

Workload Related To Prescription Processes in the Practitioners Office - Results of an Observational Study

This article was published in the following Scient Open Access Journal:

Journal of Primary Health Care & General Practice

Received December 03, 2018; Accepted December 11, 2018; Published December 17, 2018

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Abstract

Introduction: Polypharmacy is increasing in an aging population suffering from various chronic diseases, and yet the numbers of physicians' offices available in Germany to treat patients is predicted to decrease. The likely effect is that the time available for patient care will decrease and/or the workload of the medical practitioners' offices will increase. The aim of this observational study was to investigate the impact of the prescription process on the workload in clinical practice.

Methods: Prospectively-designed standardized interviews were performed with Medizinische Fachangestellte (MFA; medical assistants) in both general and specialist physicians' practices in Germany. The interviews were conducted over a pre-defined time frame by employees of UCB Innere Medizin GmbH & Co. KG, Monheim (Germany). The principal focus was the required time-expense and additional workload due to prescription process. Data were analyzed by using descriptive statistical methods.

Results: Between 01. December 2013 and 31. January 2014, a total of 375 interviews were performed with MFA across the federal territory of Germany. A total of 69.9% of MFA rated the prescription process negatively. Simultaneous prescriptions for multiple medications (compared to a single prescription) and patient requests for prescriptions at different time points per time-interval were considered to result in additional workload by 44.5% and 81.5% of MFA, respectively. A subset of 202 MFA gave an effective expenditure of time for the prescription process; mean time expenditure for one prescription was 4.8 minutes (range from 1 minute, to 30 minutes). In the opinion of 51.5% of MFA, reducing the number of prescriptions, e.g. by usage of fixed combinations, could save time.

Conclusions: The results of our survey suggest that there is a need to identify and define processes to optimize the prescription process at MFA level. A reduction of number of prescriptions by rationalization of the patients' medication or increased use of fixed-dose combination products, where possible, are actions that could be taken at the physicians' level that could reduce the workload in their offices.

Summary Slide

- Clinical guidelines are in favor of combining different drugs in a single pill to improve patient's compliance.
- Currently, it is unclear whether prescription of single pills compared to combination products has an influence on the workload in daily practice.
- The aim of this study was to investigate the impact of the prescription process on the workload in clinical practice
- The mean time for one prescription was 4.8 minutes (minimum 1 minute, maximum 30 minutes). A total of 51.5% of the MFA considered that a reduction in the number of prescriptions, e.g. by increased use of fixed-dose combination pills, could save time.
- Processes like those required for prescription handling need to be optimized to gain more time for patient management in daily practice. The time required for prescription handling should be taken into account prior to decision-making regarding patients' treatment regimens.

Keywords: Single Pill, Workload, Time for prescription, Practitioner's office, Hypertension, Treatment regimen

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Introduction

Polypharmacy is increasing in an aging population suffering from various chronic diseases, and yet the numbers of physicians' offices available in Germany to treat patients

is likely to decrease. The potential effect is that the time available for patient care will decrease and/or the workload of the medical practitioners' offices will increase. The aim of this observational study was to investigate the impact of the prescription process on the workload in clinical practice in order to identify whether reducing the number of prescriptions may benefit workload. A reduction in the number of prescriptions per patient could have a beneficial effect on the workload of the medical practitioner's office and could be achieved by increased use, where possible, of fixed-dose combination products in conditions that are frequently treated with more than one medicinal product (such as arterial hypertension).

In the majority of German patients, arterial hypertension is treated with more than one medicinal product. However, adherence to anti-hypertensive treatments is very low, and a risk factor for low adherence (and poor blood pressure control) is a high pill burden [1-3]. In addition, patients with arterial hypertension frequently have concomitant diseases such as diabetes mellitus or dyslipidemia that contribute further to their pill burden [4]. In order to reduce the patients' pill burden and improve treatment adherence, the European Society of Hypertension and of the European Society of Cardiology 2013 guidelines for the management of arterial hypertension favor the use of fixed-dose combinations of two or three antihypertensive drugs. The associated improvement in treatment adherence has been shown to improve blood pressure control [5].

Aside from above-mentioned clinical benefits for patients, increased use of fixed-dose combination products over the individual component monotherapy products may reduce the time needed in the medical practitioners' office for the prescription process and consequently increase the time available for patient care. The time required for processing a prescription for a fixed-dose combination product may be less than that required for processing multiple prescriptions for individual monotherapy products.

