

Pharmacists' journey to clinical pharmacy practice in Ethiopia: Key informants' perspective

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Abstract

Objective: Clinical pharmacy practice has developed internationally to expand the role of a pharmacist well beyond the traditional roles of compounding and supplying drugs to roles more directly in caring for patients and providing medication consultation to staff. This area of practice is at the infant stage in Ethiopia. The aim of this study was to explore key informants' perspective in the implementation of clinical pharmacy practice in Jimma University Specialized Hospital, Ethiopia.

Method: A qualitative study was conducted through in-depth interviews with the heads of departments (internal medicine, paediatrics, surgery, nurse, pharmacy, medical director, administration) and pharmacy student representatives. Qualitative data analysis was done after audiotapes were transcribed verbatim and notes were compiled.

Results: All of the respondents interviewed express diverse and conflicting perspectives on pharmacists' role, varying from a health-care professional to a business man. Despite this, the current pace of change worldwide takes the professions' mission to that of a provider of clinical pharmacy services. The data ascertained the change in pharmacy practice, and integrating clinical pharmacy services within the health-care system should be seen as a must. Pharmacists should delineate from a business perspective and focus on widening the scope of the profession of pharmacy and should come close to the patient to serve directly.

Conclusions: Although the perception of people on traditional roles of pharmacists was weak, there were promising steps in developing clinical pharmacy practice within the health-care system. Moreover, the results of this study revealed a high demand for this service among health-care providers.

Keywords

Clinical pharmacy practice, pharmacists, perspective, key informants, Jimma University Specialized Hospital

Introduction

The pharmacy profession has evolved to the point where clinical pharmacy with patient-focused practice is no longer the exception but the rule for most pharmacists.¹ According to Barber,² clinical pharmacy services are patient-oriented services developed to promote the rational use of medicines and more specifically to maximize therapeutic effect, minimize risk, minimize cost and respect patient choice.³ To achieve this, clinical pharmacists are trained in therapeutics and provide comprehensive drug management to patients. Interacting with the health-care team in patient rounds, interviewing patients, conducting medication histories, providing recommendations on drug selection and follow-up all resulted in improved outcomes.^{2,4} Many studies have shown the positive impact of clinical pharmacy services on clinical, economic and humanistic outcomes.⁵⁻⁸ Clinical pharmacy practice was developed in the United States and most European countries,⁹ and is now available in many parts of the world including

Brazil, Chile, Spain and Australia.¹⁰ Developing countries like Pakistan, India and Bangladesh and many African countries and parts of the Middle East are changing their entry-level qualification to a PharmD with an emphasis on developing clinical pharmacy practice.¹¹ However, traditionally, Ethiopia carries a track record of product-oriented pharmacy practice.

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Recently, there is a shift in trend towards patient-focused practice after a 5-year Bachelor of Pharmacy (BPharm) with a 1-year clerkship programme was developed. Moreover, in 2009, the School of Pharmacy of Jimma University took the initiative of launching a postgraduate clinical pharmacy programme and became the pioneer in strengthening the undergraduate patient-oriented pharmacy programme in Ethiopia. Clinical pharmacists have just begun working alongside physicians in the Jimma University Specialized Hospital (JUSH). They participated in multidisciplinary teams and in ward rounds in inpatient settings to give pharmaceutical-care services according to the standards of practice.¹² To date, there has been no studies that try to evaluate the roles of clinical pharmacists as part of the health-care team have been performed in Ethiopia. Thus, the aim of this study was to assess the key informants' perspective in integrating clinical pharmacy practice with the multidisciplinary team in the JUSH, Ethiopia.

Methods

JUSH is one of the oldest public hospitals in the country. Geographically, it is located in Jimma city, 350 km south-west of Addis Ababa. Currently, it is the only teaching and referral hospital in the south-western part of the country. JUSH provides specialized health services through its nine medical and other clinical and diagnostic departments for approximately 9000 inpatients and 80,000 outpatients each year with bed capacity of 450 and a total of more than 550 staff. The study was done in the JUSH over a 2-month period from 1 March to 30 April 2011. A qualitative study was conducted through in-depth interviews with heads of departments (internal medicine, paediatric, surgery, nurse, pharmacy, medical director and administration) and pharmacy student representatives (both graduate and undergraduate). Semi-structured interviews were chosen for collection of data. Questions were ordered so that they have a flow from one question/topic to another. Open-ended questions were asked to interviewees to describe their perspectives regarding the integration of clinical pharmacists with the multidisciplinary team. Purposeful sampling method was used to identify key informants. The respondents were informed about the setting of the interview and consent was obtained. The interview took approximately 30 min. They were also given further details on the nature of the study to ensure that interviewees understood what was required of them. All meetings took place in a private setting at the respondent's office during office hours where the process was unlikely to be interrupted or overheard. All interviews were conducted by a single researcher. Data were collected until a point of saturation was reached. Responses were recorded either by note-taking or audiotaping or both based on the informed consent. In order to assure the quality of data, data collectors were trained and pilot interviews were conducted with one chief pharmacist. These pilot interviews revealed that

