The Journal of Education in Perioperative Medicine

Brief Report

Practical Insights From a Pilot Program: Off-Cycle Residency Start During the COVID-19 Pandemic

Logan Jones, MD FACP
David Jones MD, MBS, MCR
Joyce Hollander-Rodriguez, MD
Amy K. Miller Juve, EdD, MEd
Maya Severson, MPH
Allison Fraser-Brewer
Lalena M Yarris, MD, MCR

Introduction

The traditional July 1 start date for graduate medical education (GME) programs in the United States has remained largely unchanged for generations despite growing calls for greater flexibility in medical training. The movement toward competency-based medical education (CBME) has gained momentum over the past decade with particular interest in competency-based time-variable (CBTV) training models.[1,2] However, implementing variable start dates in US residency programs has faced numerous logistical and systemic barriers, leaving few examples of successful off-cycle entry programs.[3]

The COVID-19 pandemic, although devastating, created an unexpected catalyst for educational innovation. As health care systems faced unprecedented workforce strains in early 2020, medical schools nationwide considered early graduation options for their senior students.[4] This crisis presented a unique opportunity to pilot an off-cycle residency entry program at Oregon Health & Science University (OHSU), where a competency-based undergraduate medical curriculum had already enabled earlier graduation for many students.[5] This educational case report shares key insights and practical considerations from our experience implementing off-cycle GME entry during the pandemic, offering descriptive findings for programs considering similar innovations in residency start dates.

Pilot Program Context and Implementation

In early 2019, OHSU GME leaders approached residency programs about a proposal to allow medical school graduates to start residency training before July 1, leveraging the school's competency-based curriculum that enabled early graduation. When the COVID-19 pandemic emerged, coinciding with the 2020 National Residency Match Program (NRMP), the Senior Associate Dean of Education rapidly accelerated this proposal in the context of an immediate need to bolster the health care workforce during the pandemic. GME approached all programs with matched OHSU students slated for early graduation in the spring of 2020 to offer the option of early residency matriculation.

Three OHSU-affiliated residency programs participated in the pilot: anesthesiology (urban academic), emergency medicine (urban academic with community rotations), and family medicine (rural community-based university administered program). The pilot enabled OHSU medical school graduates who matched to these programs through the NRMP to begin their training approximately 2 months before the traditional July start date.

The central GME office coordinated essential onboarding elements, including information technology access, human resources processing, life support training, and expedited state medical board licensure. Each program adapted its orientation and initial clinical experiences to accommodate these early start residents. For the rural family medicine program, additional site-specific onboarding was managed locally at the community hospital.

All 6 eligible incoming residents accepted the opportunity to begin training early. Three residents entered anesthesiology, 2 joined the rural family medicine program, and 1 entered emergency medicine. Of note, 2 participating programs (anesthesiology and emergency medicine) underwent program leadership changes during the first year of the pilot, adding complexity to program implementation and evaluation.

Materials and Methods

We evaluated this pilot program by applying a case study methodology with semistructured interviews. Author RLJ developed an interview guide in collaboration with institutional education leaders, focusing on logistical barriers, COVID-19's impact on implementation, and perceived benefits and challenges of off-cycle resident entry (Supplement 1).

continued on next page

continued from previous page

Through purposive sampling, we identified and interviewed key stakeholders 9-15 months after pilot implementation (February 2022–August 2022), including program directors (both current and former), GME operations leadership, and departmental education leaders.

Eight participants contributed through individual interviews or focus groups: 4 program directors (family medicine, anesthesiology, and 2 from emergency medicine due to a leadership transition 3 months into the pilot), an anesthesiology vice chair of education, and 3 GME administrative professionals. Interviews were conducted via video conferencing with consent for recording. Real-time notes were generated using unique identifiers for participants. The primary investigator (RLJ) conducted initial thematic analysis using immersion-crystallization techniques, an iterative process of deep engagement with data followed by periods of reflection to identify patterns and themes.[6] Following interviews, all participants were invited to join as authors. Those accepting the invitation conducted a second round of immersion-crystallization, reviewing and refining initial themes, and participated in manuscript drafting. This evaluation was deemed exempt by the OHSU institutional review board (Study # 00024382).

