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Current status of clinical pharmacists in the capital of Madhya Pradesh: A survey

Pawan Kumar Porwal*, Ashish K. Joshi, Riddhesh Raj Sahu, Fanish Mani Tripathi, Atul Soni
RKDF College of Pharmacy, Bhopal-462026 (M.P.)

Abstract
Objective: The objective of this study was to determine the current status of clinical pharmacists in the capital of Madya Pradesh (i.e. Bhopal). Methods: Surveys were performed to 76 (27 big and special hospital, 43 smaller) hospitals and health care institutions in the form of questionnaires. All data was entered into Excel and analyzed for descriptive statistics. Results: 158 surveys were analyzed, representing 76 hospitals. About 14% hospital pharmacist returned incomplete surveys. The chief hospital pharmacists were of mainly the males (91.0% males and 9.0% females) and in the age group of 20-60 years (Mainly 45-60 years, about 70%). About 1% M. Pharma., 22.0% B. Pharma., 46.0% diploma holders and 31.0% was science graduate along with diploma in other course. The results analyzed were based on the self-reported respondent answers but were not verified. Results were based on interpretation of the question by the respondent. Conclusion: This study reports on the current status and responsibilities of clinical pharmacist across hospital in capital of Madhya Pradesh.
KeyWords: *Clinical Pharmacists; Bhopal; survey; Madya Pradesh*

1.0 Introduction

Hospital pharmacy is an important department of any hospital. It's should have competent persons, well trained in the profusion of pharmacy. Clinical hospital pharmacy services and clinical pharmacist staffing have been associated with reduced adverse drug reactions and mortality rates in patients. This survey was performed for the understanding that pharmacists are requisite to making the goal of access to and rational use of essential medicines a reality. Clinical hospital pharmacy services and clinical pharmacist staffing have been associated with reduced adverse drug reactions and mortality rates in patients.[1,2]

There are marked inequalities in the distribution of the pharmacy work force worldwide, with pharmacy personnel being particularly scarce in sub-Saharan Africa. The ratio of the pharmacy work force (pharmacists and pharmacy technicians) to population varies widely between regions, from 0.8 per 10,000 populations in the African region to 5.4 per 10,000 populations in the Americas.[3] Therefore, Hospital pharmacists comprise up to 25% of the work force, and hospitals are often the second-largest sector employing pharmacists.[4]

Since it is necessary to make more pharmacists fully understand the in-hospital pharmacist's work, a questionnaire survey was performed for pharmacists on their knowledge of and satisfaction with the work. The survey results were analyzed with multiple regression analysis to reflect the results specifically and objectively in the routine activities of the pharmacy. Less is known about the prevalence of pharmacy technicians, assistants, and related midlevel cadres, and there is greater variation in their training and regulation.[4,5] Unless planned for, changing demographics in the pharmacy work force, such as increases in the female work force, increasing part-time employment, and the retirement of the older generation, will exacerbate work-force shortages in health systems that are struggling to cope with increasing demands. The pharmacists' work that affect the satisfaction of physicians and nurses include the provision of drug information, checking of prescriptions, guidance of patients on drug compliance, and management of nonprescription and poisonous drugs.[4,6] The present survey is useful for understanding the current status of in-hospital jobs and objectively distinguishing jobs to be improved from those that might be continued in the present manner.

2.0 Methodology

Surveys were performed to 76 (27 big and special hospital, 43 smaller) hospitals and

health care institutions. This list was generated from a general hospital distribution list. English and Hindi questionnaires were prepared separately with the same questions (figure 1). The group of five volunteer with respective head were performed the survey across all acute, chronic or rehabilitation hospitals in the capital of Madhya Pradesh (i.e. Bhopal) between June 2008 to September 2008. The questionnaire was given to the clinical pharmacist and was allowed to fill in front of our volunteer only. The Completed questionnaires were analyzed on the basis of schedule N of the Drug and Cosmetic Rule, 1945 and response to individual answer.[8, 9, 10]

