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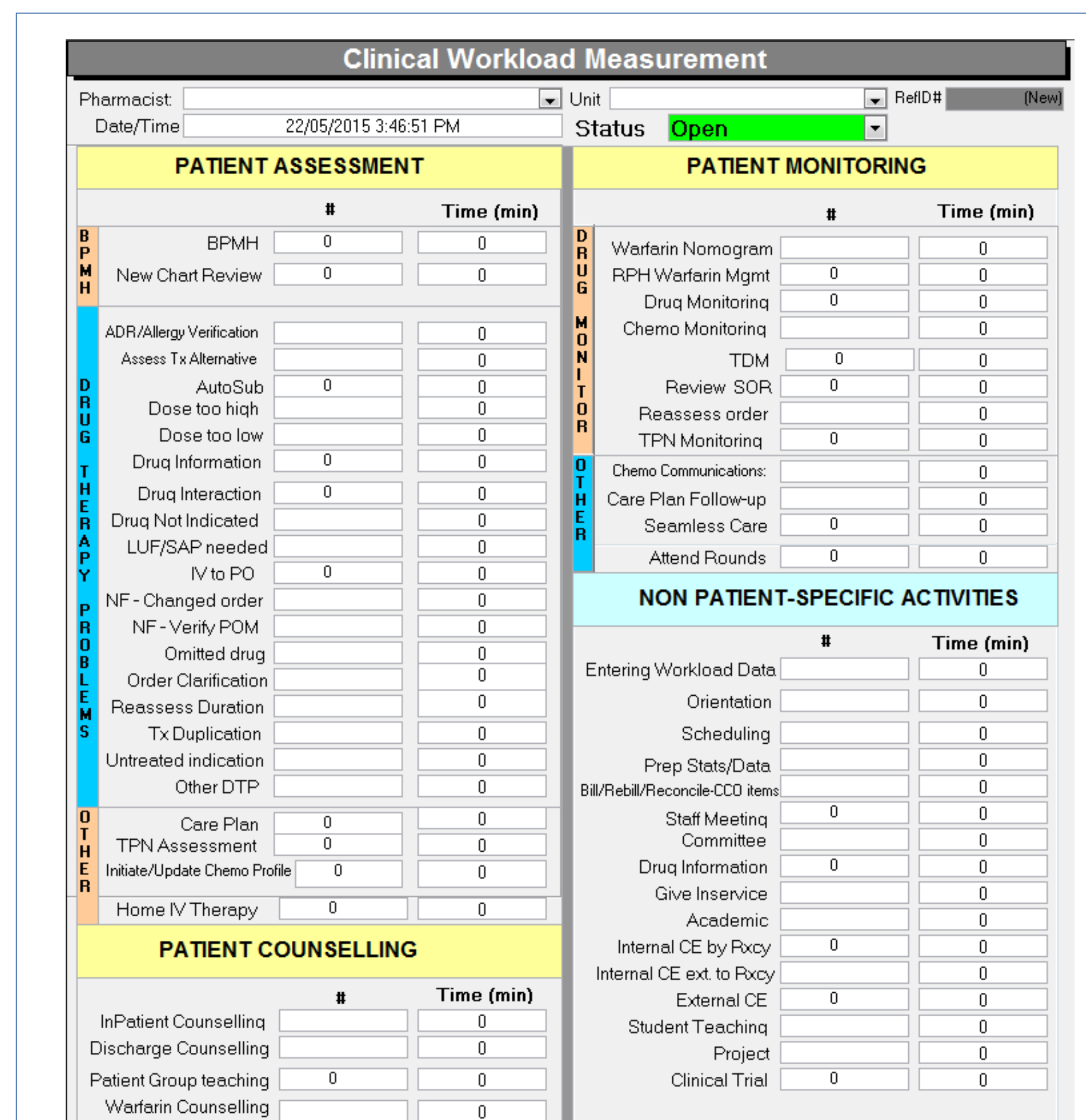
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BACKGROUND

- The University of Toronto Leslie Dan Faculty of Pharmacy recently amended the Doctor of Pharmacy (PharmD) curriculum to include a series of 5-week Advanced Pharmacy Practice Experience (APPE) rotations in the final year of the program. Students must complete a minimum of two direct patient care rotations in an institutional setting.
- Although pharmacy students enrolled in the new curriculum are involved in a variety of clinical and non-clinical activities, their contribution during experiential training has not been examined previously.
- We endeavored to analyze the time spent by APPE pharmacy students on the various types of activities during their rotations at North York General Hospital (NYGH).