often repetitive ideas were reflected and the questions were amended accordingly. Qualitative data analysis was done after audiotapes were transcribed verbatim and notes were compiled. Thematic analysis was carried out. The transcripts and notes were read repeatedly, and emerging topics were identified as themes and sub-themes. Next, coding of interview text relating to these themes and sub-themes was performed. Quotes that would help in understanding of the content of the theme or sub-theme were identified. Quotes were designated as 'pharm' for pharmacy staff and pharmacy student representatives, 'Nur' for nurses and 'Doc' for doctors. Ethical clearance was obtained from the Ethical Review Board of Jimma University. Informed consent was obtained from each interviewee.

Results

The research presented here represents an in-depth interview of key informants' views of the implementation process of clinical pharmacy practice in JUSH. They were interviewed to describe the future competence of the pharmacy profession. Besides, they were interviewed to assess their perceptions of the existing pharmaceutical service and clinical pharmacy service and its implementation. In this qualitative study, a total of 20 interviews were conducted. We identified two main themes from these in-depth interviews.

Pharmacy: current to future perspectives

All of the respondents interviewed express diverse and conflicting perspectives on pharmacists' role, varying from that of a health-care professional to a business man. The pharmaceutical services delivered in the JUSH are belong to one of the three following domains: procurement and distribution, dispensing and patient medication counselling. Respondents mentioned that pharmacists are confined to the counter with little patient-oriented service. Some respondents expressed fear that the service is not rendered appropriately and claimed that the pharmacy service had given way to recent advancements in technology:

... it was a kind of giving a chemical with little information. But thinking of what should be the future ... (pharm 03)

Majority of those interviewed observed that pharmacy has a unique role in the health-care system and that pharmacists should be involved in clinical practice in the best interest of patient care:

... for sure, one profession can't be full alone. All health care professionals should work together for complete health service ... (pharm 06)

... without pharmacy how can be the health service is full. 'On one leg you cannot climb two trees' ... (pharm 01)

Several respondents indicated that the profession should delineate from being viewed as a business. Rather, it should be realized as an applied science like any other health science discipline. This was considered the most likely factor that hinders the profession's competence in the medical arena. Respondents argued against viewing pharmacy practice as a health-care profession that is reimbursed primarily through sale of a product rather than through provision of patient-specific services:

... most of the time when you learn pharmacy, everybody's focus is opening pharmacy shop to do a business. This is the main thing that results in narrowing of the scope of pharmacy profession ... in this case, is it surprising to say pharmacists are doing what ordinary people do ... (Nur 03)

... it is we ourselves that killed the profession. The profession is on the hand of us ... (pharm 08)

Respondents who were interviewed were asked to comment on the future competence of pharmacy profession. From the interview data, it became clear that important changes are required in a number of aspects of pharmacy education in Ethiopia if pharmacists are to provide high-quality patient-oriented pharmacy service. Majority of those interviewed argued that a shift in curriculum could be the basis to help see pharmacy education in Ethiopia as advanced as in Western countries. They indicated that training and capacity building are parts of the change. Pharmacy education has engaged in widespread curricular change to better prepare graduates to assume increased responsibility for patient care:

... Knowledge precedes practicum [...] Need by itself is not a guarantee for change. The curriculum should be clinical oriented ... (pharm 01)

Again, others argued that revising the goals, content and processes of pharmacy education will not in and of itself change practice. Although pharmacy educators hold the responsibility of preparing their graduates for evolving professional roles, academia alone cannot create these roles in sufficient numbers to impact the practice of pharmacy. Academia can help innovate, but any sustainable change in pharmacy practice ultimately must be driven and maintained by the practice. But the challenge described was lack of a skilled human power in this area.