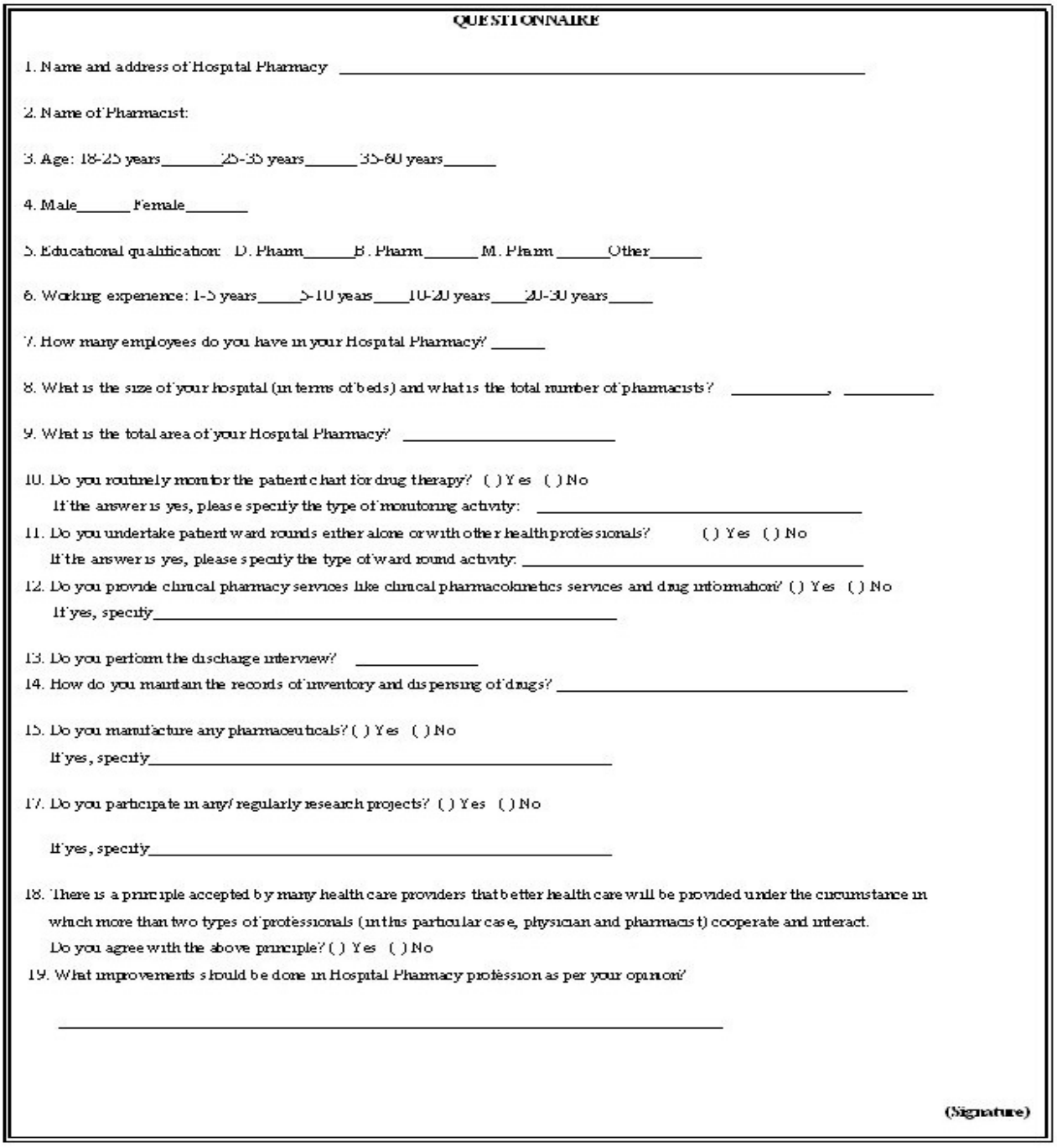
The unit of measure was the central hospital pharmacy. Hospitals with multiple sites that have one pharmacy were counted only once. Data from incomplete surveys was also considered in the analysis. There was no formal sample size determined. Rather, a convenience sample of filled questionnaires was used for the analysis. A descriptive analysis (mean, SD, percentages, continuous and categorical data) of findings was conducted.

