

Impact of a performance management system in a South African retail pharmacy on the provision of pharmaceutical care to patients

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Abstract

Background: An investigation was undertaken to determine whether pharmacists at one independently owned retail pharmacy were compliant with Good Pharmacy Practice (GPP) standards for the provision of pharmaceutical care to patients. It was hypothesised that the pharmacy's performance management system (PMS) undermines compliance with these standards, and thus the provision of pharmaceutical care.

Method: A triangulation approach was used. The quantitative research method involved 200 patients who completed a questionnaire. The qualitative research method involved conducting individual, semi-structured interviews with all four dispensary employees.

Results: At least 50% of patients perceived that only two out of 10 pharmaceutical care services were always provided. All pharmacists agreed that the provision of pharmaceutical care was a key performance area, and there were several commendable aspects of the PMS. However, nine key weaknesses in the PMS were identified. These included inadequacies relating to the pharmacy's vision and mission statement; poor awareness of GPP standards; the absence of fundamental documentation, such as job descriptions, and performance appraisals; confusion regarding performance objectives; inadequate training and development; and misunderstandings regarding remuneration. Prominent findings are that time pressures contributed to difficulties in providing pharmaceutical care, and that a key performance target was to serve customers as quickly and efficiently as possible.

Conclusion: These weaknesses in the PMS may have undermined compliance with GPP standards. Non-compliance increased the potential for patient harm, and posed operational risks that could have undermined the business's financial performance.

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Introduction

Providing pharmaceutical care is a core function of pharmacists, according to the Good Pharmacy Practice (GPP) standards, published by the South African Pharmacy Council (SAPC).¹ Pharmaceutical care is a highly patient-centred approach to providing pharmaceutical services, and aims to provide quality, safe and optimal pharmacotherapy to patients. The SAPC describes pharmaceutical care as "taking responsibility for the patient's medicine-related needs, and being accountable for meeting these needs".¹ Therefore, pharmaceutical care is not limited to the relatively technical function of processing a prescription and issuing medication to a patient.

According to GPP standards,¹ it also encompasses other functions, such as:

- Ensuring that each patient's pharmacotherapy is appropriate, for example, in terms of dosage and medical conditions.
- Detecting drug interactions among various drugs that a patient is taking.
- Detecting adverse effects.

- Determining whether patients are compliant with their pharmacotherapy.
- Counselling patients adequately about their medication, so that it is used safely and correctly. In the context of pharmaceutical care, counselling refers to providing patients with advice and information.
- Counselling patients on possible dietary modifications.
- Liaising with other healthcare professionals, such as prescribers, when necessary.
- Performing a medication review of a patient's pharmacotherapy, for example, if requested to do so by a patient or another healthcare professional. This review includes an assessment phase, formulation of a care plan, and a follow-up evaluation to assess patient outcomes.

These standards also apply to the provision of over-the-counter (OTC) medication to patients.¹ It is evident that providing pharmaceutical care is time-intensive, as time is required to elicit all the required information from a patient, analyse each patient's pharmacotherapy, and provide appropriate patient counselling.

This raises the question as to whether pharmacists comply with the abovementioned GPP standards for pharmaceutical care, given the time pressures experienced, and shortage of pharmacists, in many pharmacies. Non-compliance with GPP standards, besides potentially leading to patient harm and an increase in the incidence of drug-related problems (DRP), has legal and professional implications. Section 35A(d) of the Pharmacy Act 53 of 1974² mandates the SAPC to inspect the practices and business conduct of pharmacies. Non-compliance with GPP standards could lead to disciplinary action being taken against individual pharmacists, the pharmacist's assistant, and/or the pharmacy.

Integrated performance management system

The concept of an integrated PMS considers performance management holistically in conjunction with other business-related processes, such as planning, the development of a business vision, strategies and documentation, and quality management and staffing. An example of an integrated PMS is Cameron's "elaborated model",³ in which there is the horizontal integration of processes such as the setting of objectives for individuals, training and development, performance appraisal and rewards, and the vertical integration of organisational strategy, departmental goals and individual objectives.

