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#### The FASEB Journal

# Changes in Gross Anatomy Laboratory Assessment During Covid-19

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Abstract

#### **INTRODUCTION & OBJECTIVE:**

Traditional gross anatomy lab assessment involves in-person examination using cadavers or models. Covid-19 related restrictions introduced challenges to gross anatomy education due to the discipline's reliance on lab-based learning and assessment. Therefore, the objective of this study was to assess changes made by anatomy educators to gross anatomy lab assessments during May-August 2020.

#### **MATERIALS & METHODS:**

A 20-item survey assessed gross anatomy pedagogy, teaching resources, and assessment before and during the pandemic. The survey was distributed online to anatomy educators through professional associations and listservs in June 2020. Data were obtained from two survey items that asked respondents for narrative descriptions of their lab-based assessment before and during Covid-19. Open coding was used to apply descriptive codes relating to 3 categories: (1) setting of the assessment, (2) format of the assessment, and (3) materials used for the questions. The last author coded the data, while the first author reviewed the coding. Both authors reconciled and re-coded discrepancies. Code frequencies and percentages were calculated. Chisquare or Fisher's exact test was used to assess differences in frequencies before and during Covid-19. Alpha<5%.

## **RESULTS:**

Of the 61 respondents who described lab assessment, the use of the physical lab setting decreased (before: 82%, during: 20%; P<0.001) while computer-based platforms increased (before: 9%, during: 61%; P<0.001). The use of medical imaging and other anatomical images were maintained (before: 11%, during: 51%; P=0.37), but there were decreases in the use of cadavers (before: 63%, during: 14%; P<0.001) as well as bones, plastic models, and plastinates (before: 12%, during: 0%; P<0.001). There were no significant changes in assessment structure, with the majority of participants

maintaining a practical examination (i.e. "bell ringer") format during Covid-19 (before: 66%, during: 62%; P=0.39).

#### **CONCLUSION:**

Anatomy educators continued the use of "bell ringer" style lab assessments during the early part of the Covid-19 pandemic. The setting shifted towards computer-based examinations due to Covid-19 restrictions; thus, the use of digital images was maintained while cadaver use decreased.

### SIGNIFICANCE/IMPLICATION:

The early adaptations made by anatomy educators to their lab assessments during Covid-19 provide insight into how assessment may be offered in dire circumstances when the physical lab is unavailable, when accommodating students with extenuating circumstances preventing them from attending in-person lab assessments, and for remediation assessments.