

## REVIEW ARTICLE

### Short Review of the Current Value of Pharmaceutical Care for Patients – A Patient Survey about Single Beliefs, Concerns, and Expectations to Public Pharmacies

Valentin Schlieper<sup>1,2</sup>, Agnes Meszaros<sup>2</sup>

<sup>1</sup>Stadt-Apotheke, Dekan-Metz-Str. 5-7, Bräunlingen, Germany, <sup>2</sup>Department of Pharmacy Administration, University Pharmacy, Semmelweis University, Budapest, Hungary

Received: 30-10-2021; Revised: 25-11-2021; Accepted: 05-01-2022

#### ABSTRACT

In a world that gets more and more digitalized, people and therefore in general patients feel more and more safe to use digital applications. In the pharmacy, digitalization could become either disruptive or a lifeline for the future. Pharmaceutical care (PC) is a main point in the pharmacy that could be digitalized. The goal of this short study is to evaluate how patients perceive the performance of local pharmacies efforts toward good PC including digital influences. A patient survey about single beliefs, concerns, and expectations toward various services in public pharmacies was done. To see the current state of digital PC management in three pharmacies in Germany, 200 patients were questioned. Our focus was based on the five main principles of PC defined by the American Pharmacists Association. The results of the survey lead pharmacists toward the direction in which they should focus their digital PC management. Patients agreed on the importance of PC in general. They advocate the professional advice on therapy management but also criticize the management of their personal health data. They have expectations that could be fulfilled with digital solutions to fully satisfy their wish of personal PC. We can say that even though there is a lot of potential toward the health data management, the 200 patients are overall satisfied with the current form of mostly non-digital PC in public pharmacies. The results of the survey lead pharmacists toward the direction in which they should focus their digital PC management in the future to achieve even better approaches in PC.

**Keywords:** Pharmaceutical Care; Digital; Public Pharmacy; Expectations.

#### INTRODUCTION

Pharmaceutical care (PC) is a term that could significantly change the professional profile of the pharmacist.<sup>[1]</sup>

Whereas in earlier times, the manufacture of pharmaceuticals and the dispensing of pharmaceuticals were the focus of pharmacists' work, "Care" calls for a defined contribution to health care.

In the pharmacy, the patient has a competent contact person for all questions about the drug. This ensures

the success of the application, not at least through the improvement of adherence, and improves the quality of life of the often multimorbid seniors.

It is not just patient counseling where the pharmacist takes better care of the individual situation of the patient, but there is also a systematic recording and optimization of the drug use, also from an economic point of view.<sup>[2]</sup>

The tasks of the pharmacy in the context of PC include all these aspects to achieve a better health outcome of the patient, for example, prevention of the outcomes of drug-related morbidity and mortality.

To understand what drives the patient though, it is necessary to understand what patients' value most.

#### \*Corresponding Author:

Valentin Schlieper,

E-mail: [schlieper@apotheke-braeunlingen.de](mailto:schlieper@apotheke-braeunlingen.de)

Therefore, we have to understand that the pharmacy choice is largely led by the patient's personal preference. Preferences such as location, good prices on medicines, and the option of discussing and consulting all health issues in a consultation room have already been discussed.<sup>[3]</sup>

Many studies were performed about the status quo of how pharmacies see themselves when practicing PC.<sup>[4]</sup>

They all conclude the idea that implemented changes in management represent a PC solution.<sup>[5,6]</sup>

However, we think that internal views are just not enough to evaluate the status of progress.

The goal of this short study is to evaluate how patients perceive the performance of local pharmacies efforts for good advice in digital and non-digital manners in relation to good PC.

We looked for similar articles but as we could not find any satisfactory data on this, so new scientific evidence is needed for the literature.

This is of high importance due to the change of the professional profile that parallels the practice management activities conducted by pharmacists and ensures personal support, document management, a supply chain, and good distribution. Moreover, in the end, every pharmacist needs the patient to use his knowledge in the pharmacy.

## METHODS

The overall strategy of this survey was to gain information on patients' beliefs regarding digital PC activities in daily practice.

They were questioned about the most important PC activities that a pharmacy could offer.

The survey has been placed in three public pharmacies in Germany.

The questions were answered by a total of 200 random patients in October 2020.

Answers were mostly provided between 4- or 5-point scales due to importance.

Patients attending were elderly (over 60 years old) and taking at least four or more prescribed medications. They joined the survey voluntarily and no personal data have been saved.

The questions asked are based on the five standards of PC defined by the American Pharmacists

Association:

Questions in Part 1 are associated with establishing and maintaining professional relationship with patients.

Questions in Part 2 are associated with maintaining adequate collection and recording of health data.

Questions in Part 3 are associated with reviewing health data and provide adequate PC proposals.

Questions in Part 4 are associated with ensuring patient alignment and facilitation of execution the PC plan.

Questions in Part 5 are associated with ensuring circular management of the PC plan.

The results get summarized in percent values to overview the answer distribution.