The components of an integrated PMS are well represented in Chapters 3 and 4 of the GPP standards, which focus on human resource management and general management standards, respectively. These standards intend to facilitate the provision of a high quality, efficient pharmaceutical service that embodies the principles of pharmaceutical care.¹ Chapter 3 includes standards that prescribe the scope of practice of pharmacy personnel, written job descriptions for all pharmacy employees, and orientation and training when employees are appointed. It also states that performance objectives should be set, in consultation with employees, at least once a year, and that regular performance appraisals, which include employees' self-assessment of their performance, should be held. Furthermore, rewards should reflect performance outcomes; employee participation in the activities of professional bodies should be promoted; and there should be a training plan and development programme for employees. This extends to a self-development plan for employees, and standards for continuing professional development. Pharmacists should also be covered by professional indemnity.¹

Chapter 4 includes standards relating to having sufficient pharmacists and support staff to provide a pharmaceutical service, clearly allocating employee responsibilities and duties, and compliance with all SAPC standards and relevant legislation. Chapter 4 also includes standards relating to having a mission statement that is understood by all employees, and is aligned with the principles of pharmaceutical care, and having quality and business objectives. These should be reviewed at least once a year. Furthermore, Chapter 4 includes standards for a quality improvement plan, including the development of standard operating procedures which must be adhered to, monitoring the effectiveness of the pharmacy, including the health outcomes of patients, and developing inter-professional relationships with other healthcare professionals.¹

A decision was made to investigate the PMS in one independently owned retail pharmacy in Johannesburg, and to analyse the potential impact of various aspects of this PMS on the provision of pharmaceutical care to patients. The pharmacy is situated within a medical complex, with several doctors' rooms adjacent and close to the pharmacy.

An independently owned pharmacy was chosen for the following reasons:

- Independently owned pharmacies in South Africa have been under increasing competition since 2004 from private-sector retailers, such as New Clicks Holdings, Shoprite and Pick n Pay, which have opened pharmacies in their stores. Due to their larger purchasing power, these retailers are able to offer lower prices, leading to the closure of many small, independently-owned pharmacies.⁴ A decision was made to investigate performance management within a pharmacy facing these competitive pressures.
- There are not many reported studies in the literature on PMSs in small-, medium-, and micro-enterprises, particularly in the retail pharmacy environment.

The objectives of this research were:

- To examine whether the pharmaceutical services provided by pharmacists and the pharmacist's assistant in this particular pharmacy complied fully with GPP standards for pharmaceutical care.
- To determine whether the pharmacists in this study viewed the provision of pharmaceutical care as a key performance area.
- To investigate which aspects of the implementation of the PMS were viewed by the pharmacists and pharmacist's assistant in this pharmacy as enabling or undermining with regard to the provision of pharmaceutical care.

Method

A triangulation approach was adopted, comprising quantitative and qualitative research methods, as described below. All research was conducted in accordance with the University of South Africa's (UNISA's) policy on research ethics.⁵

Quantitative research method

The questionnaire in Figure 1 was developed to probe whether the pharmacy complied with selected GPP standards for the provision of pharmaceutical care, from the perspective of patients. The statements in the questionnaire were aligned with statements that covered the core elements of pharmaceutical care posed by Assa-Eley and Kimberlin⁶ in their study of patients' and pharmacists' perceptions of pharmaceutical care in the state of Florida in the USA.

The questionnaire was piloted to 10 patients and deemed acceptable. Pilot study participants agreed that the questions were clear and straightforward. A total of 200 questionnaires were then completed by patients through convenience sampling at different times of the day, over a period of 10 days. Patients were approached by the researcher and asked to participate in the study, either while they were waiting for their medication in the pharmacy, when they were about to leave the pharmacy, or while

1. Demographic details: please tick the appropriate box.

Gender	Male	Female		
Race	African	Indian/ Asian	Coloured	White

2. Please tick below whether you have received the following services at XXX Pharmacy, and whether you would like to receive these services.

	Do you receive this service at XXX Pharmacy?			Would you like to receive this service?	
	Yes, always	Yes, once or twice	No, never	Yes	No
1. The pharmacist asks me whether I am allergic to any medication.					
2. The pharmacist contacts my doctor to clarify my prescription, or discuss my medication.					
3. The pharmacist asks me what other medication I am taking.					
4. The pharmacist asks me what other illness or medical conditions I have.					
5. The pharmacist offers me generic medication.					
6. The pharmacist asks me whether I am experiencing any side-effects to my medication.					
7. The pharmacist asks me how often I am taking my medication.					
8. The pharmacist asks me whether my medical condition is improving or is controlled.					
9. The pharmacist, or pharmacist's assistant, explains to me how to take my medication correctly.					
10. The pharmacist or pharmacist's assistant gives me advice or information about my medication.					
11. Have you ever requested a pharmacist to perform a medication review for you? In a medication review, the pharmacist assesses the appropriateness of all your medication, develops a care plan for you, and conducts a follow-up evaluation to determine if your condition is improving.	Yes		No		

3. Please tick the appropriate box.

I know who the pharmacists are.	Yes	No	
I know who the pharmacist's assistant is.	Yes	No	
The pharmacist's assistant always prepares my prescription under the direct supervision of the pharmacist.	Yes	No	Not sure
The pharmacist or pharmacist's assistant always selects over-the-counter medication for me.	Yes	No. The front-shop assistant selects this.	