Thus, the use of individual monotherapy products may result in prescription requests at multiple timepoints whereas a fixed-dose combination product requires only one prescription per time-interval. Minimization of time spent in the medical practitioners' office on such administrative processes is likely to become increasingly important in the near future, as an aging society with increasing numbers of patients suffering from chronic diseases, such as type 2 diabetes or hypertension, face a decreasing number of practitioner's offices [6]. In addition, the workload of the medical practitioners' office has been increased by changes in the national health care system. Rebate contracts with payers often result in medication changes that cause confusion for the patient, due to modifications in the color, size and form of pills. These medication characteristics are important for the patient's orientation and often need to be clarified by time-consuming discussions in the doctor's office [4].

At the moment, it remains still an assumption that additional prescriptions will have an influence on the workload in the practitioner's office. We conducted a survey to measure the workload of the prescription process in the practitioner's office.

Methods

The impact of the prescription process on the workload of the medical practitioners' office. has been determined by conducting

a survey with Medizinische Fachangestellte (MFA; medical assistants) across Germany. The survey was conducted in the MFA population due to their role in the organizational structure, and their overview of all prescribing-related processes. In Germany, MFA is a well-recognized occupation requiring a formal training of 3 years duration. MFA assist in the practitioner's office in several aspects of medical examination, treatment, patient care and organization of processes.

MFA in practitioner's offices across Germany were prospectively visited by employees of UCB Innere Medizin GmbH & Co. KG (Monheim, Germany) and invited to participate in the survey. Standardized interviews were conducted by employees of UCB Innere Medizin GmbH & Co. KG, Monheim (Germany) in both general and specialist practices using 10 questions, which had a particular focus on the time-expense and workload associated with the prescription process. The questionnaire included open as well as closed questions (Table 1).

Table 1: Questionnaire

No.	Question	Potential Answers
1	Area	Open answer
2	Prescription process (please tick one or more of the following options)	1. is something I do gladly 2. is something I do less gladly 3. is an inconvenient obligation 4. is time consuming 5. affects other obligations 6. other (open answer)
3	Simultaneous prescription of multiple medications (please tick one or more of the following options)	1. is no additional workload compared to a single prescription 2. is additional workload 3. requires additional time for explanation 4. requires additional effort be preparing medication planes 5. other (open answer)
4	Reduction of prescriptions (please tick one or more of the following options)	1. could save time 2. could reduce stress 3. could optimize workload at reception 4. could add time for the obligations 5. would not change anything 6. other (open answer)
5	How often do patients ask for prescription at different time points? (Please give an estimation of % of patients that join the practice)	Σ
6	Patients asking for prescriptions at different time points require additional work load. (please tick one or more of the following options)	1. I fully agree 2. I agree 3. same workload 4. I disagree 5. I fully disagree 6. Other (open answer)
7	Effective expenditure of time for prescription process (minutes)	Σ
8	Do changes in the rebates negotiated with payers have an influence on the workload? (please tick one or more of the following options)	1. No influence 2. Influence due to discussion with patients 3. In general time consuming 4. Query with physicians 5. Patients join practice more frequently
9	How often will a patient be referred back from the pharmacy to get "aut idem" permission per week?	Σ
10	Patients do not like copayment. (please give one answer only)	1. True for all patients 2. True for many patients 3. True for few patients 4. Not true

In the closed questions, it was allowed to tick more than one response. A maximum of 375 interviews was planned in the time period from 01. December 2013 to 31. January 2014. A total of 125 UCB employees were trained on the questionnaire and each employee was asked to conduct a maximum of 3 interviews prospectively in the time frame. The employees were distributed over the whole federal territory of Germany to avoid a regional bias. The completed questionnaires were sent to a centralized address in Monheim (Germany) for analysis. The survey was terminated once 375 interviews had been conducted.

This article does not contain any new studies with human or animal subjects performed by any of the authors.

Data Analysis

After finalizing the questionnaires, data were anonymized and sent for data analysis. According to the predefined investigational plan, data were summarized using basic descriptive methods and interpreted exploratively.