Results

Each program's experience with off-cycle entry varied based on context and structure. Findings are presented by program, followed by cross-cutting themes. All 3 programs onboarded only 1 cohort of off-cycle residents without continuation.

Anesthesiology Program Experience

The anesthesiology program reported the most adaptable implementation. Its modular didactic structure allowed off-cycle residents to join existing educational sessions without disruption. It was noted that onboarding was "not much different than usual" though repeating it multiple times yearly would be impractical. Three early start residents progressed to first-year clinical anesthesia resident rotations in April, forming a distinct micro-cohort that became valued peer mentors for July cohorts. The program's integrated structure and independence from external rotations facilitated staggered progression throughout training. Participants noted that this distribution of novice learners mitigated the July influx and modestly reduced senior residents' call burden.

Emergency Medicine Program Experience

The emergency medicine program faced greater challenges. Limited system training slots (eg, electronic medical record training) during COVID-19 forced ad hoc on-the-job orientation. When off-service rotations were unavailable midcycle, the program assigned the early starter to emergency department shifts as an additional learner under existing supervision structures. For example, if an attending physician typically supervised 2 residents, the early starter functioned as a third add-on resident within that team. Leadership positioned the resident's local familiarity as an asset, making the resident an ambassador for incoming July cohorts. Off-cycle starts and early graduations led to uneven resident headcount across days/shifts (eg, an extra emergency department learner early, a coverage gap after early graduation), complicating coverage and increasing jeopardy/backup needs.

Family Medicine Program Experience

The rural family medicine program encountered specific challenges related to its community-based structure and continuity requirements. Tracking challenges arose in maintaining appropriate supervision levels for off-cycle residents. Interns who began midcycle still required direct supervision for all encounters, but supervising clinicians were accustomed to cohort-based timelines in which all interns advance together. As a result, it was difficult to monitor which learners required ongoing direct supervision versus those eligible for indirect supervision. The program adjusted inpatient and outpatient schedules internally to accommodate overlapping cohorts—an effort the program director stated it would be reluctant to repeat outside a pandemic context. Faculty noted that the small early cohort (2 residents) required additional consideration and mentorship to offset the loss of traditional cohort-building rituals such as the intern retreat.

Cross-Cutting Themes

Onboarding Logistics

Adding 1 extra orientation cycle in the spring was reported as manageable. Central GME staff emphasized that July intake allows compliance checks—fit-testing, electronic medical record credentialing, life-support certification—executed "at scale." Small off-cycle cohorts added workflow duplication, increasing risk of missed tasks or delayed access. Similar off-boarding concerns arose regarding graduation clearances. GME warned further fragmentation would outstrip administrative capacity.

External Stakeholder Engagement

Pandemic-era licensure flexibility from the state medical board facilitated the pilot, but external rotations remained a bottleneck. Anesthesiology placed its early clinical-base-year residents on critical care rotations in the intensive care unit and emergency department with minimal disruption as learners in these settings are more supplementary. However, service lines that rely on resident coverage for patient care, such as internal medicine–run wards vital for other specialties, were unable to absorb additional learners midcycle. The Oregon Medical Board (OMB) expedited provisional licenses during the COVID-19 emergency, enabling early starts; however, GME leaders cautioned that the OMB normally issues licenses in large seasonal batches aligned with the academic calendar, and perpetual off-cycle requests might face new bottlenecks. Programs that rely on community or out-of-state rotations anticipated parallel challenges with credentialing offices accustomed to July cohorts.