Some stated that academic staff must work more closely with the profession, particularly in areas of experiential education, development of new patient-centred practice models and student professionalization:

... if you see, the hospital reform implementation guideline by Ministry of Health; one of the major duties of a pharmacist is to deliver pharmaceutical care service ... (pharm 02)

Six of the 20 interviewed said that pharmacists were not doing what is expected of them even with what they had. In

the absence of a stimulating practice environment, new graduates eventually feel discomfort due to the mismatch between what they are 'taught' and what they actually 'do'; more mature members of the profession grow increasingly convinced that the academy has lost touch with the real world. Interviewees quoted the following:

... pharmacists are the well trained but the less employed professions. We should busy of ourselves in the service so that the future will be bright ... (pharm 03)

... pharmacy in school and in real work is indifferent. We know a lot but assuming the lesser ... (pharm 06)

The interview data indicated pharmacy will transform itself from a primarily product-centred profession to a patient care-oriented profession. The profession's movement towards patient-centred practice results in the implementation process of clinical pharmacy practice. Most believed the time is at hand to unify the profession in pursuit of its patient-care mission. Pharmacists continue to become more involved in providing patient-oriented services and the demand for practitioners in this area of pharmacy continues to grow. Health care will place increasing emphasis on drug therapy to improve patient outcomes and quality of life. Prescription drug use will continue to rise, creating greater risk of drug-related morbidity. A physician quoted the following:

... everything rests upon physicians. We are leaving everything for physicians. So what we need is multidisciplinary team ... (Doc 02)

The general consensus of the interviewees was there is much to do in the area of pharmacy. History indicates that the profession of pharmacy has struggled to achieve its mission, namely, the implementation of pharmaceutical care:

... clinical pharmacy was introduced 20/30 yrs back. We are 20/30 yrs back ... (Doc 04)

Let's stop to say it doesn't concern me. Each and every issue should be issue of us ... (pharm 05)

Patient-oriented pharmacy services: what they look like and rationality?

The pharmacists interviewed indicated that they were eager to move towards patient care more than being product oriented. All the key informants implied the two are totally different in various aspects. It is like a patient comes with a prescription and a pharmacist towards a patient. Some of them believed it is this type of product-oriented pharmacy service that lessens the role of the profession in the health-care service commenting as follows:

... to say a health care professional, they [pharmacists] should come close to patients. Otherwise, not ... (Doc 02)

Besides this, clinical pharmacy postgraduate programme was launched in the JUSH in 2009. Clinical pharmacists are now practising alongside physicians, nurses and other health-care professionals. All the respondents believed the pharmacist as a patient-care provider should be a part of the multidisciplinary team and appreciated the way they are going towards pharmaceutical care through clinical pharmacy. Physicians quoted the following:

... the prescription needs to be considered by the clinical pharmacist. They have influence on prescription writing too ... (Doc 01)

... clinical pharmacy is all about quality ... (Doc 03)

All interviewed described that to achieve the mission of the profession of pharmacy, collaboration among the health-care community is necessary. They added a well-functioning cooperation among the health-care professionals and the pharmacy staff should be established. In fact, the profession must become united by establishing common goals that meet public need. The health-care community, in turn, must know that this philosophy of practice puts the patient as the primary beneficiary of the profession. Professionals must work together patiently, honestly and meaningfully to revise pharmacy's practice to support a level of patient care that genuinely affects patients' drug therapy outcomes:

Collaboration among the physician, the nurse and the pharmacist should be seen from the perspective of patient care ... (Nur 01)

Majority of the respondents described that clinical pharmacy can contribute a number of benefits to health care ranging from inpatient counselling to drug therapy changes. They put the final goal as societal benefit. When society benefits, the profession will also benefit at the same time:

... the profession is recognized by the society. In my life, I hadn't heard no child wishes to be a pharmacist ... (pharm 03)

Provision of a cognitive service begins with the recognition of a possible patient drug therapy problem and is followed by intervention to verify that the problem is clinically relevant and to determine an appropriate solution.