The introductory paragraph of the questionnaire is not included in Figure 1.

Figure 1: The patient questionnaire developed by the author to determine whether XXX Pharmacy complied with selected GPP standards for the provision of pharmaceutical care

they were waiting in the nearby doctors' rooms. In the latter case, only patients who had been to the pharmacy under study were allowed to complete a questionnaire. Descriptive statistics using Microsoft Office Excel® (2007) was used to analyse questionnaire data.

Qualitative research method

Individual semi-structured telephonic interviews were conducted by the researcher after hours with all four dispensary employees of the pharmacy, namely the owner-manager, a full-time pharmacist, a locum pharmacist, and a pharmacist's assistant. Each interview was approximately two hours in duration, and the interview questions were piloted with two participants who were not employed by the pharmacy under study. One of these pilot study participants is a practising pharmacist, and the other has yet to complete her pharmaceutical community service.

These participants were chosen for the pilot study due to their experience in retail pharmacy.

The interviews probed interviewees' views on whether pharmaceutical care was a key performance area, the kind of pharmaceutical care services that dispensary employees provide, and whether the implementation of various components of the PMS facilitated, or undermined, the provision of pharmaceutical care. In order to minimise biased responses, interviewees were not shown the questionnaire that was given to patients for completion.

Content analysis⁷ was used to analyse interview data. Briefly, content analysis, which is commonly used to analyse qualitative data, involves the following steps:⁷

- Firstly, all interviewee responses were typed up in full. For each response to each interview question, key words were

highlighted.

- A table was created using Microsoft Office Word® (2007), in which all the keywords for all interviewees for each question were placed in their own cell. Various keywords of a similar nature or theme were then grouped together, leading to a number of different subgroups. Each subgroup was then given a name, based on its theme. These names were regarded as codes.
- The various codes that emerged from all interviewees' responses were listed. Codes that covered similar issues were assembled, creating a broader code, in order to make the analysis easier. Categories, or possible responses, were then defined for each code, into which data could easily be assigned.
- All the interview data from all interviewees were examined carefully, with data assigned to the appropriate code and category. Each piece of data was assigned to only one category.
- Finally, a coding frame was constructed, in which the various categories were listed, as well as the frequency with which data fell into each category. The top five categories with the highest frequency counts were listed in a separate table. Comparisons and conclusions were then made based on the data obtained from the coding frame and the list of the top five-ranked categories.

Results and discussion

This section presents the results of the 200 questionnaires that were completed by patients, and the interviews that were conducted with all four dispensary employees. The questionnaire results comprised the demographic profile of respondents, and the responses to each of the statements in Sections 2 and 3 of the questionnaire. The interview results show the top five-ranked categories from the coding frame obtained from analysing all interview data.

Patient questionnaire results

Demographic results

As shown in Figure 2, the majority (56.5%) of respondents were female, while 27% were male, and 16.5% did not indicate their gender. All the racial groups listed in the questionnaire are represented, as illustrated in Figure 3, with the highest proportion of respondents (46.5%) being white. Africans formed the next largest category (21.5% of respondents), followed by Indian and Asian (9%) and coloured patients (6.5%). A total of 16.5% of respondents did not indicate their race.