METHODS

- University of Toronto PharmD candidates who were completing a Direct Patient Care (DPC) APPE rotation at North York General Hospital during the 2014/2015 academic year were asked to document workload measurements using the NYGH clinical pharmacist workload measurement tool.
- This is a Microsoft Access database consisting of fields to record the time spent on each type of clinical and non-clinical activity (Figure 1).
- An orientation to the tool was provided to the students by the Pharmacy Education Coordinator at the start of each rotation.
- Data collected between May 12, 2014 and April 3, 2015 were analyzed.



The screenshot shows a software interface for tracking pharmacy student activities. It is divided into several sections: Patient Assessment, Patient Monitoring, Patient Counselling, and Non-Patient-Specific Activities. Each section contains a list of activities with columns for the number of occurrences and the time spent in minutes. For example, under Patient Assessment, activities include BPMH, New Chart Review, ADR/Allergy Verification, etc. Under Patient Monitoring, activities include Warfarin Nomogram, RPH Warfarin Mgmt, Drug Monitoring, etc. Non-patient activities include Entering Workload Data, Orientation, Scheduling, etc.

Figure 1. The workload measurement tool

RESULTS

- Twenty PharmD candidates completed 31 DPC APPE rotations during the study period. Three additional students did not use the workload measurement tool and were not included in the analyses.
- Students spent on average 23.9 days per rotation on site. A total of 235,734 minutes of workload were recorded. The mean documentation adherence rate was 73.1%. Activities were classified into 4 main categories (Figure 2).

