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5-14-2021

Changes in Anatomy Lecture and Laboratory Instruction During Covid-19

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Recommended Citation

Harmon DJ, Attardi SM, Barremkala M, Bentley DC, Brown KM, Dennis JF, Goldman HM, Harrell KM, Klein BA, Ramnanan CJ, Richtsmeier JT, Farkas GJ. Changes in Anatomy Lecture and Laboratory Instruction During Covid-19. *The FASEB Journal*. 2021; 35(S1). doi: 10.1096/fasebj.2021.35.S1.02047.

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The FASEB Journal

Changes in Anatomy Lecture and Laboratory Instruction During Covid-19

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First published: 14 May 2021

https://doi.org/10.1096/fasebj.2021.35.S1.02047

Abstract

Introduction/Objective

Covid-19 created challenges to anatomy education, particularly gross anatomy given the traditional in-person format of lectures and lab. The objective of this study was to assess the changes in lecture methods and lab materials used in anatomy courses that ran between May-August (T1) and August-December (T2) 2020 responding to Covid-19 restrictions.

Materials/Methods

A survey was distributed to anatomy educators through professional associations from June-November 2020. Respondents indicated (1) their institution; (2) programs taught (professional health (PH), medicine (MED), or undergraduate (UG)); (3) course type (integrated or stand-alone); (4) percentage of lab time before and during Covid-19 that utilized cadaveric, plastic, and/or other teaching materials; and (5) lecture format. Institutions were classified as public or private via institution websites. Mann-Whitney U and Wilcoxon signed-rank tests with Bonferroni correction compared responses before and during Covid-19 across programs, course type, and institution. Data are presented as percent increase (+value) or decrease (-value). Alpha<5%.

Results

T1 and T2 received 67 and 191 responses, respectively. During T1 and T2, cadaver use decreased in PH (-58% & -28%), MED (-55% & -34%), and UG (-57% & -55%) programs ($P \leq 0.045$); stand-alone (-58% & -33%,$P<0.001$) and integrated (-48% & -28%, $P \leq 0.004$) courses; and private (-49% & -25%, $P<0.001$) and public (-65% & -34%, $P<0.001$) institutions. During T1 and T2, plastic use did not change for programs, institutions, or courses ($P>0.05$), except UG decreased plastic usage during T2 (-20%; $P=0.033$). During T1 and T2, use of other teaching materials increased in PH (+1180% & +278%), MED (+385% & +1000%), and UG (+285% & +246%) ($P \leq 0.015$); stand-alone (+920% & +540%, $P<0.001$) and integrated (+330% & +500%, $P \leq 0.002$) courses; and private (+1233% & +667%, $P<0.001$) and public (+415% &

+400%, P<0.001) institutions. For T1 and T2, in-person lecture decreased (-89% & -72%, P≤0.001), while remote lecture increased (+509% & +533%, P≤0.001) during Covid-19.

Conclusion

Reduction in cadaver use and in-person lecture were most pronounced in T1, but remained diminished through both time points, suggesting a shift from the initial pandemic response to teaching to more complex hybrid programs as regulations permitted.

Significance/Implication

This study provides evidence to better understand how anatomy educators adapted their gross anatomy teaching due to Covid-19 across programs. In addition, this study provides first of its kind insight into how anatomy was taught across programs prior to Covid-19. Future studies need to determine whether the findings characterized here were pandemic-based or if they represent long-term changes for anatomy education.