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BACKGROUND

Pharmacist professional services are paramount to the success of home infusion patient care. The literature reveals studies tracking a pharmacist's time have been conducted. Unfortunately, the investigations did not include home infusion pharmacy as the work setting. The published studies included retail, clinical, hospital, ambulatory, academics, and a free clinic dispensary. Research specific to home infusion pharmacist professional services and the time utilized has not been reported. Studies that investigate tasks and quantify the amount of time to complete a given task are known as time utilization or time and motion studies and are common in health care because they assist in understanding the time requirements specific to a health care profession. Time utilization studies offer a precise standard in quantifying health care workers' time expenditures on clinical activities and provide valuable insight into system specifications and workflow design.

PURPOSE

The primary purpose of this study was to determine the amount of time a home infusion pharmacist spends managing and caring for a home infusion patient. A secondary analysis was performed to determine the time and task differences between therapy types and methods of administration.

METHODS

Pharmacists tracked the time spent on a predetermined list of patient tasks using a formatted Excel® spreadsheet. Data collected therapy types, dispensing cycles, task categories, and task examples. Data was collected January-October 2021. Time data related to at least two dispensing cycles. Data was de-identified and exempt from IRB.



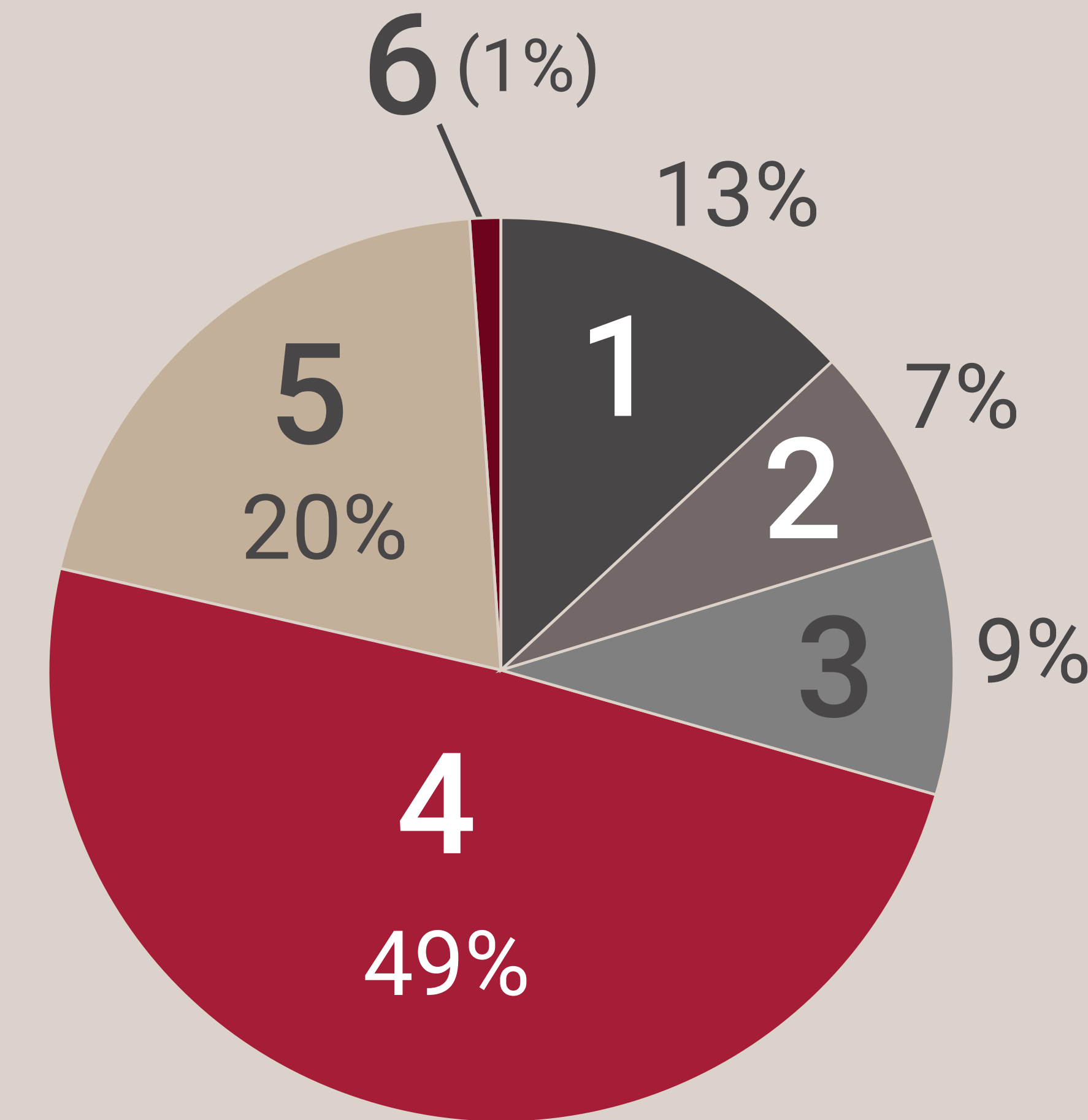
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PHARMACIST PROFESSIONAL SERVICES TASK CATEGORY