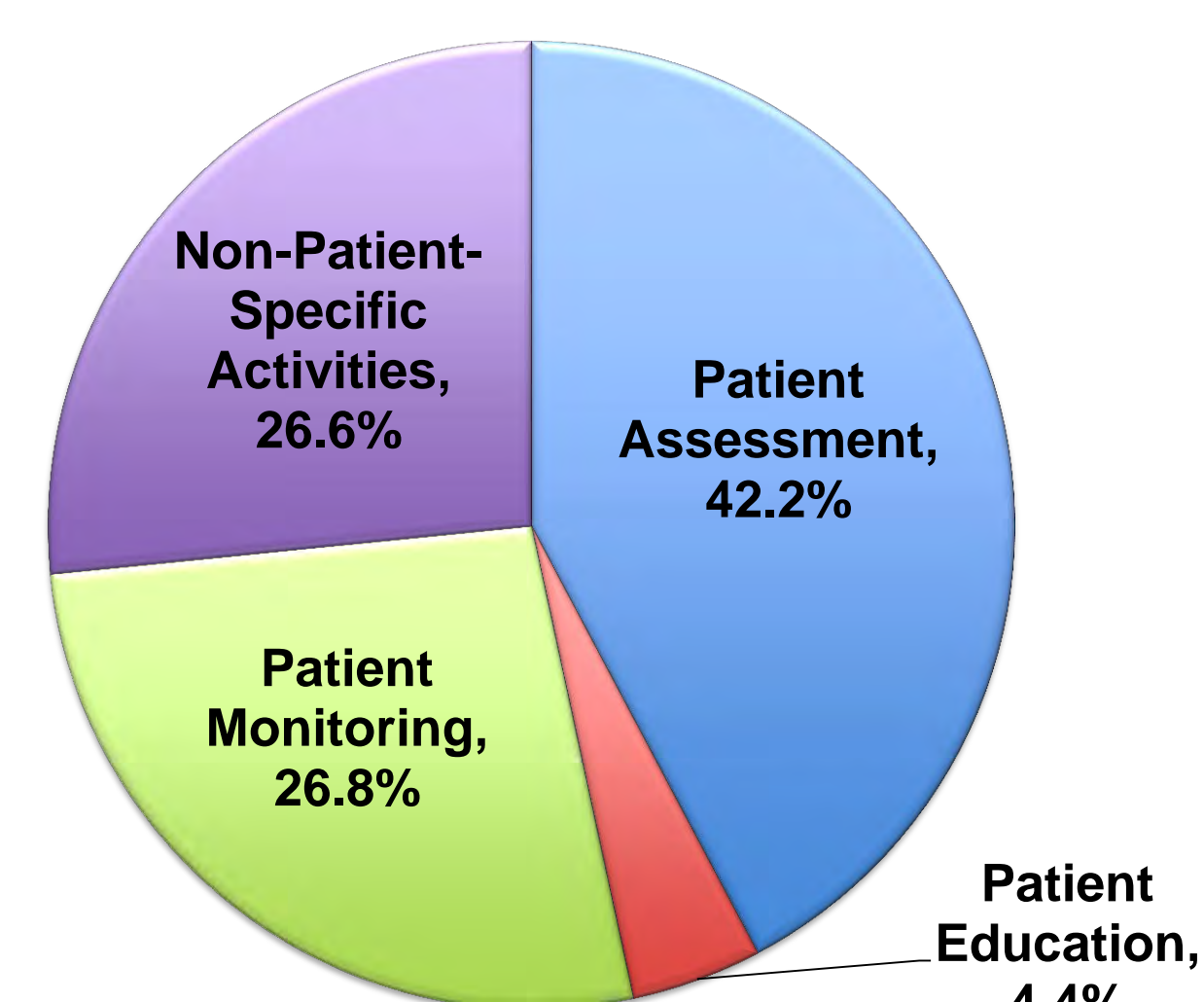


Figure 2. The four main categories of activities and the proportion of time spent on each by students.

- Detailed analyses of the time spent on individual activities within each of the 4 main categories are illustrated in Figures 3a to 3d.