Professional Identity Formation

Maintaining class cohesion was a universal concern. Participants reported that early start residents risked feeling isolated, requiring deliberate community building.

continued on next page

continued from previous page

Staffing, Faculty Development, and Program Sustainability

Service coverage models were reported to determine feasibility. Emergency medicine leaders cautioned that off-cycle starts and early graduations created staffing irregularities that exacerbated shift coverage challenges. Family medicine leaders flagged complexity for the Clinical Competency Committee when learners progressed on different calendars and emphasized that the model suited highly self-directed residents better than those needing closer guidance. These observations, among others, would certainly expand required administrative support for tracking and managing complexity. Anesthesiology leaders reported a perceived net benefit: staggering entry dispersed novice learners across the calendar, mitigating the July influx of beginners and modestly reducing senior residents' call burden. All programs requested guidance on equitable assessment for residents who start rotations at divergent times. Beyond clinical coverage, sustainability hinged on contractual considerations. Union negotiations for house staff were underway during the pilot, and central administrators were uncertain how an off-cycle class would intersect with collectively bargained definitions of appointment dates, vacation accrual, and pay steps, highlighting an additional layer of complexity for institutions with organized residency labor groups.

Table 1 presents reflective questions derived from participant insights for programs contemplating similar off-cycle GME entry initiatives, organized by the 4 identified domains.

Discussion

This pilot demonstrates that off-cycle GME entry is feasible when programs have specific structural characteristics identified by participants: flexible scheduling systems, modular curricula, and strong administrative support. All early start residents completed their programs, graduating between April and June with timing variations determined by nonacademic individual circumstances. Whereas implementation occurred during a crisis, the observations made may be applicable extend beyond pandemic conditions. Programs considering similar innovations should carefully evaluate their capacity for flexible scheduling, faculty development needs, and ability to support asynchronous learner progression.

The findings suggest several key considerations for successful implementation. First, programs with modular educational structures appear better positioned to absorb off-cycle learners without disrupting existing cohorts. The anesthesiology program's ability to integrate residents into ongoing didactics contrasts with the challenges faced by programs dependent on fixed rotation schedules. This implies that programs considering off-cycle entry should first assess their curricular flexibility rather than assuming all specialties can equally accommodate asynchronous progression. Second, the experiences reveal a tension between educational innovation and operational efficiency. Whereas GME administrators emphasized risks of duplicating compliance processes, the successful completion of all early start residents suggests that these operational concerns may be surmountable with adequate planning. Programs must weigh potential benefits—such as distributed novice learners and enhanced peer mentoring—against increased administrative burden. Third, external dependencies emerge as critical limiting factors. Programs reliant on other departments or institutions for rotations face greater implementation barriers than self-contained programs. This suggests that pilot programs might best begin with specialties having greater autonomy over their educational experiences.

Additionally, staffing, scheduling, and contractual considerations add complexity to the implementation of off-cycle GME entry. Programs must carefully evaluate their service coverage models and resident workload and navigate union negotiations and collectively bargained provisions. For institutions with organized residency labor groups, off-cycle entry raises unresolved questions about contract provisions, such as appointment dates, vacation accrual, and pay steps, that require proactive engagement with union representatives.

The experience also highlights opportunities for advancing CBME/CBTV implementation in GME. As medical schools increasingly adopt competency-based curricula, the growing temporal misalignment between undergraduate medical education and GME creates inefficiencies that off-cycle entry could potentially address. These findings offer practical insights for programs seeking to bridge this growing gap between undergraduate and graduate medical education timing. Several limitations should be noted. This evaluation includes only GME program leaders and administrative stakeholders; learner perspectives were not captured. The small number of participating programs (n = 3) and residents (n = 6) limits generalizability. Implementation occurred during unique pandemic circumstances that may not reflect standard conditions. The evaluation was conducted 9-15 months postimplementation, potentially missing longer term outcomes. Additionally, we did not assess academic outcomes such as in-training examination performance or fellowship match results, which could provide important data on educational impact. Future work should examine resident perspectives and longitudinal outcomes including academic performance and fellowship placement.

Conclusion

Our experience implementing off-cycle GME entry during COVID-19 provides descriptive insights into both the challenges and opportunities in moving toward more flexible training models. Whereas the pandemic provided unique circumstances that facilitated this innovation, the insights gained provide valuable observations for future efforts to expand time-variable training in graduate medical education. The reflective questions outlined in Table 1 serve as a starting point for programs contemplating similar initiatives. As medical education continues to evolve toward competency-based models, the experiences described in from this case report can inform thoughtful implementation of flexible entry points

continued on next page

continued from previous page

that support both learners and healthcare systems.