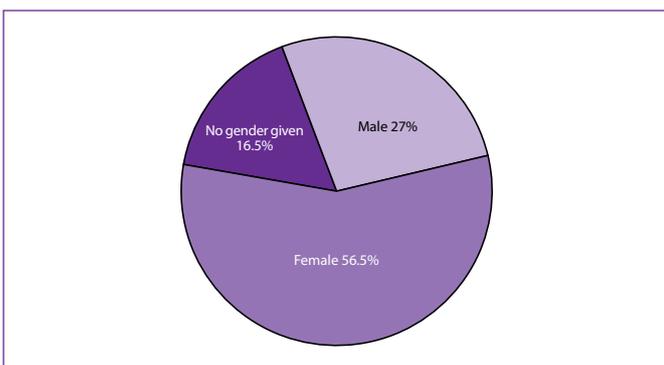


Figure 2: A pie graph showing the percentage of respondents of different genders

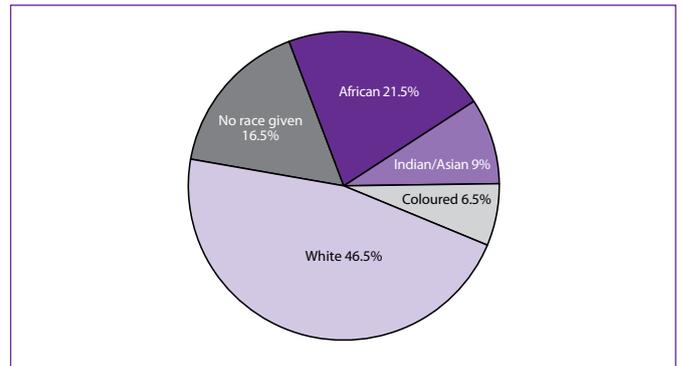


Figure 3: A pie graph showing the percentage of respondents from different racial groups

Provision of pharmaceutical care services

Figures 4 and 5 show the overall results for Sections 2 and 3, respectively, of the 200 completed questionnaires. Figure 4 illustrates that, according to at least 50% of questionnaire respondents, only two out of the first 10 pharmaceutical care services probed in the questionnaire are always provided, namely:

- The pharmacist or pharmacist's assistant explains to a patient how to take his or her medication correctly (Statement 9).
- The pharmacist or pharmacist's assistant provides the patient with advice or information regarding his or her medication (Statement 10).

Statement 11 was a question asking patients whether they had requested a medication review. The possible responses for this statement were "Yes" or "No" only.

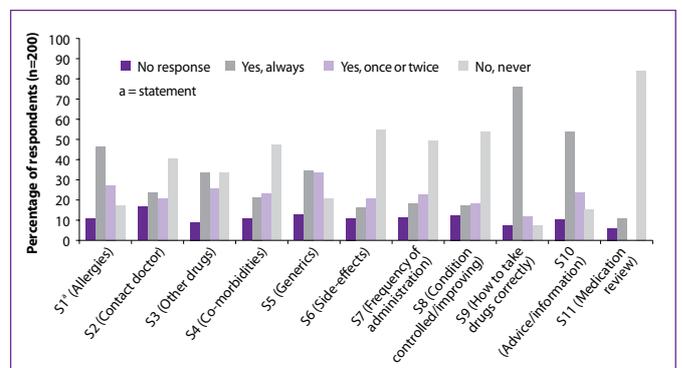


Figure 4: Patients' responses to whether or not they received each of the pharmaceutical care services in Section 2 of the questionnaire (n = sample size)

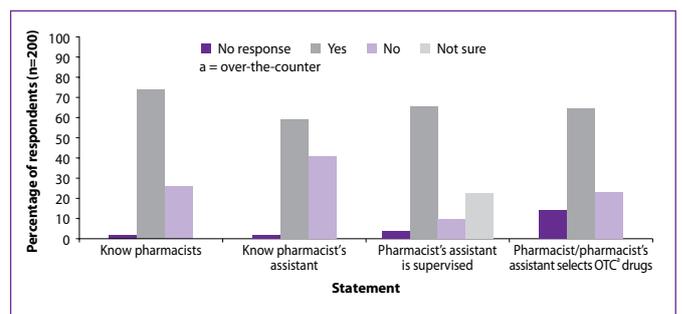


Figure 5: Patients' responses to Statements 1-4, which relate to the scope of practice of pharmacists and the pharmacist's assistant, in Section 3 of the questionnaire (n = sample size)

Furthermore, when combining favourable responses, i.e. "Yes, always", and "Yes, once or twice", at least 50% of patients agreed that pharmacists always asked them if they had any allergies to medication (Statement 1). According to Section 2.25 of the GPP standards,¹ this service does not have to be provided at each patient encounter, to the same patient, if it has already been performed and documented.