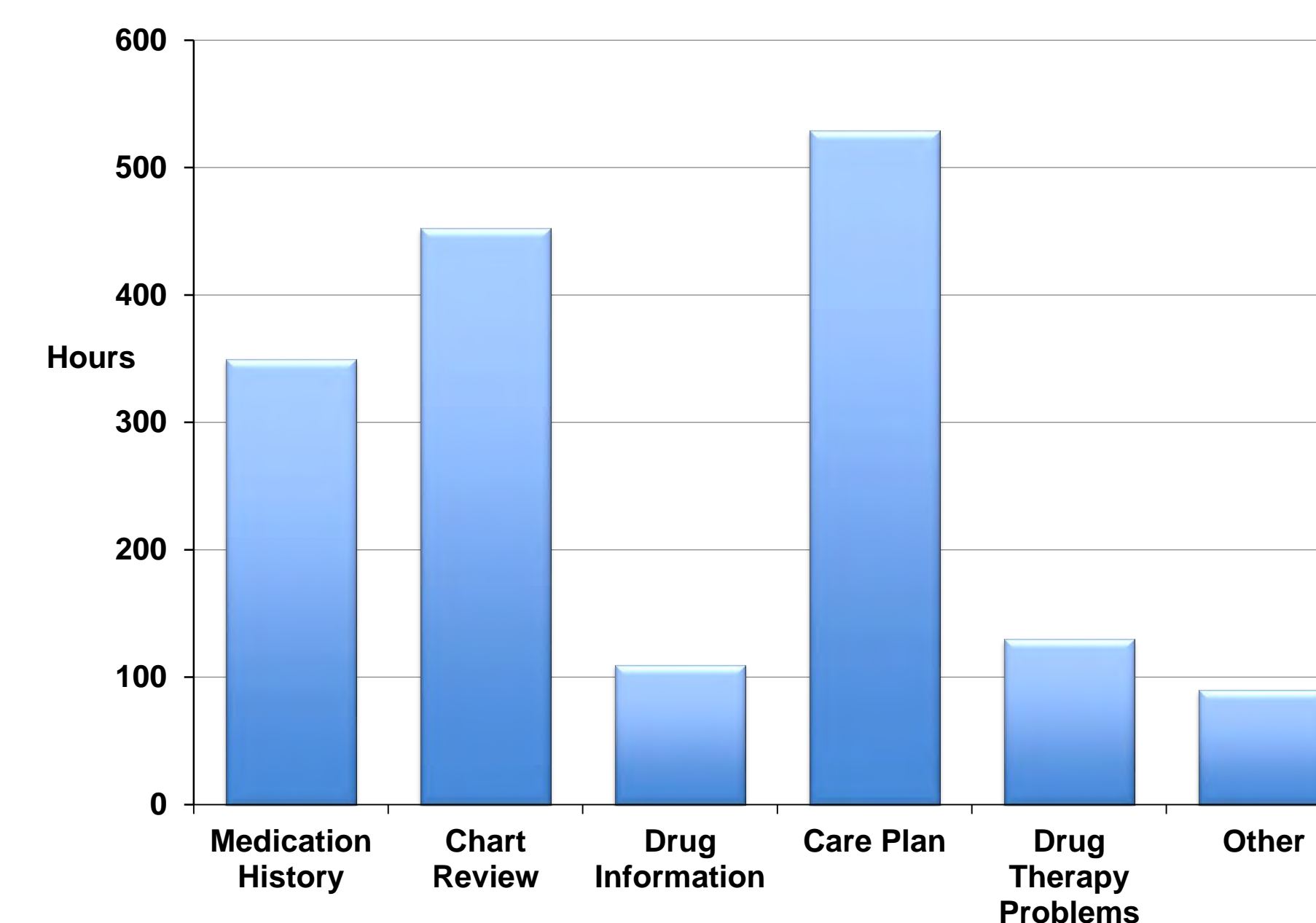


Figure 3a. Time spent by pharmacy students on patient assessment activities.

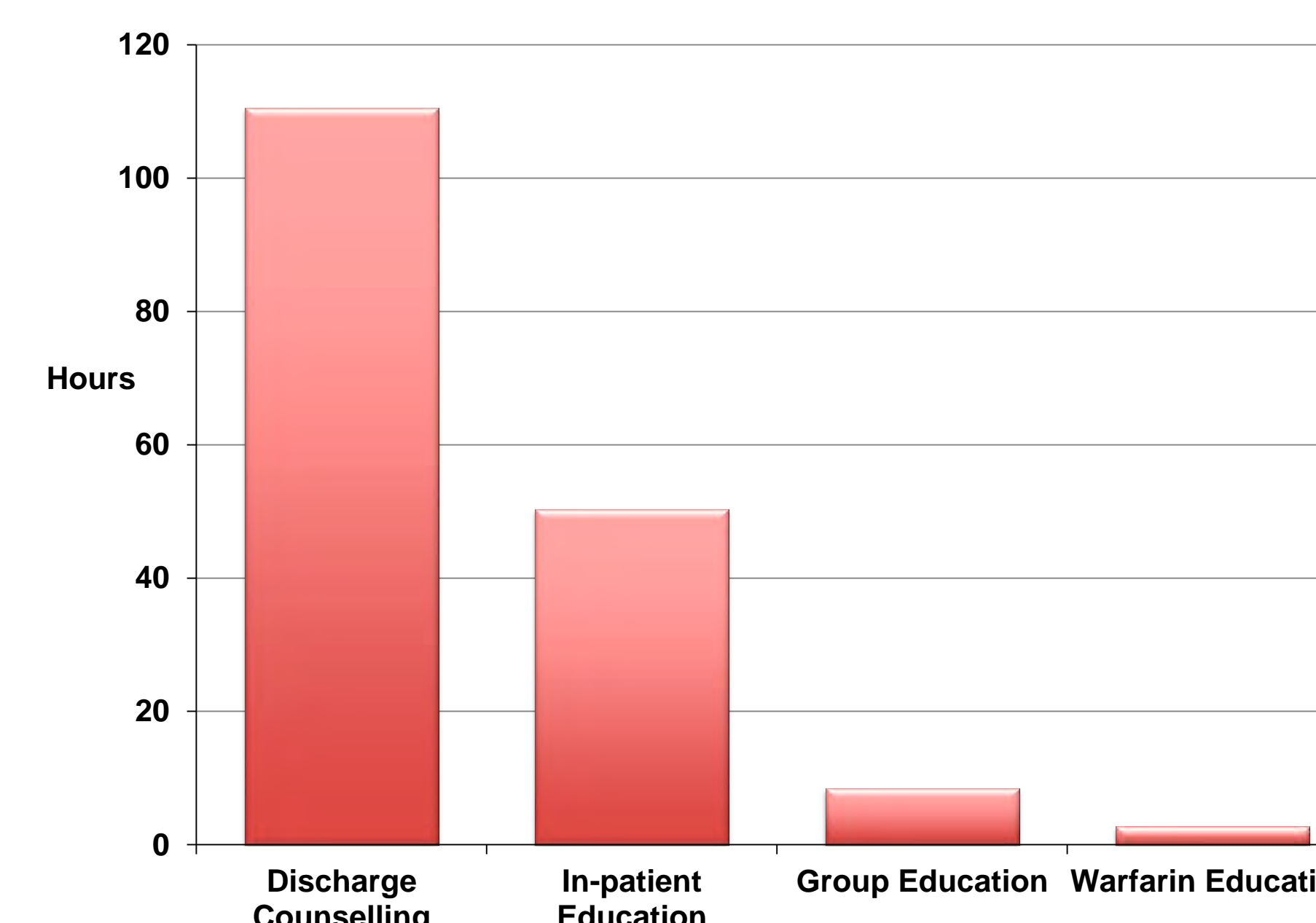


Figure 3b. Time spent by pharmacy students on patient education activities.