3.0 Results and Discussion

This study reports on the current status and responsibilities of clinical pharmacist across hospital in capital of Madhya Pradesh. Our findings indicated that hospital pharmacy is diverse.

The chief hospital pharmacists were of mainly the males (91.0% males and 9.0% females) and in the age group of 20-60 years (Mainly 45-60 years, about 70%). The reason behind this was, might be promotion based on seniority. About 1% M. Pharma., 22.0% B. Pharma., 46.0% diploma holders and 31.0% was science graduate along with diploma in other course as depicted in the figure 2. In 100.0 % hospital pharmacies, the staff was qualified and possessing knowledge about basic parameter of therapeutic assistance. It might be a possible reason that none of the chief hospital pharmacist was simply science graduate. The facilities provided in the hospital pharmacies, as per the norm of schedule N of drug and cosmetic act 1945, were not sufficient in most of the hospitals (about 68%). Only 17% hospital pharmacies were having their internal library. The big hospitals were having drug information center. But they were not updated and well equipped with necessary database and information. The source of medicines in 67.0% of hospital pharmacies was wholesaler, 31.0% was manufacturer and, 2% was retailer (figure 3). Most of the supply in government hospital was from government manufacturing unit. It was observed in number of the hospitals the pharmacy was working as a retail shop inside the hospital premises. In 73.0% of hospital pharmacies, maintenance of inventory and dispensing records were computerized, while in remaining 27.0% it was manual by using central stock book as depicted in the figure 4.

According to the size of hospitals (in terms of number of beds), none of the hospital pharmacies passed the requirement of total required area (sq. ft.). In case of the total number of pharmacists also, according to the size of the hospital, none of the hospital passed the requirements and 100.0 % failed. Some of the hospital pharmacies (about 8%) are involved in the manufacturing facilities. At the same, some hospital pharmacies are involved in the research activities but the medical staff supervised it. Only 40.0% pharmacists agreed that the pharmacist should have power to change the prescription if needed. According to hospital pharmacists, further improvements should be made in terms of increase in number of pharmacists and their salary, arrangements of informative lectures, manufacturing medicines, R & D and Q. C. facilities, etc.



QUESTIONNAIRE

1. Name and address of Hospital Pharmacy _____

2. Name of Pharmacist:

3. Age: 18-25 years_____25-35 years_____35-60 years_____

4. Male_____ Female_____

5. Educational qualification: D. Pharm_____B. Pharm_____ M. Pharm _____Other_____

6. Working experience: 1-5 years_____5-10 years____10-20 years____20-30 years_____

7. How many employees do you have in your Hospital Pharmacy? _____

8. What is the size of your hospital (in terms of beds) and what is the total number of pharmacists? _____, _____

9. What is the total area of your Hospital Pharmacy? _____

10. Do you routinely monitor the patient chart for drug therapy? ( ) Yes ( ) No
If the answer is yes, please specify the type of monitoring activity: _____

11. Do you undertake patient ward rounds either alone or with other health professionals? ( ) Yes ( ) No
If the answer is yes, please specify the type of ward round activity: _____

12. Do you provide clinical pharmacy services like clinical pharmacokinetics services and drug information? ( ) Yes ( ) No
If yes, specify_____

13. Do you perform the discharge interview? _____

14. How do you maintain the records of inventory and dispensing of drugs? _____

15. Do you manufacture any pharmaceuticals? ( ) Yes ( ) No
If yes, specify_____

17. Do you participate in any/ regularly research projects? ( ) Yes ( ) No

If yes, specify_____

18. There is a principle accepted by many health care providers that better health care will be provided under the circumstance in which more than two types of professionals (in this particular case, physician and pharmacist) cooperate and interact.
Do you agree with the above principle? ( ) Yes ( ) No

19. What improvements should be done in Hospital Pharmacy profession as per your opinion?

_____

(Signature)

Figure1: Questionnaire prepared for the survey

The results analyzed were based on the self-reported respondent answers but were not verified. Results were based on interpretation of the question by the respondent. As well, the survey developed was not validated. Moreover, the authors were unable to judge whether the results were representative of the entire clinical pharmacist population in the Madhya Pradesh.