Consideration should be given to the proportion of patients who stated that the services in Statements 1, 9 and 10 were not provided. Almost one fifth of respondents (17%) indicated that the pharmacists had not asked them whether they were allergic to any medication. Some of these patients could potentially have been allergic to medication that was dispensed to them, and this could have resulted in patient morbidity, or possibly mortality. A total of 6.5% of respondents indicated that the pharmacist or pharmacist's assistant did not explain to them how to take their medication correctly (Statement 9), while 14.5% of respondents stated that advice or information about their medication was not provided to them (Statement 10). This indicates that the patient counselling that does occur tends to focus more on how patients should take medication correctly (Statement 9). Broader counselling on the pharmacotherapy (Statement 10), that covers potential side-effects, for example, took place less often. Considering that time pressures have been ranked as the top category in the interview data (see Table I), the above differences in patient responses to Statements 9 and 10 may support an earlier reported finding⁸ that as a pharmacy gets busier, less information is provided to patients.

The remaining seven standards related to other aspects of analysing the appropriateness of a patient's pharmacotherapy, such as detecting drug-drug and drug-disease interactions, assessing the safety and efficacy of pharmacotherapy and patient compliance, and generic substitution. The finding that less than 50% of respondents indicated that these seven services are always provided suggests that the pharmacy provided patient counselling more often than performing these other equally important aspects of pharmaceutical care.

A greater proportion of patients (34.5%) indicated that the pharmacist always offered them generic medication, compared to 20.5% who stated that this service was not provided. However, 34.5% is relatively low, representing just more than one third of respondents. The implications of this are that more than one fifth of respondents (20.5%) did not receive this service, and approximately one third (33%) stated that they were only offered generics once or twice. Therefore, these patients may have paid more for original branded products. A minority of patients (9%) did not wish to be offered generics. However, for those who would have liked such a substitution, it would be interesting to investigate what it would have cost them not to be offered a generic. Patients may not be aware of the existence of generic substitutes, which is why Section 22F of the Medicines and Related Substances Act 101 of 1965⁹ makes it compulsory for pharmacists to offer generics, except in certain circumstances.

A large majority of respondents (84%) had never requested a medication review. Although the reasons for this were not probed, it could be that patients were unaware that this service existed, or that they could request such a service, or that this service could be provided by pharmacists. This may also be true for the other pharmaceutical care services listed in Section 2 of

the questionnaire. Many patients might have been unaware that pharmacists are supposed to perform these services. This emerged in the pilot study, in which one participant expressed his view that some of the statements were not relevant, as they related to functions performed by doctors. Patients may also have had doubts about the ability or willingness of pharmacists to perform these services, and utilise the resulting information in a way that could enhance patient outcomes. For example, a study carried out by Hanna, White & Yanamandram¹⁰ found that patients have a neutral opinion of pharmacists' ability to perform diabetes disease management services. Cerulli (2002), cited in Hanna et al,¹⁰ argues that patients have limited interactions with pharmacists, and thus have limited awareness of the latter's roles and responsibilities. Hanna et al¹⁰ suggest that the expertise of pharmacists is not utilised by patients optimally, and that the demand for pharmacists to provide a diabetes disease management service, and by extension, other pharmaceutical care services, offers pharmacists an opportunity to enhance public awareness of their expertise and expanding role as providers of pharmaceutical care.

Scope of practice

An important component of the GPP standards is that various dispensary employees should adhere to their scope of practice. The mean percentage of respondents who responded favourably to all the statements in Section 3 of the questionnaire (65.25%) was significantly greater than the mean percentage of respondents who responded negatively (24.38%) (p -value < 0.001 after analysis by analysis of variance, followed by the Newman-Keuls multiple comparison test). As shown in Figure 5, 65% of respondents stated that the pharmacist's assistant prepared their prescription under the direct supervision of a pharmacist. However, almost 10% of respondents (9.5%) stated that direct supervision of the pharmacist's assistant did not occur. This suggests that the pharmacist's assistant did not always practise within her scope of practice. Figure 5 also shows that 64% of respondents stated that the pharmacist or pharmacist's assistant, as opposed to a front-shop assistant, selected over-the-counter (OTC) medication for them. Therefore, there appeared to be a system in place in which dispensary employees were able to exert control over the selection of OTC medication.

Despite the positive responses to the statements in Section 3, and shown in Figure 5, more than one fifth of respondents (22.5%), stated that front-shop assistants selected OTC medication for them (Statement 4). This is problematic, as the front-shop assistants in this particular pharmacy had no formal training or qualification in pharmacy, and did not possess the knowledge and skills required to ask individual patients the necessary questions to determine if particular OTC medication was safe and appropriate. The front-shop assistants would also not have the knowledge to have been able to detect drug interactions, or counsel patients adequately about OTC pharmacotherapy.