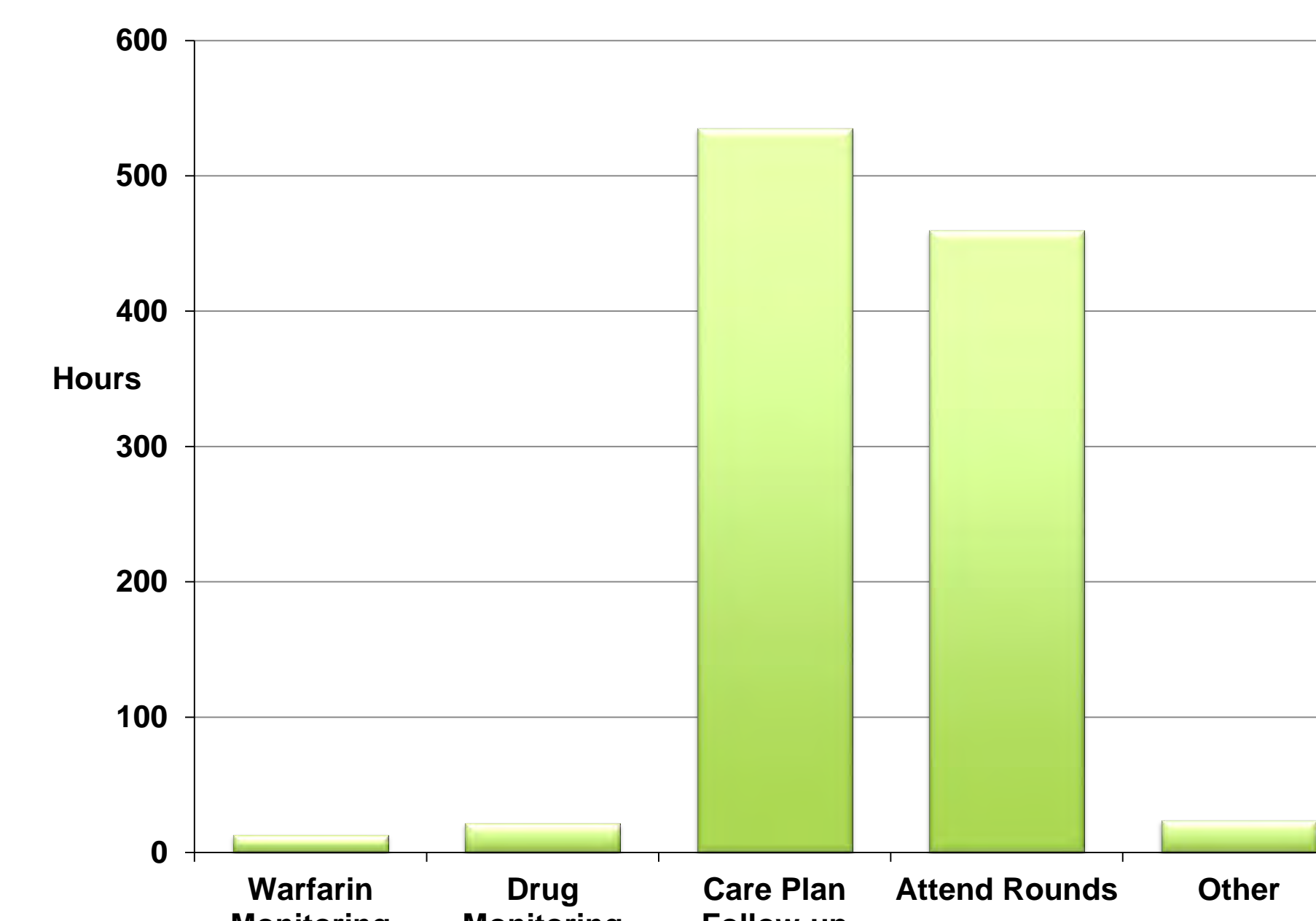


Figure 3c. Time spent by pharmacy students on patient monitoring activities.