Discussion

The current trend shift in the undergraduate pharmacy curricula necessitates the practice of patient-oriented pharmacy practice. This area of practice is at the infant stage in Ethiopia. The Ethiopian health authorities have sought to implement clinical pharmacy service within the nation's health-care system in order to improve patients' quality of life and drug use. The 'Ethiopian hospital reform implementation guideline' has

shown the way forward, as it indicates that pharmacists should be assigned to hospitals to serve the patients directly. Successful implementation of this practice requires cooperation between physicians and pharmacists. To do so, pharmacists specializing in drug therapy should be part of the patient-care multidisciplinary team. Although direct patient care is still exclusively in the hands of physicians in Ethiopia, pharmacists' input in managing drug therapy ultimately depends on physicians' receptiveness to pharmacists' role. Different authors described the level of physician acceptance of these services as found to be related to the degree of exposure physicians have had to pharmacist-provided services.^{13,14} The interviewees of this study depicted pharmacists should be involved with the multidisciplinary team to have a positive influence on patient care. Moreover, they will add an additional standard of care to the gamut of patient care, and other health-care providers will be aware of the specific clinical services provided by clinical pharmacists, such as therapeutic drug monitoring, patient counselling and drug therapy recommendations. All agreed on the positive impact of clinical pharmacist interventions on outcomes related to drug-related issues. In fact, this has been demonstrated in numerous studies.¹⁵⁻²⁴ The interviewees responded that there is a need for Ethiopian pharmacists to work more closely with physicians, thereby providing the physician with an opportunity to observe pharmacists performing clinical responsibility, leading to an input to the physicians' awareness regarding pharmacy practice and in effect building confidence for the pharmacists. A number of studies reported involvement of a clinical pharmacist in patient care in the inpatient hospital setting results in safer and more effective medication use through the identification, resolution and prevention of drug therapy problems.^{19,20,22-25} The interviewees also indicated that clinical pharmacy service is quality service delivery. But to do so, a multidisciplinary team is essential. The study showed that the relationship between the physicians, the nurse and the pharmacist should be seen from the perspective of patient care. Most importantly, the cooperation between the clinical pharmacist and the physician was key to resolve and/or prevent drug-related problems.

The innovation of new practices in pharmacy is a paradigm shift in the profession's mission.²⁶ It is recognized internationally that clinical pharmacy services provided by pharmacists are an integral part of the profession. This was the idea that was supported by our interviewees. The data ascertained the change in pharmacy practice, and integrating clinical pharmacy services within the health-care system should be seen as a must. Society will become increasingly technology literate and technology driven. Technology will be deployed fully to dispense most prescriptions, provide drug information to patients and facilitate the exchange of patient-specific data among and within the health-care system. Because of the reasons mentioned, the pharmacy profession is undergoing reformation from time to time and country to country. Patient-oriented pharmacy practice is the

current agenda of Ethiopia after considerable progress was made by changing the curriculum. Recently, the pharmacy profession has begun to shift its emphasis from technical product-oriented issues to patient-oriented informational and cognitive services in Ethiopia.

Albrecht et al.²⁷ demonstrated that the public perception of pharmacist is very weak. The general population perceives pharmacists are drug traders. This was what most of those interviewed in our study supported, and it was suggested that pharmacists should delineate from a business perspective to widen the scope of the pharmacy profession. In any case, the pharmacy profession has come a long way in a little more than a century. The current pace of change, however, promises more momentous transitions over the next few decades. The continued specialization of pharmacists in specific disease states, the growing trend of pharmacy certification and the rapid diffusion of technology as a facilitator to the profession is changing the composition of its workforce and philosophy. It remains clear, however, that pharmacy will remain an integral part of health-care delivery system and an existing career choice for its practitioners.

Conclusion

The recent shift in the undergraduate BPharm curriculum necessitates the move towards clinical pharmacy practice. There was a growing need for pharmacists in Ethiopia to realize the recent changes in the pharmacy practice worldwide. Although the perception of people regarding the traditional roles of pharmacists was weak, there were promising steps in developing clinical pharmacy practice within the health-care system. The Ethiopian Ministry of Health adopted, in its guidelines, that pharmacists should serve the patient directly. Moreover, the results of this study revealed a high demand for this service among health-care providers.

Declaration of conflicting interests

All the authors declare that there is no conflict of interest and contributed equally to this work.