Acknowledgments

Thanks to Dr George C. Mejicano for leadership to the OHSU community on this project.

Funding statement: This work was an unfunded pilot program and received no direct or indirect funding sources related to the work described in the manuscript.

Disclosures: None

Ethical approval: This project underwent review by the OHSU IRB and was granted minimal risk approval: Study #00024382.

Disclaimers: Large language models (Claude, Anthropic) were used in initial drafting and revision of this manuscript. All content was critically reviewed, edited, and approved by the human authors who maintain full responsibility for the accuracy, intellectual contribution, and integrity of the work. All authors meet ICMJE criteria for authorship.

References

1. Ryan MS, Holmboe ES, Chandra S. Competency-based medical education: considering its past, present, and a post-COVID-19 era. *Acad Med*. 2022;1(3S):S90-7.
2. Frank JR, Snell LS, Cate OT, et al. Competency-based medical education: theory to practice. *Med Teach*. 2010;32(8):638-45.
3. Schumacher DJ, Caretta-Weyer H, Busari J, et al. Competency-based time-variable training internationally: ensuring practical next steps in the wake of the COVID-19 pandemic. *Med Teach*. 2021;43(7):810-6.
4. Flotte TR, Larkin AC, Fischer MA, et al. Accelerated graduation and the deployment of new physicians during the COVID-19 pandemic. *Acad Med*. 2020;95(10):1492-4.
5. Mejicano GC, Bumsted TN. Describing the journey and lessons learned implementing a competency-based, time-variable undergraduate medical education curriculum. *Acad Med*. 2018;93(3S):S42.
6. Borkan JM. Immersion–crystallization: a valuable analytic tool for healthcare research. *Family Practice*. 2022;39(4):785-9.

The authors are at Oregon Health & Science University in Portland, OR. ***Logan Jones*** *is an Associate Professor of Medicine in the Department of Internal Medicine;* ***David Jones*** *is an Associate Professor of Emergency Medicine in the Department of Emergency Medicine;* ***Joyce Hollander-Rodriguez*** *is a Professor of Family Medicine in the Department of Family Medicine;* ***Amy K. Miller Juve*** *is a Professor of Anesthesiology in the Department of Anesthesiology and Perioperative Medicine;* ***Maya Severson*** *is the Director of Operations, Graduate Medical Education;* ***Allison Fraser-Brewer*** *is a Program Technician, Graduate Medical Education;* ***Lalena M. Yarris*** *is a Professor of Emergency Medicine in the Department of Emergency Medicine.*

Corresponding author: *R. Logan Jones, MD, Oregon Health & Science University, School of Medicine, Department of Internal Medicine – Mail Code: BTE 119, 3181 SW Sam Jackson Park Road, Portland, OR 97239. Telephone (503) 494-1164, Fax (503) 494-5502*

Email address: *R. Logan Jones: joneslo@ohsu.edu*

Abstract

The COVID-19 pandemic presented an unprecedented opportunity to pilot off-cycle graduate medical education (GME) entry at Oregon Health & Science University. This educational case report analyzes stakeholder perspectives on implementing an early start to residency initiative through semistructured interviews with program directors, GME operations leadership, and departmental education leaders. Three GME programs participated in the pilot: an urban academic anesthesiology program, an urban academic emergency medicine program with community rotations, and a rural community-based university-administered family medicine program. Thematic analysis of interviews conducted 9-15 months postimplementation revealed key logistical factors that facilitated or hindered implementation. Programs with flexible scheduling systems adapted more effectively, whereas those heavily dependent on resident coverage or external rotations faced greater challenges. The pilot demonstrated that staggered entry could potentially distribute novice learners throughout the year, and early start residents often emerged as peer mentors. However, programs needed to carefully manage professional identity formation and cohort integration. Whereas implementation required no direct additional costs, perceived effort of implementation varied based on program structure and setting. Drawing from educational administrative stakeholder insights across varied training settings, this report describes the administrative and structural elements observed during off-cycle GME entry, offering practical implementation guidance for interested programs.

