

Competitions in Medical School Learning Communities

Nguyen V, Cordner Z, Shochet R, Fleming A

Vanderbilt University School of Medicine, Nashville, TN ♦ Johns Hopkins School of Medicine, Baltimore, MD

Background

Medical school offers one of the most challenging and stressful learning environments for students, and facilitation of learning in conjunction with maintaining wellness and balance is a growing concern across the United States and Canada. As part of a response to this issue, a number of schools have adopted the “Learning Communities” model of medical education. A recent trend within the “Learning Communities” movement is the development of collegial competitions that vertically integrate across the classes.

Exercise and competitions have been shown to improve self-esteem in children and young adults¹, as well as promote diversity and community building². Intercollegiate athletics have even been compared to learning communities, both of which bring students together for a common goal². Furthermore, physical activity has even been shown to improve cognitive function at the molecular level^{3,4}. Finally, it has been long established that extracurricular experiences help students to learn in the classroom and to develop personally.⁵ Given these previous findings, one would expect that incorporating exercise and competitions into learning communities may provide numerous benefits to medical students.

Objectives

While recent surveys have sought to characterize the learning communities that now exist at approximately 60 medical schools in the United States and Canada, no study has addressed the presence of collegial competitions in medical schools.

This study will seek to confirm the structure of learning communities that have been established at medical schools in the U.S. and Canada. Furthermore, it will describe the competitions that exist within each learning community and survey the various implementation strategies that medical schools have taken to incorporate collegial competitions into the learning environment. Ultimately, we hope to understand how non-curricular competitions impact learning and wellness in medical school.

Methods

This study involved a one-time web-based survey developed using REDCap software. A link to the survey was sent to a convenience sample of 55 known medical schools with learning communities (LCs). Data from the survey were analyzed by descriptive statistics and bivariate correlation analysis was performed between presence of an LC competition and all other categorical variables. Free text responses were assessed by content analysis performed by two coders.

Results



- 38 of 55 (69%) medical schools responded to the survey request
- Of those 38 schools, 36 had learning communities
- LC members include First/Second Years (100%), Third/Fourth Years (86%), dual degree students (47%), residents (8%), clinical faculty (78%), basic science faculty (36%) and administrators (44%)
- Most students in LCs were placed randomly (69%), with other factors being by gender (14%), career interest (14%), research (8%) or another algorithm/combination (28%)
- Focus of LCs were deemed to be curricular (69%), for career planning (67%), student wellness (81%) or other (33%)
- 22 of the 36 LCs had competitions among LCs (61%)
- For competitions, most schools had 26-50% student participation (55%), while some had less than 25% participation (23%)
- Budget ranged from \$0 to over \$5,000, with the latter being the most likely option (23%)

Description of Competitions

University	Athletic	Academic	Social	Service	Other	Unknown	Total
UAB						1	1
Dartmouth		1	1			1	3
Florida International			1				1
Harvard		1	1		1	1	4
Iowa		1		1	1		3
Johns Hopkins		1	1	1		1	4
Kansas					1	1	2
Louisville		1	1				2
Massachusetts		1	1		1	1	4
Miami			1	1	1		3
UMDNJ		1					1
North Texas		1			1		2
Ohio State					1	1	2
Texas Tech					1	1	2
Tufts			1	1		1	3
UC Davis				1			1
UT Medical Branch			1				1
UTSW						1	1
Vanderbilt		1	1	1		1	4
Vermont		1					1
Virginia		1			1		2
Wisconsin		1	1	1		1	4
Total	22	12 (55%)	11 (50%)	7 (32%)	9 (41%)	8 (36%)	4 (18%)
							Average
							2.3

Conclusions

- Among medical school LCs, there is an incredible amount of diversity in size, student and faculty membership, organizational and leadership structure, focus and competitions
- When broken into categories of athletic, academic, social, service, other, and unknown, the average competition among LCs include 2.3 of those categories
- A dichotomy exists between annual competitions and year-long competitions
- Similarly, some competitions emphasize participation, while others focus on winning specific events

Limitations

- Only 55 known medical schools with LCs were contacted, which leaves many schools in the U.S. and Canada unaccounted for
- Although many administrators/representatives from each school were contacted, it is likely that some were overlooked, especially for the 17 institutions where no response was recorded
- Free text descriptions of competitions are limited by participant’s willingness to answer and knowledge of the events

Future Directions

- Are competitions beneficial or detrimental to the goals of LCs?
- How do competitions between LCs affect medical students short-term and long-term?
- Do competitions exist in schools without LCs, and if so, how do they compare to the ones between LCs, both in format and effect?

References

1. Ekeland E, Heian F, Hagen KB, Abbott JM, Nordheim L. Exercise to improve self-esteem in children and young people. *Cochrane Database of Systematic Reviews* 2004, Issue 1. Art. No.: CD003683. DOI: 10.1002/14651858.CD003683.pub2.
2. Wolf-Wendel L, Toma JD, Morphew CC. There’s No “I” in “Team”: Lessons from Athletics on Community Building. *The Review of Higher Education*. 2001;24(4):369-396.
3. Vaynman S, Gomez-Pinilla F. Revenge of the “sit”: how lifestyle impacts neuronal and cognitive health through molecular systems that interface energy metabolism with neuronal plasticity. *J Neurosci Res*. 2006 Sep;84(4):699-715.
4. Cotman CW, Berchtold NC, Christie LA. Exercise builds brain health: key roles of growth factor cascades and inflammation. *Trends Neurosci*. 2007 Sep;30(9):464-472.
5. Kuh GD. The Other Curriculum: Out-of-Class Experiences Associated with Student Learning and Personal Development. *The Journal of Higher Education*. 1995 Mar;66(2):123-155.