

Taking Leave During Anesthesiology Residency: Reasons for Leave and Associations with Board Certification Outcomes

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Extended Leave of Absence (LOA) Policy

The American Board of Anesthesiology allows CA1-3 residents up to 40 additional days away from training for conditions covered by the Family Medical and Leave Act (FMLA) without extending training (July 2019)

- Increased flexibility during training
- Support resident well-being while maintaining training standards
- **Scope of Study: Whether extended LOA during residency is associated with subsequent ABA certification exam outcomes**

Study Design: Relation to Certification Exams

Data Source: 2019-2021 CA-1 Residents (from 160 residency programs)

LOA records: Residents who took at least one LOA during training

Examination: ADVANCED and Applied Exams (SOE and OSCE)

Outcomes: Pass/Fail and Scaled Scores (first-attempts)

Data Analysis – Multilevel Modeling (Residents within programs)

- Mixed-effects logistic regression -- binary pass/fail outcome
- Mixed-effects linear regression -- scaled score outcome

Study Aim 1

Association between taking LOA and exam performance
(n = 4,816, 160 programs)

- ❖ Covariates: Gender (Male/Female), Cohort (2019/2020/2021), Medical School Location (American/International)



Study Aim 2

Association between LOA characteristics and exam performance

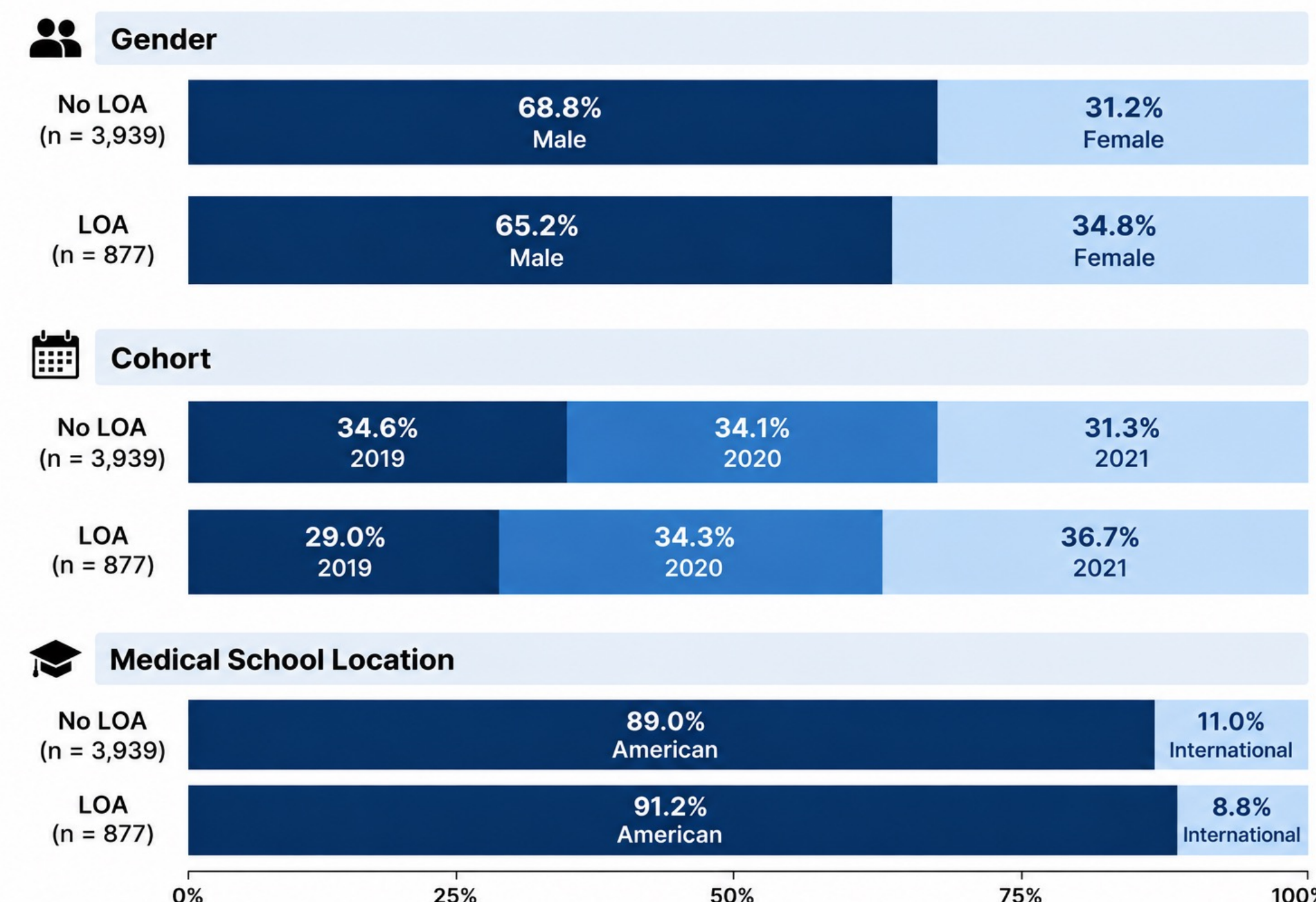
(n = 877, 127 programs)