## RESULTS

**Table 1:** How important do you assess professional help provided by pharmacy staff?

1 a.)	Very Important	Important	Sometimes Important	Not Important
Distribution in %	16	48	32	4

**Table 2:** Are you concerned that professional help from pharmacy staff does not provide adequate information on medication issues?

1 b.)	No Concerns	Mostly No Concerns	Mostly Concerns	Always Concerns
Distribution in %	67.5	21	11	0.5

**Table 3:** Which expectations on pharmacy staff do you have regarding drug information?

1 c.)	Very High	High	Low	None
Distribution in %	98.5	1.5	0	0

**Table 4:** In your opinion, how important is the appropriate collection and organization of your personal medicines in the pharmacies database?

2 a.)	Very High	High	Low	None
Distribution in %	28	51	11	10

**Table 5:** Which concerns do you have when the pharmacy has access to your health data?

2 b.)	No Concerns	Data could get stolen	Not used appropriate	Not kept up to date	Several concerns apply
Distribution in %	31	17	29	4	19

**Table 6:** Which pharmacy service of the ones listed do you consider most important?

3 a.)	Constant update of personal databank	Monitoring of interactions	Personal Intake Instructions	Several of the above services	All of the above services
Distribution in %	9	10	15	19	47

**Table 7:** What are your expectations for the services in the pharmacy?

3 b.)	Service only by professionals	Advice according to current scientific standards	Modern Infrastructure in the pharmacy	Several of the above expectations	All of the above expectations
Distribution in %	5	15	7	3	70

**Table 8:** How much do pharmacies support you in following to your medication plan?

4 a.)	Very Much	Much	Mostly	Not at all
Distribution in %	11	30	40	19

**Table 9:** What kind of support would you like your pharmacy to provide to keep with your medication plan?

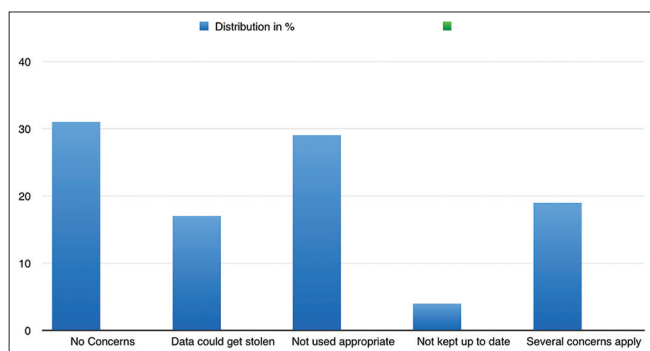
4 b.)	Personal commitment of every single pharmacy employee	Digital applications to remind me to take your medication	Reminder of any kind in case a drug is running low	Several of the above expectations	All of the above expectations
Distribution in %	14	33	34	11	8

**Table 10:** How confident do you feel about your own disease management?

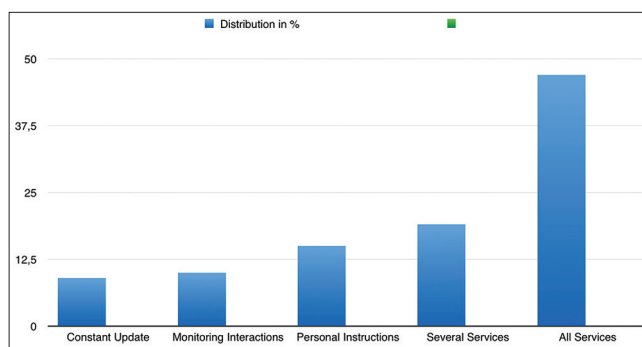
5 a.)	Very Confident	Confident	Not Confident	Unsecure
Distribution in %	3	67	28	2

**Table 11:** Who do you trust most for medication recommendations?

5 b.)	Medical Doctor	Pharmacists	Acquaintances	Advertisement
Distribution in %	42	40	15	3



**Graph 1:** Which concerns do you have when the pharmacy has access to your health data?



**Graph 2:** Which pharmacy service of the ones listed do you consider most important?

## DISCUSSION

The quality of PC in public pharmacies in Germany could either be discussed from self-disclosure of the pharmacy itself or from the patients' point of view.

After distributing the questionnaire to 200 patients, results are obvious and mostly clear regarding their view.

Minimum of 48% of the patients assess professional help regarding medication issues as important. About 32.5% of the participants answered that they are not fully free of any concerns. The rest of the data in Table 2 shows the importance of advanced training and therefore actuality of knowledge of pharmaceutical personnel to keep this high acceptance. Hence, we can assume that punctuality on up to date medication knowledge is a key point for associating, establishing, and maintaining professional relationship with patients. The answer distribution shown in Table 3 clearly confirms this thesis from the patient side.