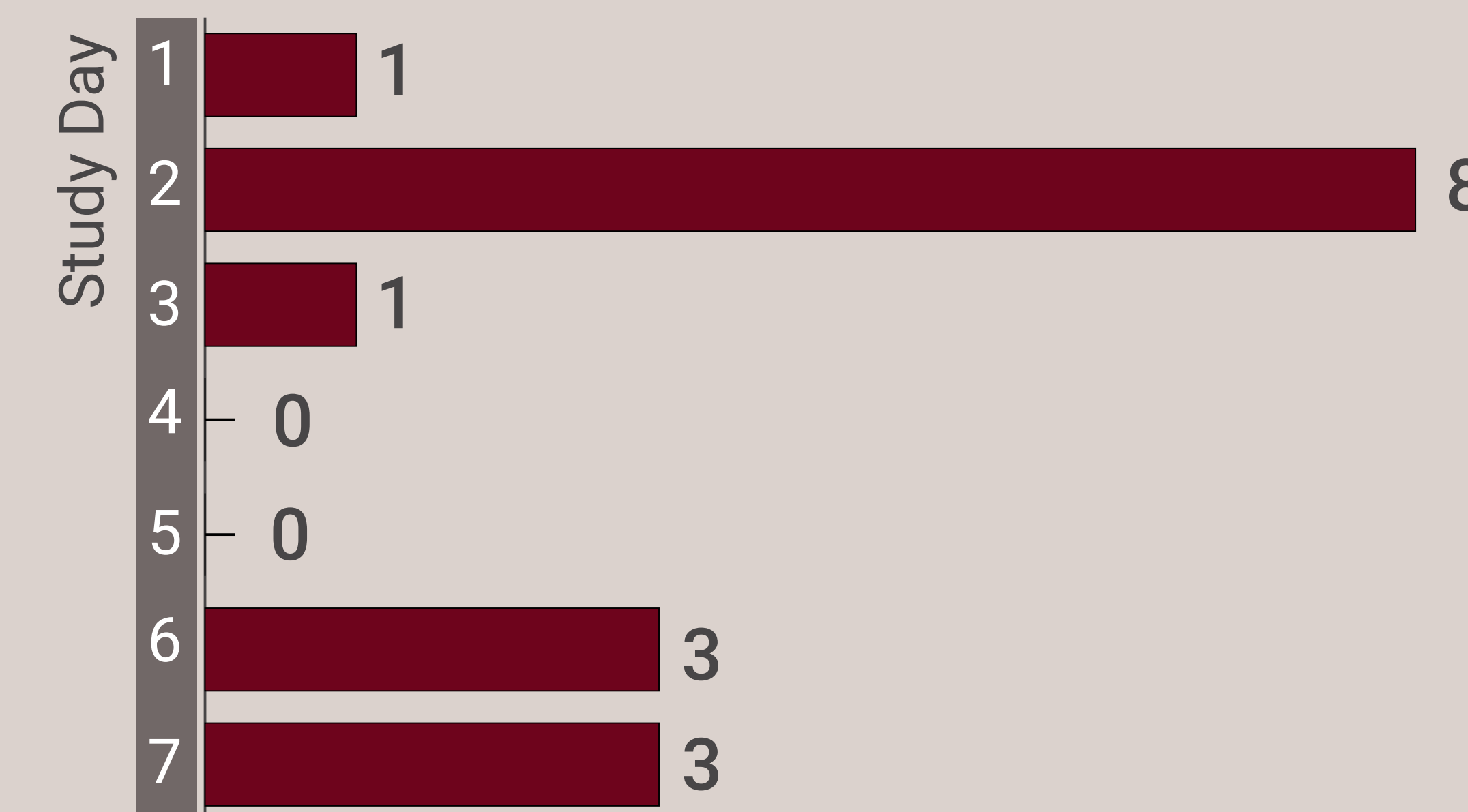
Task Category	Examples	Task (N)	% of Total N
1 Performing patient assessments and documenting the assessment results in the patient EMR	<ul style="list-style-type: none"> Review of current illness Review of past medical history Review of current medication list Review of prescribed infusion medication Assessment of home environment/caregiver status Assessment of ambulatory status and other physical limitations that may interfere with self-administration Assessment of vascular access device compatibility with prescribed medication Interventions to facilitate initiation of home infusion therapy 	53	13.30%
2 Developing, implementing, and documenting the plan of care	<ul style="list-style-type: none"> Selection of administration method Establishing goals of therapy Reviewing existing, and obtaining supplemental physician orders for prevention of acute infusion reactions, access device de-clotting agents, access device maintenance solutions, etc. Developing a monitoring plan Developing an access device maintenance plan Patient education plan Interventions performed Documenting and updating the care plan in the EMR 	29	7.20%
3 Clinical monitoring and related intervention activities	<ul style="list-style-type: none"> Obtaining, tracking, and trending lab results Lab evaluations Interventions performed Recommendations made because of monitoring activities Documentation of monitoring and interventions in the EMR 	36	9.00%
4 Drug preparation and compounding activities	<ul style="list-style-type: none"> Dispensing Determining appropriate beyond use dates Compounding process oversight (patient specific) Supply selection Shipping Documentation of compounding, dispensing, and delivery activities 	197	49.30%
5 Care Coordination and communication	<ul style="list-style-type: none"> Telephonic interactions and the time spent performing the task Patient communication Prescriber communication Internal communication (i.e., billing) Only include if not able to fit into a category above 	81	20.30%
6 Other patient-related work tasks	<ul style="list-style-type: none"> Case conferences Work not covered above 	4	1.00%