Results

A total of 375 interviews were performed between December 2013 and January 2014. This was the calculated number that could be performed in the time period planned for the study. A total of 202 of the MFA had a standardized prescription process in place and could report the effective time expenditure for the whole prescription process.

Evaluation of the distribution of questionnaires by geographical region showed that of the MFA surveyed, 20.8% were located in the Area of Regional Board of Panel Doctors Westphalia-Lippe, 12.7% in North Rhine, 12.7% in Rhineland-Palatinate, 11.0% in Baden-Württemberg, 7.5% in Hessen, 6.9% in Saxony-Anhalt, 5.8% in Schleswig-Holstein, 5.8% in Bavaria, 4.1% in Berlin, 2.9% in Saxony, 2.3% in Brandenburg, 2.3% in Thuringia, 2.3% in Lower Saxony, 1.7% in Saarland, 0.6% in Mecklenburg-West Pomerania, and for 0.6% this information was missing. An influence of geographical area or a difference between general doctors' practices and specialists' practices on the prescription process could not be identified.

Overall, 30.1% of MFA reported the prescription processes as being something they do gladly, whereas 69.9% rated it more negatively. In detail, it was reported as an inconvenient obligation by 21.4%, as time-consuming by 29.5% and as affecting other obligations by 28.9% (Figure 1).

A reduction of prescriptions was rated as beneficial on several aspects of daily business.

A total of 55.5% of MFA rated simultaneous prescription of multiple medications as an additional workload. In 11.0% simultaneous prescription of multiple medications required additional time for explanation.

In 48%, patients ask for prescription at different time points. Patients asking for prescriptions at different time points were considered by 81.5% of MFA to require additional work load.

The MFA rated that a reduction of prescriptions could save time in 51.5%, could reduce stress in 35.3%, could optimize workload at reception in 46.8%, and could add time for the

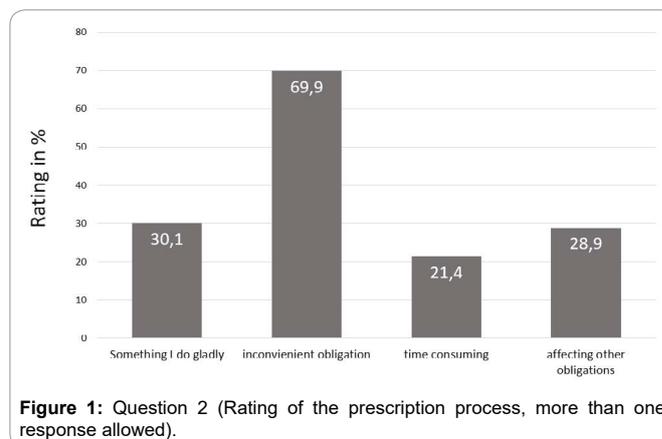


Figure 1: Question 2 (Rating of the prescription process, more than one response allowed).

obligations in 50.3%. Only 10.4 answered that a reduction of prescriptions would not change anything.

Around 6 Patients will be referred back from the pharmacy to get "nec aut idem" permission per week.

Copayment was rated as an issue for the patients in 97%. 2% did not answer this question and 1% did not rate copayment as an issue for the patient.

The mean time for a prescription to be processed (starting with the request by the patient and ending with the prescription signed by the physician) was 4.8 minutes (range: 1 to 30 minutes) and in the opinion of 51.5% of MFA, a reduction in the number of prescriptions could save time.

Changing pills/medications due to rebate contracts with health insurances are considered to increase workload by 65.2% of MFA because they need to be explained to patients, by 25.5% of MFA because they require further enquiry with physician, and by 38.7% of MFA because patients attend practice more frequently. A total of 52.5% of MFAs consider changes in rebates negotiated with payers to be generally time-consuming.

Discussion

In Germany, an increasing population of elderly people suffering from various chronic diseases will be facing a decreasing number of physicians [7]. Optimizing daily processes in the medical practitioner's office could provide more time for individual patient care. In the past, prescribing practice was a focus of scientific interest with regard to potential prescribing faults and prescription errors [8]. To our knowledge, this was the first survey to evaluate the influence of the prescription process on the workload in the practitioner's office.