Interview results

The most prominent finding from the interview results, with 10 frequency counts, as shown in Table I, was that time pressures in the pharmacy contributed to it being difficult to provide pharmaceutical care. Table I shows the top five-ranked categories that emerged from the coding frame obtained after content analysis of the data obtained from the interviews with the three pharmacists and one pharmacist's assistant.

Table I: The top five-ranked data categories, ranked in descending order

Rank	Theme/code	Category	Frequency (count)
1	Pharmaceutical care services	Time pressures and other practicalities in the pharmacy make it difficult to provide patient counselling, or other aspects of pharmaceutical care.	10
2	Problems with performance management system ^a	Problems with front-shop assistants, ranging from a frequent turnover of assistants undermining standardisation in service delivery, to front-shop assistants placing incorrect medication into packets for patients.	7
3	Understanding of pharmaceutical care	Patient counselling, i.e. providing patients with advice and information.	6
3	Working relationships	I have good working relationships.	6
3	Pharmaceutical care services	I routinely counsel patients.	6
4	Whether pharmaceutical care is a key responsibility	Yes, it is a key responsibility.	5
4	Performance targets	To serve customers as quickly and as efficiently as possible.	5
5	Understanding of pharmaceutical care	The evaluation of pharmacotherapy.	4
5	Compliance with GPP standards for pharmaceutical care	Yes, I am compliant with GPP standards for pharmaceutical care.	4
5	Whether there are performance appraisals and the impact of these	No, there are no performance appraisals.	4
5	Whether the number of dispensary employees is sufficient to provide pharmaceutical care	No, the number of dispensary employees is not sufficient to provide pharmaceutical care.	4
5	Whether the number of dispensary employees is sufficient to provide pharmaceutical care	The number of pharmacists is sufficient to supervise the pharmacist's assistant.	4
5	Working relationships	My working relationships promote the provision of pharmaceutical care.	4
5	Relationships with patients	Relationships with patients promote the provision of patient counselling and/or other aspects of pharmaceutical care.	4
5	Other financial rewards	No, there are no other financial rewards, e.g. performance-related bonuses.	4
5	Other financial rewards	Financial rewards are not a motivating factor.	4
5	CPD activities	I participate in CPD activities.	4
5	OTC sales	Dispensary employees ask patients questions before OTC medication is sold.	4
5	OTC sales	Dispensary employees provide patient counselling on OTC medication.	4

The provision of patient counselling emerged strongly from interview data, and was ranked third. This is in agreement with the questionnaire finding discussed earlier, namely that at least 50% of patients agreed that counselling regarding medication is always provided. Furthermore, Table I reflects that, according to interviewees, patient counselling on OTC medication is also routinely provided. Two categories relating to this, i.e. the final two categories in Table I, are ranked fifth out of all the categories.

The questionnaire results presented earlier in Figure 5 showed that 64% of respondents stated that the pharmacist or pharmacist's assistant, as opposed to a front-shop assistant, selected OTC medication for them. This suggests that there was a system in place in which dispensary employees were able to exert control over the selection of OTC medication. In his interview, the owner-manager stated that it was policy that no OTC medication should be sold without the front-shop assistant liaising with dispensary employees. Front-shop assistants function as intermediaries, exchanging information and questions between the dispensary employees at the back of the pharmacy, and patients at the OTC counter. From the obtained information, the pharmacists direct

the front-shop assistants as to which OTC products to sell to the patient. A potential problem associated with this approach was highlighted by the locum pharmacist, who said that there was a "break in the transmission", or the communication, between pharmacists and patients. It might have taken longer, for example, for the pharmacist to obtain all the necessary information about the patient, or there could be communication errors relating to what the front-shop assistant relayed between the parties.

Interviewees asserted that they were fully compliant with GPP standards for pharmaceutical care. This assertion is one of the fifth-ranked categories in Table I. However, it is difficult to understand how the pharmacists could assert that they were compliant with GPP standards for pharmaceutical care, given that in the interviews, none of them were able to provide examples of these standards. The questionnaire results presented earlier, in which at least 50% of patients stated that only two pharmaceutical care services were always provided, also contrasts with this assertion.