FREQUENCY

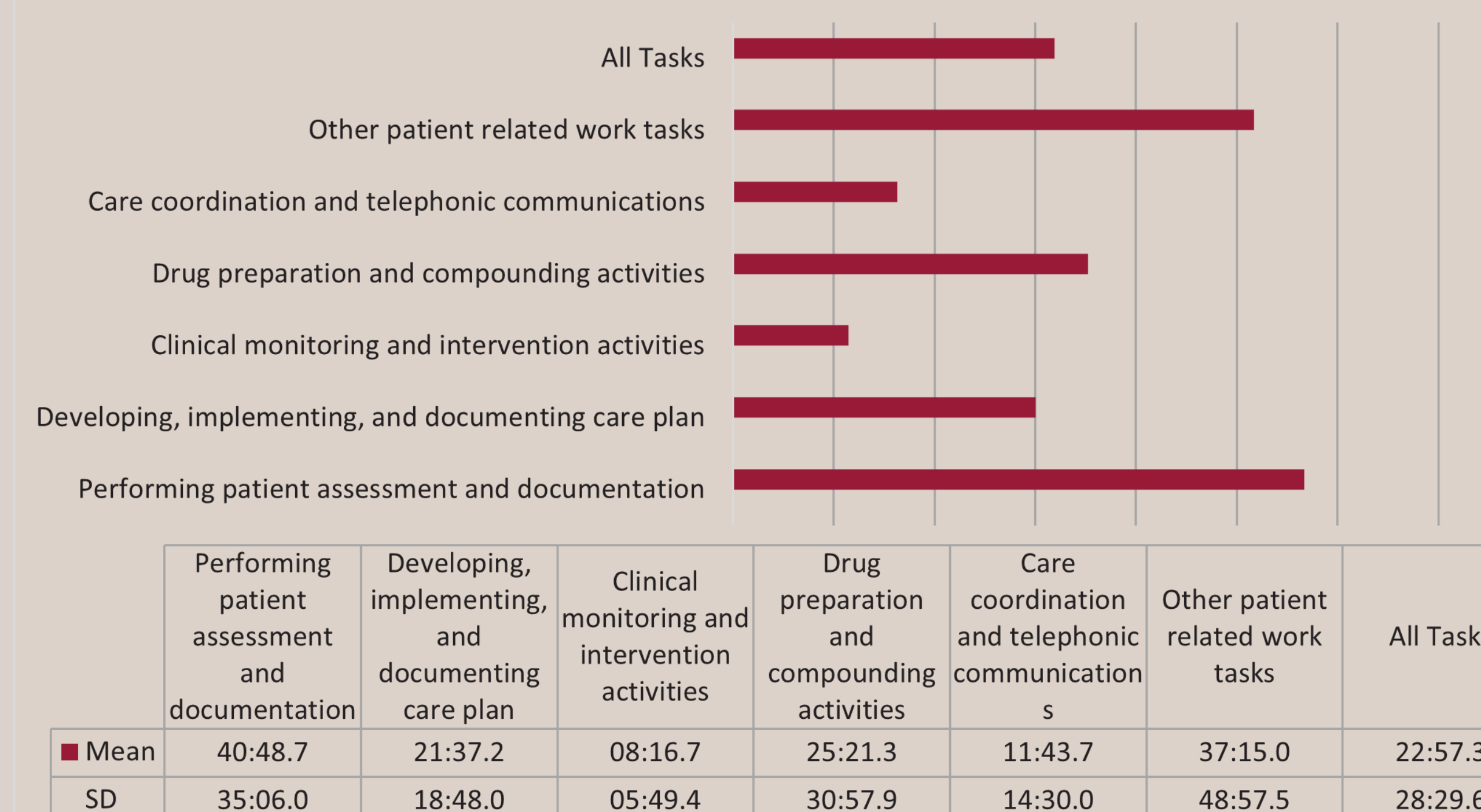
PERCENTAGE OF TOTAL PHARMACIST TASKS BY CATEGORY



NUMBER OF PHARMACIST TASKS/DAY ANTI-INFECTIVE PATIENT/AMB. PUMP



MEAN PHARMACIST TIME (MINUTES/SECONDS) PER TASK



RESULTS

Pharmacists completed 400 tasks for 30 patients over 367 total patient study days. Of the six categories of tasks, half (50.7%) of all pharmacist work is dedicated to patient care activities, while the remaining 49.3% involved drug preparation and compounding activities. The mean tasks per patient was 13.33 (SD=7.03) and the mean tasks per patient per day was 1.33 (SD=.85). Anti-infective patients using an ambulatory pump required the most tasks per day (2.77, SD=1.20) and anti-infective patients using an IV push required the least (1.09, SD=.84). The mean time per task was 22.96 minutes (SD=28:29). Even though anti-infective patients who use a pump required the most time per day, they averaged the least number of study days (4.25) while anti-infective patients using an IV push averaged 14.39 study days.

DISCUSSION

This study results show home infusion pharmacist professional work is nearly evenly divided between patient care activities (50.7%) and drug preparation and compounding tasks (49.3%). This study defines and quantifies the professional contributions of pharmacists in the home infusion site of care. This time utilization data is valuable for understanding the typical work required to efficiently provide a high-quality home infusion service.

CONCLUSION

This pharmacist time study illustrates the type of tasks and the amount of time dedicated to home infusion professional services. Data shows that patient care is highly customized, and there are trends that can be applied to understanding a pharmacist's workflow.

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