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References

1. World Health Organization. *Developing pharmacy practice: a focus on patient care*. Geneva: World Health Organization, 2006 (Document no. WHO/PSM/PAR/2006.5).
2. Barber N. Towards a philosophy of clinical pharmacy. *Pharm J* 1996; 257: 289–291.
3. Chisholm-Burns MA, Kim Lee J, Spivey CA, et al. US pharmacists' effect as team members on patient care: systematic review and meta-analyses. *Med Care* 2010; 48(10): 923–933.
4. Kaboli PJ, Hoth AB, McClimon BJ, et al. Clinical pharmacists and inpatient medical care: a systematic review. *Arch Intern Med* 2006; 166(9): 955–964.
5. Chisholm-Burns MA, Graff Zivin JS, Lee JK, et al. Economic effects of pharmacists on health outcomes in the United States: a systematic review. *Am J Health Syst Pharm* 2010; 67: 1624–1634.
6. Matsoso MP. Future vision and challenges for hospital pharmacy. *Am J Health Syst Pharm* 2009; 66(3): 9–12.
7. Hatoum HT, Catizone C, Hutchinson RA, et al. A eleven year review of the pharmacy literature: documentation of the value and acceptance of clinical pharmacy. *Drug Intell Clin Pharm* 1986; 20: 33–48.
8. Child D, Camtro JA and Cooke J. Effectiveness of hospital pharmacy: where is the evidence? Guild of Health care pharmacists. Available at: <http://www.ghp.org.uk/login.aspx?reason=notauthenticated> (2001, accessed 23 March 2012).
9. Van Mil JWF and Schulz M. A review of pharmaceutical care in community pharmacy in Europe. *Harvard Health Policy Review* 2006; 7(1): 155–168.
10. Rao D, Gilbert A, Strand LM, et al. Drug therapy problems found in ambulatory patient populations in Minnesota and South Australia. *Pharm World Sci* 2007; 29: 647–654.
11. Anderson C and Futter B. PharmD or needs based education: which comes first? *Am J Pharm Educ* 2009; 73(5): 2.
12. Cipolle RJ, Strand LM and Morley PC. *Pharmaceutical care practice: the clinicians guide*. New York: McGraw-Hill, 2004.
13. Awad A, Matowe L and Capps P. Medical doctors' perceptions and expectations of the role of hospital pharmacists in Sudan. *Pharm World Sci* 2007; 29(5): 557–564.
14. Smith WE, Ray MD and Shannon DM. Physicians' expectations of pharmacists. *Am J Health Syst Pharm* 2002; 59: 50–57.
15. MacKinnon NJ, Morais C and Rose T. Drug-related problems identified in a workplace asthma self-management program. *Can Pharm J* 2007; 140(2): 110–115.
16. Gillespie U, Alassaad A, Henrohn D, et al. A comprehensive pharmacist intervention to reduce morbidity in patients 80 years or older: a randomized controlled trial. *Arch Intern Med* 2009; 169(9): 894–900.
17. Sturgess KL, McElnay JC, Hughes CM, et al. Community pharmacy based provision of pharmaceutical care to older patients. *Pharm World Sci* 2003; 25(5): 218–226.
18. Lyra DP, Kheir N, Abriata JP, et al. Impact of pharmaceutical care interventions in the identification and resolution of drug-related problems and on quality of life in a group of elderly outpatients in Ribeirão Preto (SP), Brazil. *Ther Clin Risk Manag* 2007; 3(6): 989–998.
19. Struck P, Pedersen KH, Moodley P, et al. A pilot study of pharmacist-initiated interventions in drug therapy in an Australian pediatric hospital. *EJHP Sci* 2007; 13(4): 105–112.
20. Stuchbery P, Kong DCM, DeSantis GN, et al. Identification by observation of clinical pharmacists' activities in a hospital inpatient setting. *Pharm Pract* 2007; 5(1): 10–16.
21. Krahenbuhl JM, Kremer B, Guignard B, et al. Practical evaluation of the drug-related problem management process in Swiss community pharmacies. *Pharm World Sci* 2008; 30: 777–786.
22. Veggeland T and Dyb S. The contribution of a clinical pharmacist to the improvement of medication at a geriatric hospital unit in Norway. *Pharm Pract* 2008; 6(1): 20–24.
23. Spinewine A, Dhillon S, Mallet L, et al. Implementation of ward-based clinical pharmacy services in Belgium – description of the impact on a geriatric unit. *Ann Pharmacother* 2006; 40(4): 720–728.

24. Connor SE, Snyder ME, Snyder ZJ, et al. Provision of clinical pharmacy services in two safety net provider settings. *Pharm Pract* 2009; 7(2): 94–99.
25. Altavela JL, Jones MK and Ritter M. A prospective trial of a clinical pharmacy intervention in a primary care practice in a capitated payment system. *J Manag Care Pharm* 2008; 14(9): 831–843.
26. Basak SC and Sathyanarayana D. Community pharmacy practice in India: past, present and future. *South Med Rev* 2009; 2(1): 11–14.
27. Albrecht LC, Roberts AS, Benrimoj CS, et al. Cognitive pharmaceutical services: financial facilitators. *Australian Pharmacist* 2006; 25(10): 809–816.