The evaluation of pharmacotherapy, although ranked fifth in Table I, had fewer frequency counts (four) compared to the

provision of patient counselling (six frequency counts), in relation to interviewees' understanding of pharmaceutical care. Patient safety and outcomes had even fewer frequency counts (three). These findings suggest that evaluating the appropriateness of pharmacotherapy, ensuring patient safety, and monitoring patient outcomes might have been regarded by the pharmacists in this study as less important than providing patient counselling. This supports the patient questionnaire results, which revealed that the majority of respondents reported that patient counselling was provided, but not other important aspects of evaluating pharmacotherapy (other than pharmacists checking if patients were allergic to medication), patient safety and outcomes. The potential existed for a variety of drug-related problems to occur from neglecting to always provide the full ambit of pharmaceutical care services.

It also emerged from content analysis of the interview data that there was disagreement among interviewees about whether generics were always offered, except in cases when these could not be offered in terms of the Medicines and Related Substances Act. There were two frequency counts, for example, stating that the interviewee always offered generics, and two frequency counts stating that this was not always the case. This supports the questionnaire results presented earlier, in which only 34.5% of respondents indicated that the pharmacist always offered them generic medication. Other notable interview results are highlighted below in the discussion of the pharmacy's PMS. These may not all be reflected in Table I, as Table I lists the top five-ranked categories into which interview data fell, and there were many data categories with fewer than four frequency counts.

The pharmacy's PMS

From the content analysis performed on the interview data, as shown in Table I, several aspects of the PMS appeared to be working well, and to promote compliance with GPP standards for the provision of pharmaceutical care.

These aspects of the pharmacy's PMS, for which the pharmacy should be commended, are the following:

- The provision of pharmaceutical care was viewed as a key performance area by all pharmacists.
- Two out of the four dispensary employees claimed to be fully compliant with the pharmacy's standard operating procedures, which were closely aligned to GPP standards.
- The provision of patient counselling was recognised to be a performance objective.
- There was agreement that the number of pharmacists was sufficient to supervise the pharmacist's assistant.
- The owner-manager's management style was viewed as one that encouraged pharmacists to provide pharmaceutical care.
- Dispensary employees stated that they had good working relationships.
- Dispensary employees also claimed to have developed good relationships with patients.
- There seemed to be a high level of intrinsic motivation and commitment to patient health among the pharmacists and the pharmacist's assistant.
- Although this was contested by patients' responses to the

questionnaire, three out of the four dispensary employees stated that they regularly liaised with other healthcare professionals, and that the owner-manager encouraged this.

- Two dispensary employees believed that the new layout of the pharmacy, which included lowering the counters that separated patients from dispensary employees, enhanced the provision of pharmaceutical care. Pharmacy layout falls under the category of organisational structure, and was regarded as a component of a PMS by Al-Shaqha and Zairi.¹¹

However, there were nine key weaknesses in the PMS, each of which could potentially undermine the provision of pharmaceutical care:

- Although there was a philosophical commitment to the provision of pharmaceutical care by the owner-manager and other pharmacists, and pharmaceutical care was viewed as a key performance area, there was poor awareness of GPP standards. The organisational vision and mission statement of the pharmacy did not explicitly commit to pharmaceutical care, and there was poor communication of this to dispensary employees. This inadequacy in overall vision cascaded down to other components of the PMS, and contributed to pharmacists having a poor understanding of their roles and responsibilities in providing pharmaceutical care practically, on an everyday basis, in accordance with GPP standards.
- The poor understanding of the roles and responsibilities was made worse by the absence of current job descriptions for pharmacists and the pharmacist's assistant. This might have led to the pharmacists not always performing all the tasks outlined in their scope of practice, while the pharmacist's assistant did not always practise within her scope of practice. The provision of patient counselling was regarded as more important than the evaluation of the appropriateness of a patient's pharmacotherapy. Furthermore, the patient counselling that was provided tended to focus more on how patients should take their medication correctly, while less information and advice was provided on other aspects of pharmacotherapy.
- An inadequate induction and orientation programme made it more difficult for new dispensary employees to familiarise themselves with current practices, basic information about the pharmacy and operational matters, as well as the organisational vision, values, strategies and plans. This could have undermined the ability of the new dispensary employee to provide pharmaceutical care, or in the case of the pharmacist's assistant, aspects of pharmaceutical care.
- Having an insufficient number of dispensary employees, in particular pharmacists, directly affected the ability of the pharmacy to provide pharmaceutical care to all patients at all times.
- As highlighted in Table I, there were no performance appraisals for pharmacists and the pharmacist's assistant, and there was confusion regarding performance objectives. Predominant emphasis was afforded to a particular performance target, namely to serve customers as quickly and efficiently as possible, which could have contributed to why "time pressures and other practicalities in the pharmacy make it difficult to provide pharmaceutical care" has been ranked as the category with the highest frequency count among all interview data (see Table I).
- There was no formal, structured training and development programme. The owner-manager did not identify and address the training and development needs of the pharmacists and

the pharmacist's assistant in terms of the pharmaceutical and non-pharmaceutical skills necessary to provide optimal pharmaceutical care.