Our survey was completed by MFA, because in Germany the MFA are deeply involved in the prescription process in the practitioner's office. Our data suggest that prescription has an influence on daily work as well as on the workload. Approximately 70% of MFA rated the prescription process negatively. Indeed, approximately one-third of MFA considered the prescription process to be time-consuming, and disruptive for the general workflow. Surprisingly, the time-expenditure for a prescription varied between 1 minute and 30 minutes. One reason for this variability might be that the prescription process is, in general, a procedure that is not standardized across practitioners' offices.

Some offices use a so-called "prescription telephone", via which the patient can order a prescription and get a time-frame to pick up his final prescription in the office. This allows the time required for the prescription process to be managed separately from time required for other processes of daily business. In other offices, the patients ask for and receive their prescriptions during their consultations, which makes the workload dependent on the number of consultations per day and does not provide flexibility to harmonize the process with other work-flow requirements. Overall, the MFA rated fewer prescriptions as beneficial for several aspects of daily business. Identifying and implementing optimal and time-saving processes could be an additional component to optimize patient care in the future.

Prescription of multiple drugs for one patient at different time points instead of simultaneously is considered by 81.5% of MFA to result in additional workload in the practitioner's offices, and in addition, 45.5% of MFA consider that simultaneous prescription of multiple medications is additional workload compared to a single prescription. An obvious solution to reduce the additional workload incurred by the prescription process would be to assess whether all regularly prescribed medications are necessary or whether some medications could be stopped [9]. Another approach could be the prescription of fixed-dose combination medications or 'polypills', whenever available, to reduce the number of single prescriptions per time-interval. In addition to diminishing the MFA workload, this could decrease the patients' pill burden and improve convenience for the patient [5] and consequently improve patient compliance [2,3], which could have a positive impact on the long-term outcome of chronic diseases [1].

An additional challenge related to the prescription process that we have identified are so-called rebate contracts. In Germany, as of 1 April 2007, pharmacists who complete prescriptions covered by the statutory health insurance system (Gesetzliche Krankenversicherung, GKV) are required, whenever possible, to dispense a preparation that contains the same active substance for which a rebate contract is in effect. This means that, due to rebate contracts, one patient might receive different generic preparations with every few prescriptions. Changes in color and shape of the pills lead to confusion at the patient level [5]. Furthermore, approximately two-thirds of MFA have found that changes to the patient's pills/medications due to rebate contracts with health insurances need to be explained to patients and approximately half perceive these changes to be time-consuming. Consequently, about 25% of MFAs reported that these changes in medications required further enquiry with the physician, which also has an influence on the time that medical practitioners have available for patient care.

As a limitation of this survey, interviewer bias may have occurred because the interviews were conducted by members of a pharmaceutical company instead of an independent and neutral investigator. We tried to avoid this by asking the employees to perform the interviews in the next three offices they visited but participating MFA may not fully represent the population of MFA working in general practitioner's offices in Germany although they were located in different regions of Germany. Another limitation is that the questionnaire was not validated and that an option to provide an open answer was allowed for many of

the questions. The reason that open answers were included was to identify additional issues not already covered by the range of answers provided as options for selection. Lastly, this survey did not analyze in detail the prescription processes at each office; the information we obtained on how each office processed prescriptions was the result of a limited number of open answers to question 2 (prescription process). Systematic collection of further information on how the different offices handle the prescription process should be part of further investigations, and could provide knowledge on best practices.

Conclusion

Handling of prescriptions is a process which has an influence on the workload of the physician's office. The results of our survey suggest that there is a need to identify and define processes to optimize the prescription process at an MFA level. At the physician's level, a reduction of numbers of prescriptions per patient (and consequently a lightening of the workload) could be achieved by considering whether patients require all their medications and/or whether individually prescribed monotherapies could be replaced with fixed-dose combinations (if available). Optimization of general prescription processes, starting with a rationalization of the patients' medication needs and ending with optimal handling of patient prescription requests may result in more time available for patient management in daily practice.

Acknowledgements

Interviews were performed by employees of UCB Innere Medizin GmbH & Co. KG, Monheim (Germany).

A. Noetel and O. Randerath are employees of the Medical Department of UCB Innere Medizin GmbH & Co. KG (Germany). L. Möckel is employee of the Medical Department of UCB Pharma GmbH. KG (Germany).

All named authors meet the international Committee of Medical Journal Editors (ICMJE) criteria for authorship for this manuscript, take responsibility for the work as a whole, and have given final approval to the version to be published.

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