

Confidence and Preparation: Informing USMLE Step 2 Clinical Knowledge Exam Study Strategies

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Introduction

The USMLE Step 1 and Step 2 CK exams are central to medical licensure and the residency match process.

Traditionally, Step 1 has played a more significant role than the Step 2 CK exam in the residency match process, particularly as it relates to a student's prospects of securing an interview (1). As Step 1 transitions to pass/fail in 2022, the Step 2 CK exam score will become a more valuable tool for residency programs in evaluating applicants (2).

Students vary widely in their approach to studying for the Step 2 CK exam and there has been little data demonstrating approaches or tools that are effective for students preparing for the exam.

With the elimination of a score for Step 1, there is now a need to identify evidence-based study strategies to help students prepare for the Step 2 CK exam.

Methods

We distributed post-exam surveys to all second-year students in 2019 and fourth-year students in 2020/2021 at the David Geffen School of Medicine at UCLA within 1 month of receiving their exam score on the USMLE Step 1 or Step 2 CK exam, respectively (as applicable).

The survey included a mix of multiple choice and open-ended questions related to study schedules and strategies. Students were also asked to subjectively report their feelings of "exam preparedness" and "score satisfaction" for both exams.

The Step 2 CK post-exam survey asked students to compare their feelings of exam preparedness and score satisfaction between both tests using a 5-point scale, where 5 indicated feeling significantly more prepared or satisfied with Step 2 CK compared to Step 1, and 1 indicated feeling significantly more prepared or satisfied with Step 1 compared to Step 2 CK.

We compared findings on study strategies from the two surveys, and isolated data from students who stated they felt significantly more prepared for Step 2 CK than Step 1 to identify patterns in their study strategies.

Results

A total of 119 students completed the Step 1 Exam survey and 120 students completed the Step 2 CK Exam survey.

In the Step 2 CK Exam survey results, 51 (43%) students reported feeling much more prepared for Step 2 versus Step 1 and 43 students (36%) reported feeling much happier with their Step 2 CK score relative to their Step 1 score (Table 1).

Students also reported various study aids in Step 2 CK exam preparation, including prior experience with shelf exams and in-person clinical rotations, as well as studying for Step 2 prior to a "dedicated" exam study period (Table 2). Reported benefit of different shelf exams and in-person rotations in preparing for the Step 2 CK exam are shown in Figures 1 and 2 respectively.

The median number of weeks of dedicated for Step 1 was 6 weeks and 4 weeks for Step 2.

When comparing trends in study strategy, students tended to study fewer hours per day and fewer total weeks for Step 2 versus Step 1 (Figures 3 and 4).