- There was disagreement over whether remuneration and rewards adequately reflected the full ambit of responsibilities in providing pharmaceutical care. The owner-manager believed that the remuneration was adequate, whereas both the other pharmacists disagreed with this.
- It was suggested that the owner-manager did not make optimal use of the pharmacist's assistant to perform primarily technical tasks, so that he could have more time for the provision of pharmaceutical care.
- There were weaknesses in the quality management system, notably the absence of a quality improvement plan. Furthermore, compliance with standard operating procedures, which are closely aligned to the GPP standards, was not regarded as a key performance area.

Conclusion

The abovementioned weaknesses in the PMS could have contributed to the pharmacy's appearance of not always complying with the following GPP standards for the provision of pharmaceutical care, from the perspective of patients:

- The comprehensive evaluation of the appropriateness of a patient's pharmacotherapy, in terms of drug interactions, drug-disease interactions, adverse effects, efficacy and patient compliance (Sections 2.7.1.1(b)(i), 2.7.1.1(b)(ii), and 2.7.1.3.2(a) of the GPP standards). These results are supported by data obtained from interviews with dispensary employees.
- Always offering patients the option of generic substitution, unless not permitted to do so in certain circumstances (Section 2.7.3.11 of the GPP standards). This finding is also consistent with interview results.
- Contacting the prescriber if there was a problem with a prescription (Section 2.7.1.1(c) of the GPP standards). This finding differs from the interview results.

Not complying with all selected GPP standards could lead to potential operational risks, and in particular, legal and professional risks. These could occur if a patient experienced a drug-related problem as a result of these occurrences, and sued the pharmacy or individual dispensary employee, and/or laid a complaint with the SAPC. The SAPC could also inspect the pharmacy, detect non-compliance to particular GPP standards, and institute penalties against those registered with the SAPC who are found guilty of misconduct. As outlined in Sections 45(1) and 45(2) of the Pharmacy Act 53 of 1974,² these penalties could include a caution, a reprimand, suspension from practising, removal from the register of persons allowed to practise in South Africa, and/or a fine, and public gazetted notification of the offence. Inspections by, and complaints to, the SAPC do occur, evidenced by the fact that the Pharmaceutical Society of South Africa notified its members in April 2011 that two pharmacists were arrested for not complying with regulatory requirements. Besides the abovementioned professional risk, financial consequences could also result if patients sued the pharmacy or dispensary employees.

Importantly, there is also the potential for patient harm and suffering, which is difficult to quantify. The spirit of pharmacy

law and the GPP standards is that the pharmaceutical profession acts in the best interests of the patient, and this is undermined if performance management within a pharmacy does not emphasise compliance with these standards.

Some of the limitations of this study were that it was only conducted at one pharmacy, and that this pharmacy operated in the private, retail sector of pharmacy practice. Recommendations for future research include extending this study to pharmacies in sectors other than the retail sector, such as the hospital and institutional sectors. Notably, this could also include pharmacies in the public sector that have additional imperatives, such as compliance with the principles of Batho Pele ("People First").¹² These principles are resonant with many of the values expressed in the GPP standards, such as accountability and excellence in service delivery. Enhancing compliance with GPP standards for pharmaceutical care could also promote the enactment of the principles of Batho Pele in these pharmacies.

The research methodology in this study could also potentially apply to larger pharmacies, such as pharmacy chain stores, or retail stores that include pharmacies in their outlets. Using inferential statistical analysis, further research could also determine whether there is a relationship between demographic variables and patients' perceptions and expectations of pharmaceutical services. Furthermore, a wider range of demographic variables could be explored, such as the educational level, socio-economic status and age of patients, as well as patients with different chronic medical conditions.

The current sample size of 200 patients could also be increased, and the research conducted at multiple pharmacies across all the provinces in South Africa, instead of being restricted to Gauteng. This would also allow differences in patients' responses and compliance with GPP standards between provinces to be ascertained. Finally, a future study could assess compliance with a wider range of GPP standards for the provision of pharmaceutical care than the 10 probed in the questionnaire used in this study.

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