

Serving Up Learning Engagement, One Byte at a Time

Microlearning for the M4 to PGY-1 Transition

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Introduction

- The M4-PGY1 transition period provokes anxiety for students and residency programs in being “ready for day one.”
- M4 students receive mixed messages about need for pre-residency preparation, and may be more inclined to participate in low stakes preparatory programs.
- Programs may be challenged by new residents seeming ill-equipped, lacking knowledge or skills thought to be essential.
- Microlearning balances competing desires for consistent, quality preparation and minimal time burden and stakes.

Methods

- 25-day long curricula were prepared and offered to incoming PGY-1 in OB/GYN across the USA in summer 2021 and summer 2022, delivered by SMS.
- Curricula designed using principles of microlearning:
 - Short time commitment (<15-30 mins).
 - High quality audiovisuals (podcasts, infographics).
 - Nudge psychology (text messaging).
- Curriculum components designed by our team, or using quality free open access medical education work (#FOAMed) fitting into a microlearning ethos.
- Students completed pre-participation and eligibility surveys in 2021 and 2022.
 - Post-survey to assess acceptability, efficacy was completed in the 2021 cohort.



A standardized, expert-written curriculum delivered via SMS is feasible to design and implement.



The curriculum can be disseminated to a large, diverse cohort at low cost and high rate of completion.



The curriculum is acceptable to MS4s looking for low-stakes pre-residency preparation.



Short-term learning occurs after completion of the curriculum, based on a knowledge assessment.

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Results

- In 2021, 1057/1469 (71.9%) of eligible MS4s participated. In 2022, 922/1521 (60.6%) participated.
- Course completion rates exceeded 80% in both years (81.3% in 2021, 81.6% in 2022).
- Overall interactivity rate ranged from 53.3% - 66.4%.
- Students in the 2021 cohort improved scores on a post-course knowledge assessment from 62.4% → 74.0% (p<0.001).
- The course was considered “enjoyable” by 93.2% and “helpful” by 88.3% of participants.
- The overall cost of the intervention was \$2.54 per participant.

Conclusions

- Microlearning curricula delivered by text messaging is **feasible, acceptable, and efficacious** in short-term knowledge acquisition.
- These curricula can be deployed quickly at scale, allowing students equitable access to a high-quality residency preparation course.
- We are limited by short-term follow up, lack of linkage to faculty evaluations or other teacher-oriented outcomes, higher-order learning outcomes, or behavior changes.
- Future directions include building automated, individualized course performance reports to assess strengths/weaknesses; assessing long-term knowledge retention or comparisons to other offerings; and deployment of microlearning curricula in additional contexts.