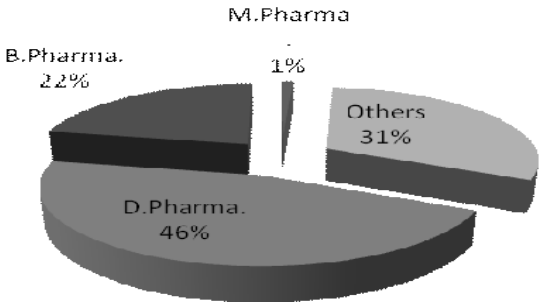


Figure 2 : Status of education in clinical pharmacist

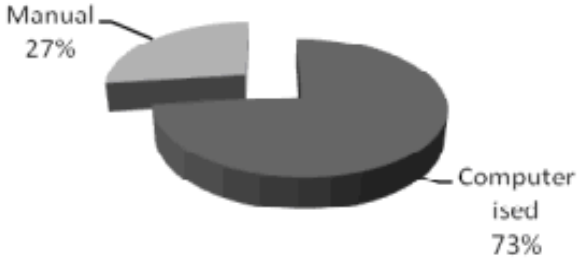


Figure 3: Maintenance of inventory and dispensing records

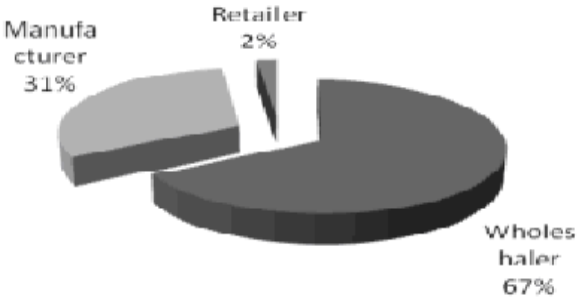


Figure 4: Source of medicine

4.0 Conclusion

This study reports on the current status and responsibilities of clinical pharmacist across hospital in capital of Madhya Pradesh. Future studies will consider expansion of topics highlighted in this study such as the impact of value added programs, level of pharmacoeconomic experience, impact of medication bundling programs.

5.0 Acknowledgements

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6.0 References

[1] Bond CA, Rael SL. Clinical pharmacy services, pharmacy staffing and adverse drug reactions in United States hospitals. *Pharmacotherapy*. 2006; 26: 735-47.

[2] Bond CA, Rael SL. Clinical pharmacy services, pharmacy staffing and hospital mortality rates. *Pharmacotherapy*. 2007; 27:481-93.

[3] Dayrit MM, Dolea C. The health workforce crisis—where are the pharmacists. *Int Pharm J*. 2006; 20:5-7.

[4] Chan XH, Wuliji T. Global pharmacy workforce and migration report. www.fip.org/hr (accessed 2008 Feb 27).

[5] Doloresco F, Vermeulen L. Interim results: survey of global hospital pharmacy practice. International Pharmaceutical Federation Hospital Pharmacy Section. 2008 Apr 25.

[6] Society of Hospital Pharmacists of Australia. Strategies to improve the retention and recruitment of Australia's hospital pharmacy workforce as part of the National Workforce Action Plan, 2007. www.shpa.org.au/pdf/whatsnew/NHWSF_response_200702.pdf(accessed 2008March 4).

[7] Schedule N, The Drug and CosSmetic act, 1945. Ministry of Health, Government of India, New Delhi. 451-453.

[8] ASHP national survey of pharmacy practice in hospital settings: prescribing and transcribing--2004. Am J Health Syst Pharm 2005;62(4):378-90.

[9] Odedina FT, Sullivan J, Nash R, Clemmons CD. Use of pharmacoeconomic data in making hospital formulary decisions. Am J Health Syst Pharm 200;59:1441-4.