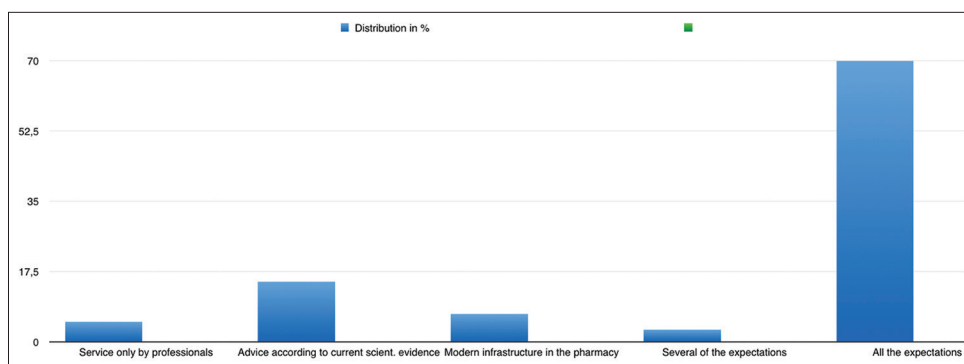
The organization surveillance of patients' personal medication can be achieved through consistent preparations. These are collected with the help of digital databases, stored in the pharmacies.

For them to get accepted by the patients, their approval is necessary due to different data protection laws.

In most cases, patients in our survey would give their approval for data collection as the results in Table 4.

In total 79% answered that the collection of health data is at least *High* resp. *Very High*.

There are still doubts though: While 31% have no doubts at all, all the other patients doubt the



**Graph 3:** What are your expectations for the services in the pharmacy?

correct use of the data. Mainly, the inappropriate use of the data is criticized and points out in Table 5 and Graph 1. This shows a big basic trust in the collection as one but an increasing loss of confidence when it comes to keep the actuality within the pharmacies database.

Keeping up the actuality is only one part to review health data for providing adequate PC proposals.

The goal here is to optimize the monitoring of interactions, also for achieving better intake instructions.

The data in Table 6 and Graph 2 confirm this hypothesis. About 47% of the patients consider these three points as most important; and clearly 19% still consider more than one point to be most important.

This shows the will of the patient to interact with the pharmacy to optimize their health status frequently.

About 70% [Table 7 and Graph 3] expect the pharmaceutical staff to be professional, therefore, up to date regarding scientific standards and the pharmacy to be modern within its infrastructure.

This result, regarding the general distribution in Table 7 and Graph 3, shows what high expectations patients have when they think about pharmacies.

It is a bit of disappointment when in this case 19% answer that the pharmacy did not support the patients at all following their medication plan.

This can get put into context with the 32% that assess professional help as sometimes important and not important [Table 1]. The goal should be to decrease these 19% toward the majority from Table 8.

To achieve this goal among other things, people wish either a better reminder of any kind in case a drug is running out and, with almost the same value, a digital reminder to actually take the drugs for following up adherence.

This shows the open-mindedness of patients regarding digital applications within their health.

Table 9 shows the distribution of the number of patients regarding their confidence to manage their own disease. About 28% say, they do not feel confident to manage their own disease.

Merged with the data of Table 8, especially with the use of digital applications, the goal should be to decrease these 28% toward zero.

Concerns that the PC part is not necessary anymore when digital trends take more and more part of everyday life can be refuted.

Pharmacies can be sure, to still be a part of the patients health journey, as the they are trusted almost as much as medical professionals regarding health recommendations [Table 11].

## CONCLUSION

The results clearly show as a take home message that the status quo of the PC performed so far is satisfactory.

The evidence of the data can be used to implement new PC processes that achieve a better outcome for both, pharmacy management and the patients' health status.

It is a perfect starting point for the future opportunities to include digital applications to further increase and modernize non-digital PC aspects.

## REFERENCES

1. American Pharmacists Association; 2005. Available from: [https://www.caremark.com/portal/asset/Principles\\_of\\_Practice\\_for\\_Pharmaceutical\\_Care.pdf](https://www.caremark.com/portal/asset/Principles_of_Practice_for_Pharmaceutical_Care.pdf) [Last accessed on 2020 Dec 20].
2. Schumock GT, Meek PD, Ploetz PA, Vermeulen LC. Economic evaluations of clinical pharmacy services 1988-1995. *Pharmacotherapy* 1996;16:1188-208.
3. Merks P, Kaźmierczak J, Elzbieta A, Olszewska M, Häggström K. Comparison of factors influencing patient choice of community pharmacy in Poland and in the UK, and identification of components of pharmaceutical care. *Patient Prefer Adherence* 2014;8:715-26.
4. Westerlund LT, Björk HT. Pharmaceutical care in community pharmacies: Practice and research in Sweden. *Ann Pharmacother* 2006;40:1162-9.
5. Guignard E, Bugnon O. Pharmaceutical care in community pharmacies: Practice and research in Switzerland. *Ann Pharmacother* 2006;40:512-7.
6. Berenguer B, La Casa C, de la Matta MJ, Martín-Calero MJ. Pharmaceutical care: Past, present and future. *Curr Pharm Des* 2004;10:3931-46.