Many schools have recently, are currently or plan to revise their curriculum. Common among these revisions are reductions in the basic science focused pre-clinical curriculum, giving students an earlier opportunity to begin clinical clerkships. The reduction of time in pre-clinical basic science curricula has caused medical educators to consider ways to optimize teaching. Specifically related to Gross Anatomy, discussions have been underway for some time to reconsider the use of cadaveric dissection given the financial burden of maintaining donor body programs, difficulty accessing human cadavers, and health concerns related to exposing faculty, staff and students to formalin containing preservatives.

Research on whether other instructional methods can eliminate cadaveric dissection and achieve similar learning outcomes is very limited. A 2007 review of 14 studies that compared various techniques of anatomy instruction concluded there was a slight advantage of traditional dissection over prosection.¹ Not surprisingly, data on more recent innovative methods are even scarcer. There is descriptive data on the use of plastic models at one medical
school from Pakistan, and a similar descriptive report on plastinated models used at a dental school. A small study at the University of Manchester compared 39 second year medical students' performance on a 10-item practical examination comparing dissection to use of a 3D virtual reality program, showing performance to be no different.

In addition to lack of comparative data on anatomy instructional methods, little is known about what strategies US medical schools are currently using to teach anatomy. A recent survey of 55 osteopathic and allopathic schools indicated that all still used cadavers to teach gross anatomy, with 36 schools using dissection only and 18 using a combination of student dissection and prossection. In a report from 2006, the authors not only debunked the notion that many medical schools had eliminated dissection, but also cited several examples of US medical schools including NYU, UCSF, UC Davis, University of Hawaii, and the University of Washington who had initially eliminated dissection, only to reinstate it, as student learning achievement diminished and student preference was in favor of gross dissection.

The Curriculum Inventory Report on Resources for Learning Anatomy shows how different anatomy instructional methods are used at AAMC US and Canadian member medical schools. Data was gathered from the LCME Annual Medical School Questionnaire Part II, given in 2012-2013, with a total of 136 medical schools participating. The data looked not only at Gross Anatomy, but also use of resources in Neurosciences, the OB and General Surgery Clerkships, and Surgical Subspecialties. For Gross Anatomy, the figure shows that 132 out of 136 medical schools in the survey used cadaveric dissection for Gross Anatomy instruction. The Curriculum Inventory data is also informative as it shows that most medical schools (119 or 88%) use prossection and half (68 or 50%) use plastinated specimens. Use of anatomic models or simulators (104 or 76%) and virtual/online anatomical manuals (109 or 80%) were also commonly used.

Thus, based on the available medical literature which is supplemented by data from the Curriculum Inventory on AAMC affiliate schools, it appears that virtually all US medical schools use cadaveric dissection as part of Gross Anatomy instruction, and while there may have been a trend several years ago to discontinue cadaveric dissection, most if not all schools reverted back to using cadavers given a decrease in learning outcomes and student preference. In addition, the use of prossection appears to be common, and many medical schools have instituted other instructional technologies including plastinated specimens, models or simulators, and virtual/online anatomical manuals.

It should not be surprising that cadaveric dissection remains almost universal at US medical schools. In addition to the literature being unable to support significant advantages over more time-efficient instructional methods, there are certain intangibles that come with this time honored tradition. Even with curricular revision, in many medical schools the cadaver is a new student's first "patient" and often their first real encounter with death. In addition, despite advances in visualization technologies, nothing can replace the visual and tactile experience of seeing an organ in its anatomical location, holding it after dissection, and comparing pathologic to normal findings side by side. Cadaveric dissection also has ritualistic value; serving as a rite of passage, similar to donning a white coat or surviving a first night on call.
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