

# 'Can you watch me please?' An evaluation of supervised learning events for medical students

C4ME SUPPLEMENT

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Link to YouTube Video:  
<https://youtu.be/nwMaX06tLAI>

### **Background**

The Mini-Clinical Evaluation Exercise (Mini-CEX) is a formative tool utilised within the UK Foundation Programme to assess competence of junior doctors through observation of clinical tasks. (1) Feedback on strengths and weaknesses are given directly after the performance. (1) Research on the use of Mini-CEXs in the postgraduate setting has shown it is a valid way to measure progress. Barriers to its successful execution originated from tick-box attitudes, the misconception that it could be failed and a disregard of its benefit resulting in less time dedicated to providing feedback. (2,3) Studies found that comments were often devoid of any action plans, leaving postgraduates with little incentive to strive to improve. (4)

At present, there is inadequate research into the utility of the Mini-CEX for undergraduates. (5) It is critical that medical schools evaluate the use of the Mini-CEX to ensure fulfilment of its purpose in creating safe and competent doctors.

In Cardiff University, Mini-CEXs were introduced in 2013 to ensure early patient contact for students and a way to identify weaknesses in performance. They are used on placement from Year 3 through the platform MyProgress (MyKnowledgeMap). The documentation of Mini-CEX feedback changed from a paper-based format to MyProgress in 2018. Hence, data was now readily accessible, making it easier to conduct an exploratory study to acquire information on how Cardiff undergraduates use the Mini-CEX, alongside in-depth discussions on student perceptions.

## Methods

Using a mixed methods approach ensured that the meaning behind the quantitative data was explored qualitatively to fully reflect students' personal experiences. Ethical approval was granted by Cardiff University's School of Medicine Research and Ethics Committee.

The data from 1060 Mini-CEX forms from the 2018/19 cohort of Year 3 students from their first block of placement (September – November) was analysed.

Certain areas were examined closely; these were chosen based on available postgraduate literature on form analysis. The topics included: number of Mini-CEXs completed by the students, the tick-box feedback table and grade of the assessor completing the form. Inductive content analysis of the free-text feedback box was undertaken using the software NVIVO 12 (QSR International). (6)

The results from the Mini-CEX form analysis informed the questions explored during three semi-structured student focus groups including student perceptions and suggested modifications to the forms. Participants from Years 3-5 were recruited using self-selection. Thematic Analysis of the focus group transcripts was undertaken, looking for repetitive patterns/themes within the data. (7)

## Results

Below are the main results derived from the Mini-CEX form analysis:

- Students must complete at least 3 Mini-CEXs though are encouraged to undertake more. However, 134/279 (48.0%) students simply conducted the minimum.
- Students' performance is evaluated against 8 domains. The assessor ticks whether each domain was 'Excellent/Skillful', 'Proficient' or requiring 'Targeted-' or 'Significant Improvement'. Across all assessed domains, 'Excellent/Skillful', 'Proficient' was the modal response.
- 429/1060 (40.5%) of assessors were FY1 or FY2 doctors.
- 630 comments were generic, positive statements, for example, "Excellent history". Only 57 comments represented specific action plans.

Figure 1 illustrates the themes generated from the focus groups. Theme 1 details how the Mini-CEX helped develop students' professional identity through medical school. This was achieved through skill acquisition; it allowed them to gain self-confidence, carry out jobs similar to a doctor and obtain good techniques to mirror within their own style.

The reasoning underpinning theme 2 was that students felt the lack of targeted written feedback on their performance and 'feedforward' stemmed from a lack of observation and time invested by the assessors. Furthermore, both parties deemed that receiving 'Targeted-' or 'Significant Improvement' warranted a fail of the Mini-CEX, thus showing a misunderstanding of the process, further contributing to unreflective feedback. The choice to complete the minimum was attributed to the possession of a tick-box mindset.

Within theme 3, the reason why certain assessors were chosen was explored. 3rd and 4th years were inclined to choose Foundation doctors, as more exam-focused tips were given to guide preparation for their finals.

## Discussion

Previous research has discovered factors which can aid the development of a professional identity, for example, confidence, feeling involved in the clinical environment. (8) However, this was the first study to highlight the role of the Mini-CEX in assisting this development.

For both postgraduates and undergraduates, the lack of specific feedback is a major issue. (2, 9) In light of this study, a reason for this could be due to the Mini-CEX still being used as a summative exercise, echoing findings from published literature. (1, 10) Assessors may opt for generic statements even if improvement is recommended, as they do not want to be perceived as "failing" a student. As a 5th year student mentioned, "it makes improvement like a bad thing" emphasising that clarity needs to be sought.

One limitation included the small sample size leading to limited generalisability of findings. Further research is needed regarding assessors' perceptions of Mini-CEXs to tackle any misconceptions, with the hope that its learning potential would be recognised.

Suggestions for improvements to the forms have been implemented for 2020/21 due to this study.

## Lessons Learnt

As I have not had any previous experience, having to conduct primary research was daunting. However, I was determined to not let this overshadow my feelings of excitement in undertaking a project which would have a direct impact on the curriculum for present and future medical students.

The limited timeframe posed a challenge; I was overambitious and tried to evaluate the feedback data from all three placement blocks of Year 3. I then reluctantly analysed only one placement block, though I was apprehensive of how this would affect my conclusions. In hindsight, with any piece of research there will be obstacles and I should know my limits and weigh up what is feasible whilst ensuring a high quality of results. I will now be aware of this hence will make plans accordingly from the outset.

I wish to continue my interest in Medical Education research and an extension of this project is currently in the pipeline looking into whether effective feedback on Mini-CEXs is related to educational continuity.

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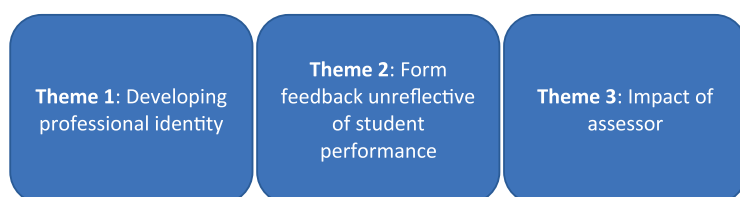


Figure 1: The 3 themes generated from thematic analysis of the focus group transcripts. Each theme tackles a different aspect of the students' perceptions of the Mini-CEX.



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