continued on next page

continued from previous page

Table

Table 1. *Food for thought: considering a pilot to start residents off-cycle*

On-Boarding Considerations	External Stakeholder Engagement
New hiring processes: • Who is responsible for logistics related to hiring, onboarding, ensuring life support, and other essential training? • Are they a willing and able partner in this process?	Learner placement: • Do learners rotate in other departments or other institutions? • How will programs accommodate a "bubble" of learners on the initial year and a potential absence of learners in future years if an off-cycle program is not maintained?
Orientation: • Are there hands-on specialty-specific aspects of new resident orientation that would be laborious to replicate for additional resident cohorts? • Will learners get an abridged orientation and repeat the full orientation with the July cohort or only complete orientation at their onboarding?	Community-Based Clinical Learning Environments and Community Hospitals: • If residencies are located at community-based hospitals, what additional agreement and engagement will need to occur for that clinical setting to take learners off-cycle? • Will affiliation agreements need to be changed? • Will this affect GME payment structures and CMS caps?
Resident Curriculum: • Consider how and where learners will engage with longitudinal curriculum. • Will they be on their own timeline, or plugged into the curriculum based on their PGY level?	State Medical Board: • Many states' medical boards are equipped to handle a bolus of applications coinciding with the traditional academic year; would the state medical board be able and willing to expedite off-cycle trainee licensure?
	ACGME: • Depending on specialty and timing of learner entry into program, will the program need to apply for a complement increase?
Professional Identity Formation	**Staffing Issues and Faculty Development**
Socialization: The culture around "intern class cohesiveness" varies widely. • What is the effect on group dynamics by having a cohort start separate from the main July group? • How large is the intern class and how large would the early cohort be? • Can the early cohort serve as ambassadors for the program?	Staffing Requirements: • Does the bolus of increased number learners when starting the program all trigger staffing ratio requirements, needing to have additional faculty available for supervision? • Are there services lines relatively dependent on resident physician coverage such that an intermittent gap of residents may affect rotation coverage and patient care?
Advancing Learners: • Once leaners have gained PGY-2 status, will early cohort residents be placed in roles commensurate with their level of training? • Will residents in the early cohort be expected to supervise their PGY-1 peers once they reach PGY-2 year?	Learner Tracking: • If in an ambulatory setting, how will the program and faculty track which learners require direct supervision for patient encounters?

continued on next page

continued from previous page

Table *continued*

Table 1. *continued*

Rituals and Landmarks: • If having early cohort residents undergo their own orientation, are they missing out on bonding and group cohesion typically generated by group orientation? • Are there landmarks in the training program that residents in the early cohort may miss or have to revert back to their prior role (eg, end of year intern retreats)?	Learner Assessment: • How can programs equip learners to be self-advocates and train faculty to avoid the potential bias of considering current time in academic year versus when the learner started (eg, will new interns in May be unfairly assessed as if they are at the end of intern year rather than just starting)? Program Sustainability: • Considering resident schedules and faculty schedules, monitoring of learners' progression and credentialing/licensure, and ability to accommodate additional orientations/socialization efforts, would this program remain sustainable if variable numbers of residents started early each year?

continued on next page

continued from previous page

Supplemental Online Material

Supplement 1. COVID-19 Early Intern Class Semi-Structured Interview Script

1. What logistical barriers did you encounter trying to get learners to start residency prior to traditional July 1st start date?
    a. Onboarding & Licensure
    b. ACGME Complement
    c. "Off cycle" from usual academic calendar year conference/curriculum
    d. Contract issues?
    e. Finding appropriate rotations?
    f. Other barriers or considerations?
2. Did the COVID-19 pandemic lift some barriers that otherwise would have been present if you were to attempt to replicate the efforts in 2019 or today? If so, what?
3. Have any issues come to light during this last year – apart from initial onboarding – related to having a resident start off cycle?
4. What benefits did you see arising out of having your residents start prior to the July 1st start date?
5. What detriments do you see arising from learners starting off cycle?
6. Other general reflections?