- ❖ LOA characteristics of interest: reason for leave (parental/medical/family/multiple reasons), duration of leave (days), number of leave, training year at first LOA (CA1/CA2/CA3)
- ❖ Covariates: Gender (Male/Female), Cohort (2019/2020/2021), Medical School Location (American/International)

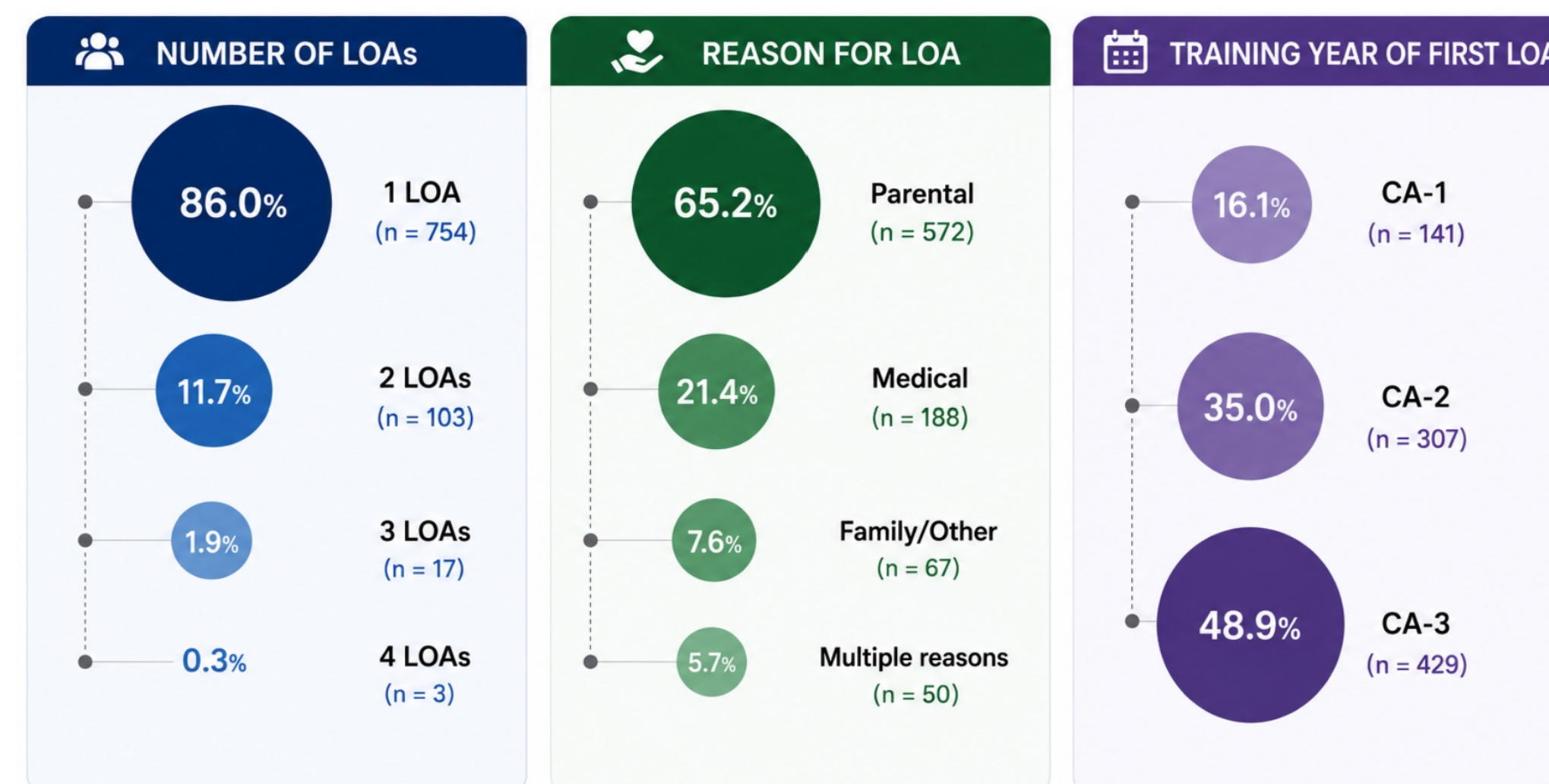
Note. Models were run for each outcome under each exam separately in R Version 4.5.3

Descriptive Results

- The LOA group had slightly higher proportions of female residents & U.S. medical school graduates, compared with no-LOA group
- The proportion of residents taking an LOA increased across cohorts



- Residents took an average of 23.7 days of LOA ($SD = 13.1$; $M = 21$; $IQR = 11-40$)