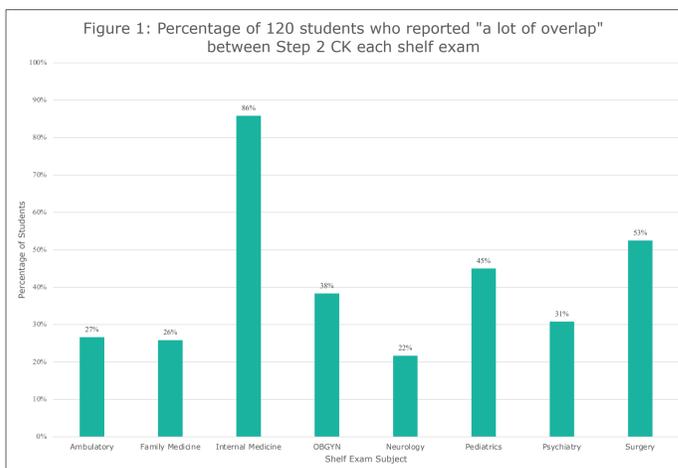
Results continued

Table 1: Reported Step 2 CK exam preparedness and score satisfaction

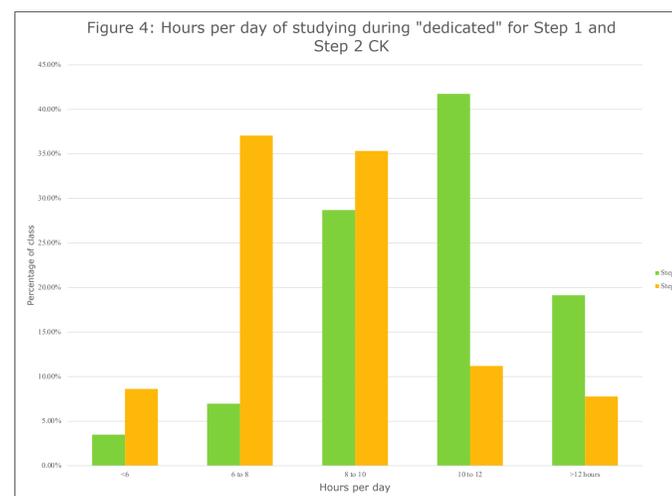
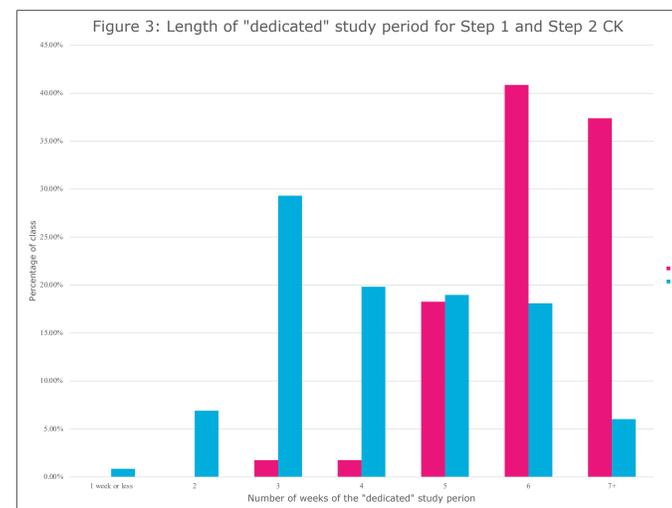
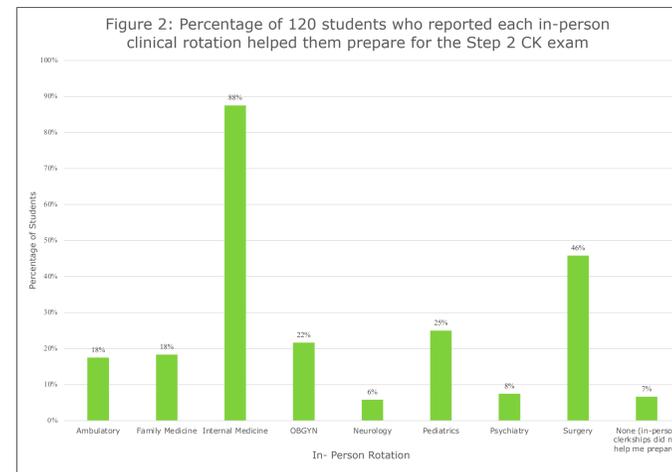
Reported relative exam preparedness	Percentage of students
Much more prepared for Step 2 versus Step 1	43%
Somewhat more prepared for Step 2 versus Step 1	24%
Equally prepared for both tests	14%
Somewhat less prepared for Step 2 versus Step 1	15%
Much less prepared for Step 2 versus Step 1	4%
Reported relative score satisfaction	Percentage of students
Much happier with Step 2 score relative to Step 1	36%
Happier with Step 2 score relative to Step 1	23%
Equally happy with both scores	28%
Disappointed with Step 2 score relative to Step 1	11%
Very disappointed with Step 2 score relative to Step 1	1%

Table 2: Study strategies that students reported to be helpful in preparation for Step 2 CK

Reported study strategy	Much more prepared for Step 2 compared to Step 1 n=51	All other students n=69	Total n=120
Start of Step 2 studying	-	-	-
Started studying for Step 2 prior to dedicated	55%	45%	49%
Only studied for Step 2 during dedicated	33%	49%	43%
Other/did not answer	12%	6%	8%
Reported experiences that helped prepare students for Step 2	-	-	-
Prior experience taking shelf exams	92%	83%	87%
Prior experience during in-person clerkships	59%	45%	51%
Prior experience studying for the Step 1 exam	25%	41%	34%



Results continued



Discussion

We conclude that "macro" factors, such as prior longitudinal experiences studying for shelf exams and working in clinical rotations, as well as length of dedicated period, have more impact on Step 2 CK preparedness than "micro" factors, such as hours studied per day during dedicated.

These conclusions were bolstered by the qualitative portion of the survey, in which students were prompted to provide open-ended comments on the study approaches that helped them best prepare for the Step 2 CK exam.

Many students reported that the timing their Step 2 exam near the end of third-year and their shelf exam preparation (particularly the Internal Medicine shelf exam) aided in their Step 2 exam preparation had a positive impact on their feelings of preparedness:

- "Internal Medicine was my last clerkship of [third year], and I planned to take Step 2 right after given the studying for the shelf would help me prepare for Step 2 as well."
- "Studying for shelf exams is a preparation for Step 2"
- "The concepts of internal medicine...will go a long way on studying for Step 2"

Students also reported that improved clinical judgement, from in-person rotations, helped them approach questions on the Step 2 CK exam:

- "I relied a lot more on intuition I built from my clinical experiences for Step 2"
- "Step 2 [studying] felt more manageable...given the clerkships and clinical relevance"
- "Step 2 is more clinically focused (i.e., differential, management), and I felt like my rotations for third year were practice to this thinking"

Overall, both our quantitative and qualitative findings support the value of clinical rotations, and corresponding shelf exams, particularly the internal medicine rotation, in preparation for Step 2 CK.

Conclusion and Recommendations

Our findings suggest that in general, students feel more prepared for the Step 2 CK exam than the Step 1 exam. Several factors help to explain why this may be the case: shelf exams, experience gained from clinical rotations and prior experience taking the Step 1 exam are cited as three of the most important factors that helped students feel prepared for Step 2 CK. In addition, students report a high value learning experience with the Internal Medicine shelf exam and rotation.

This study is limited in that it is confined to a single institution and is vulnerable to the biases inherent of survey-based studies. Given these preliminary findings, we anticipate further analysis of all student responses, including a statistical evaluation, to explore validated study approaches for success on the Step 2 CK exam.

We hope this research and further understanding of the topic will help to identify opportunities for curriculum-based enhancements to support students' preparation for their board exams. Student preparedness and performance on these exams may be determined in large part by the organization of the curriculum; to the extent that students are given time for both independent study and exposure to the knowledge and experiences needed to prepare for exams. As such, the burden for preparation should be seen as a shared responsibility of the learner and the institutions in which they are situated.

References

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