Prescriber Acceptance Rates of Pharmacist Recommendations in a Home Infusion Setting

Rachel Dellevar, PharmD[1] | Vien-Son Pham, PharmD[1] | Tiffany Fancher, PharmD[1]

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Introduction

Pharmacists receive medication-focused training that allows them to offer a unique perspective when it comes to patient care, medication safety, and therapeutic monitoring. It is common practice for pharmacists to provide recommendations to prescribers regarding many different aspects of patient therapies, including recommendations for monitoring parameters or therapy changes to improve patient safety. The outcomes surrounding these recommendations have been previously evaluated in various different areas of pharmacy, including hospital, retail, and managed care settings, but have not yet been analyzed in a home infusion pharmacy setting. This study will provide better understanding of the role of home infusion pharmacists in patient care, as well as give insight into pharmacist clinical productivity and the potential impact that home infusion pharmacists can have on medication therapy management through clinical intervention.

Purpose

The primary purpose of this study is to determine how often various types of pharmacist recommendations made within a home infusion pharmacy setting are either accepted without modification, accepted with modification, or rejected. Other objectives are to evaluate reasons for the rejection of recommendations, and to analyze the time to provider response.

Methods

This prospective qualitative study was conducted in a home infusion pharmacy located in Wisconsin from October 22, 2019 to January 31, 2020. During this time, pharmacists were asked to document the details of each recommendation made, including the type of recommendation, associated medication(s), time to provider response, a brief description of the recommendation, the outcome of the recommendation, and if applicable, the reason for rejection. Recommendations were included in the analysis if they were made by a pharmacist and if they were in regards to a patient serviced by the pharmacy where the study was conducted. Fisher's Exact Test was used to evaluate the relationship between recommendation type and prescriber response outcomes.

Results

Table 1: Outcomes per Recommendation Type

Recommendation type	No. accepted without modification (%)	No. accepted with modification (%)	No. rejected (%)
Change in dose (n=22)	17 (77.3%)	3 (13.6%)	2 (9.1%)
Change in monitoring (n=10)	7 (70%)	2 (20%)	1 (10%)
Start, stop, or change in drug (n=9)	8 (88.9%)	0 (0%)	1 (11.1%)
Change in administration (n=6)	3 (50%)	2 (33.3%)	1 (16.7%)
Other (n=4)	1 (25%)	1 (25%)	2 (50%)
Total (n=51)	36 (70.6%)	8 (15.7%)	7 (13.7%)

Table 1. A total of 51 recommendations were made during the course of this study, averaging 3.4 recommendations per week. Of all the recommendations made, 43.1% were related to a change in the prescribed dose, 19.6% were related to a change in monitoring parameters, 17.6% were related to either starting, stopping, or changing a prescribed drug, 11.8% were related to changes in the administration of a drug, and 7.8% fell into the category of 'other'. Overall, the majority of all recommendations were accepted without modification. Using Fisher's Exact Test, no significant difference was found between the type of recommendation and the outcome of the prescriber response (p= 0.2165).

Figure 1: Therapies for which Changes Were Recommended

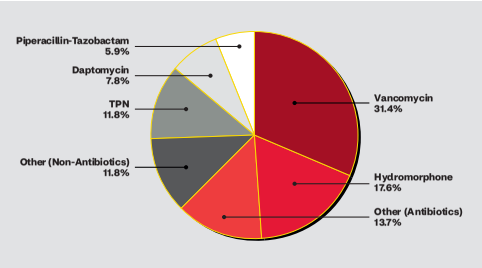

Figure 1. Compared to all other therapies, the greatest number of recommendations were made in regards to vancomycin (n=16). In total, 58.8% (n=30) of the recommendations were made in regards to antibiotic therapies, while 41.2% (n=21) of the recommendations were made in regards to non-antibiotic therapies.

Table 2: Reasons for Rejection of Recommendations

Reason for Rejection	No. (%; n=7)
Prescriber had access to additional information not available to the pharmacist	4 (57.1%)
Prescriber exhibiting extra caution	2 (28.6%)
Unable to accomodate request	1 (14.3%)

Table 2. Recommendations were commonly rejected due to prescribers having access to information that the pharmacist did not have access to, such as institution-related policies, or patient history not included in the HPI. One of the recommendations was rejected due to time constraints surrounding lab values, resulting in the prescriber being unable to accommodate the request.

Figure 2: Time to Prescriber Response

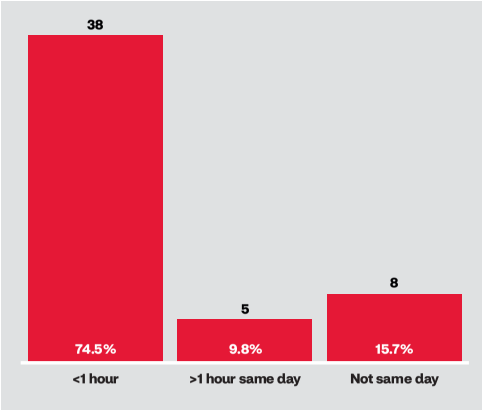

Figure 2. The majority of recommendations (84.3%; n=43) received responses within the same business day of the request, and 15.7% (n=8) received responses the next business day or later. Of the recommendations that received responses during the same business day, 88.4% (n=38) were received within 1 hour of the request, thus reducing the delay in service to the patients.

Discussion

Though we did not see any statistically significant differences in the frequency of the outcomes depending on the type of recommendation that was made, we did find that a large majority of the recommendations made to prescribers were accepted without modification. Most often the reasons for rejection were related to information that was not readily available to the pharmacist, such as patient history not included in the HPI, or institutional policies from the prescriber's place of practice. Some of the rejections also stemmed from the prescriber choosing to exert extra caution. The majority of responses were received within an hour of the time the recommendation was made, which meant that clinicians were able to have their concerns addressed in a timely manner and thus reduced the extent of the time that shipments were delayed. This study was completed using a relatively small sample size, therefore, future studies are needed to evaluate the generalizability of these findings.

Conclusions

Overall, we found that recommendations made by home infusion pharmacists were most commonly accepted without modification by prescribers, regardless of the type of recommendation made. Responses were also often received in a timely fashion which reduced the delay of shipments. Limitations include the limited geographical area encompassed by this study as well as the short duration of the study, resulting in a relatively small sample size. While this study provides initial insight into the impact that home infusion pharmacists have on patient care, more studies with larger sample sizes are still needed to allow for a more complete understanding of the influence that pharmacists have on medication therapy management in home infusion settings.

References

1. Doellner JF, Dettloff RW, Devuyst-Miller S, Wenstrom KL. Prescriber acceptance rate of pharmacists recommendations. *Journal of the American Pharmacists Association*. 2017;57(3):S197-S202. doi:10.1016/j.japh.2017.03.002.
2. Mann A, Esse T, Abughosh SM, Serna O. Evaluating Pharmacist-Written Recommendations to Providers in a Medicare Advantage Plan: Factors Associated with Provider Acceptance. *Journal of Managed Care & Specialty Pharmacy*. 2016;22(1):49-55. doi:10.18553/jmcp.2016.22.1.49.
3. Schneider PJ, Pedersen CA, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Dispensing and administration—2017. *American Journal of Health-System Pharmacy*. 2018;75(16):1203-1226. doi:10.2146/ajhp180151.
4. Somers A, Robays, Paepe D, Maele V, Petrovic M, Perehudoff. Evaluation of clinical pharmacist recommendations in the geriatric ward of a Belgian university hospital. *Clinical Interventions in Aging*. June 2013;703. doi:10.2147/cia.s42162.

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