Modeling Results

Study Aim 1 –

Taking LOA during residency was **not** significantly associated with ADVANCED, SOE, or OSCE performance on either pass/fail or scaled scores

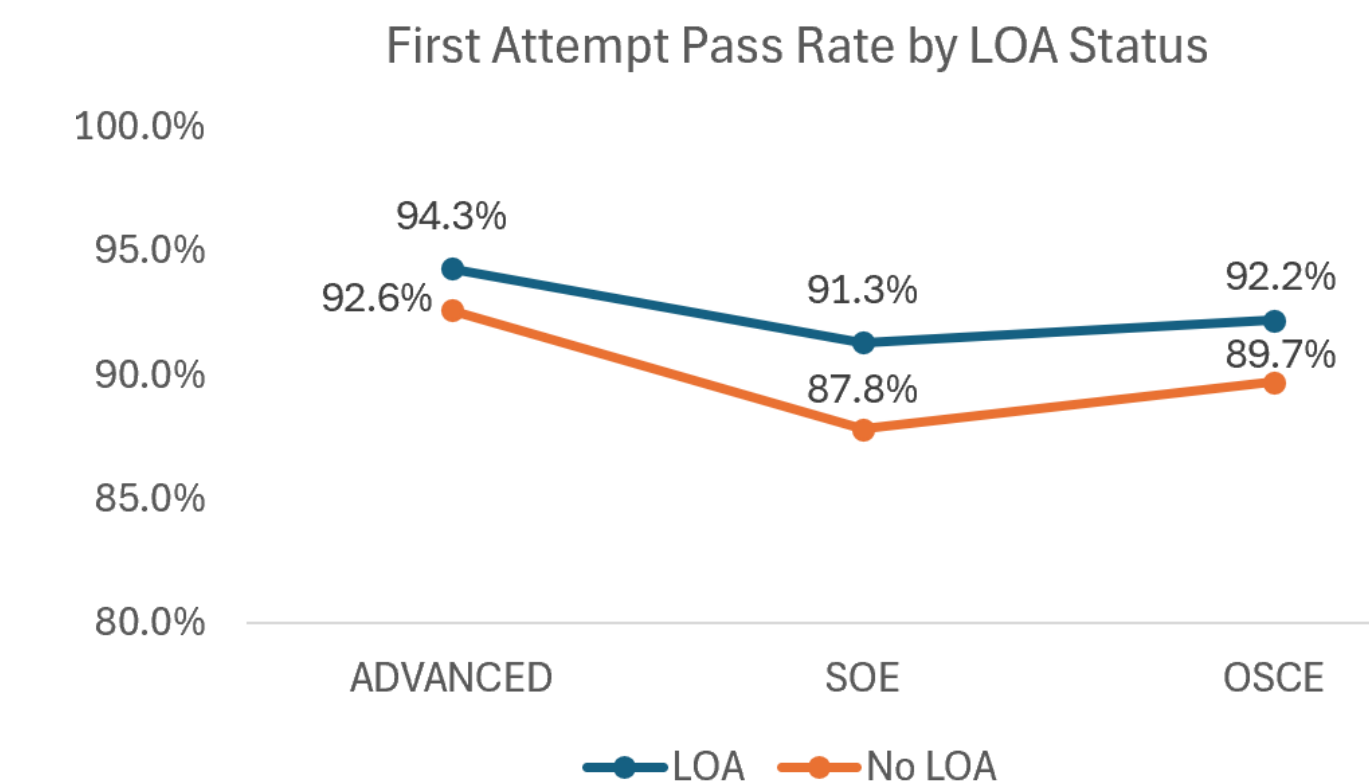
Study Aim 2 –

Consistent exploratory findings:

- LOA duration and multiple LOAs were **not** significantly associated with ADVANCED, SOE, or OSCE performance on either pass/fail or scaled scores

Exam-specific exploratory findings:

- ADVANCED: Medical LOA → lower odds of passing (vs. Parental LOA)
- First LOA in CA-2 → higher odds of passing (vs. CA-1)
- SOE: Multiple LOA reasons → higher scores (vs. Parental LOA)
- OSCE: First LOA in CA-3 → lower scores (vs. CA-1)



Other predictors –

- 2020–2021 cohorts → better ADVANCED performance (vs. 2019 cohort)
- Male residents → higher ADVANCED scores but lower SOE and OSCE scores
- International medical graduates → lower OSCE performance

Significance & Discussion

This is the first study to evaluate the ABA's extended LOA policy in relation to subsequent certification examination outcomes. Findings suggest that taking an LOA, the duration of leave, and taking multiple leaves were **not** associated with worse subsequent examination performance.

Limitations – COVID19 effect (virtual training and exams; change of study format; programs had heavier workload); the implementation of extended LOA policy may have varied across programs

Future Directions – Examine patterns among residents taking multiple LOAs and other training outcomes (e.g., BASIC); investigate program-level implementation of the LOA policy to inform future policy development