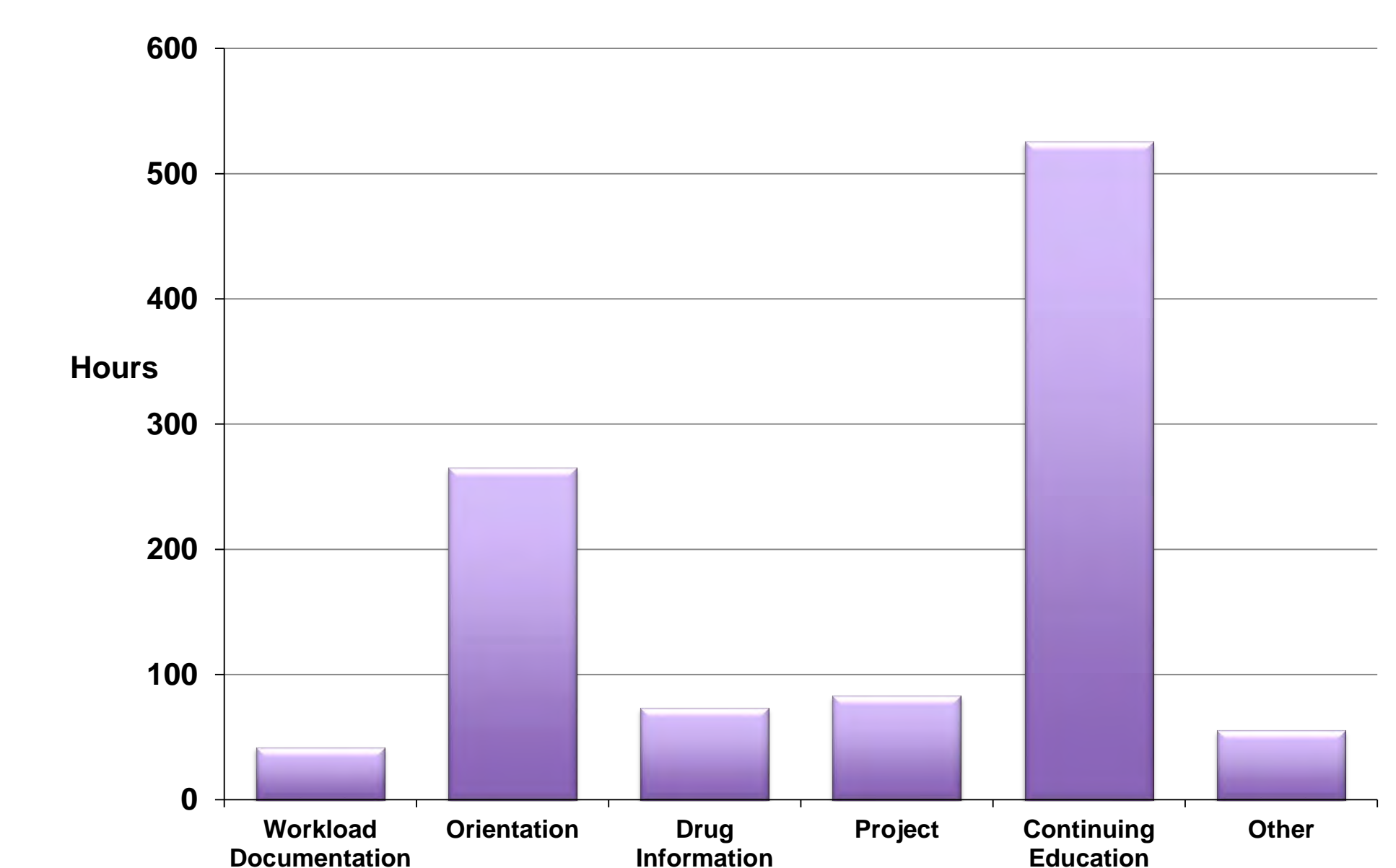


Figure 3d. Time spent by pharmacy students on non-patient-specific activities.

DISCUSSION

- Pharmacy students demonstrated good compliance to workload documentation in this first attempt of adopting the pharmacist clinical workload measurement tool. Recording of workload took up about 1% of students' time.
- Students spent a majority of their time on clinical activities such as patient assessment (consisting mainly of care plan development). This was followed by patient monitoring (consisting mainly of care plan follow-up), then non-clinical activities (consisting mainly of continuing education events) and lastly, patient education.
- There were differences in how some workload categories were interpreted. Periodic follow-up with the preceptors and clarification of how categories are defined may be useful.

NEXT STEPS

- Future research should aim to evaluate if there is a shift of pharmacist's workload of certain activities to the students.

ACKNOWLEDGMENT

- We thank all the pharmacy students who participated in workload documentation.