to

the standard and job description due to the low number of approved beds, lack of programs, and insufficient equipment, leading to a high amount of mechanical work and requiring significant time. These findings are consistent with the results of our study².

CONCLUSION

In calculating the workload of clinical pharmacologists and pharmacists at the pharmaceutical departments of level II and III hospitals, it was found that they work 3.68 hours more than the average working hours of a 5-day workweek as per the labor law. They spend 4.38-15.75 hours on paperwork and 13.04-26.43 hours on core activities.

When comparing the established evidence of the high workload of professional workers in hospital pharmaceutical departments with the labor law provisions, it was concluded that they work an average of 5.57 hours more. When categorizing this time expenditure, it was observed that time is spent on core work, paperwork, personal needs, official conversations, and other activities. This indicates that the time focused on core work, as specified in the job description, is relatively short.

This highlights the urgent need for establishing labor norms and standards for professional workers, updating job descriptions, calculating labor productivity based on research and evidence, setting professional standards, and conducting performance-based evaluations.

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