A Better Learning Community: Mixed-Methods Reveal Medical Student Preferences with Implications for Learning Community Design and Implementation

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ABSTRACT

BACKGROUND: Medical school learning communities benefit students. The College of Medicine (COM) at the University of Arkansas for Medical Sciences (UAMS) provides medical students with academic, professional, and personal support through a learning community (LC) made of 7 academic houses.

OBJECTIVES: To evaluate the effectiveness of the academic house model at UAMS utilizing a mixed-methods survey. The aims were to: (1) assess student experience and satisfaction with academic houses, (2) describe the realms of advising and guidance, and (3) identify areas for improvement.

METHOD: An online survey was assigned to 723 COM students (all students enrolled, first through fourth years) at UAMS in March 2019. The survey was comprised of 25 items (10 multiple-choice, 8 on the Likert scale, and 7 open-ended questions). Data was depicted using frequency and percentiles and/or thematic review of free-form responses.

RESULTS: The survey response rate was 31% (227 students). The majority of students responding (132, 58.1%) attended 2 or more face-to-face meetings with the faculty advisor within the preceding year. However, 27 (11.9%) students did not have any meetings. Approximately two-thirds of the respondents were satisfied or very satisfied with the guidance and direction provided by their advisors [very satisfied (n = 83; 36.6%); satisfied (n = 77; 33.9%)]. Themes that emerged from student generated areas for improvement include time constraints, advisor/advisee interest mismatch, and perceived inadequacy of advising content/connections.

CONCLUSIONS: This study confirms the effectiveness of the LC model for advising and mentoring in the COM at UAMS. Uniquely, this study identifies not only learners’ satisfaction with their LC but also highlights areas for improvement which are widely generalizable and important to consider for institutions with or planning to start an LC.

KEYWORDS: Education, medical student, survey, perception

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Introduction

Medical students benefit greatly from connectedness with faculty and peers in a supportive learning environment outside of the classroom. Learning communities (LCs), which include subdivisions of medical students and faculty, enhance student learning, and professional development.1–3 Additionally, LC participation can reduce stress, prevent burnout and improve overall student wellness and sense of belonging.4–5

Such medical school LCs—variously known as societies, colleges, or houses—are well described in the literature.1–3 LCs encompass a broad range of activities built around advising to bolster academic success while also facilitating wellness programming, community service, leadership opportunities, and social activities.1,2 LCs enhance the perception of the learning environment and foster a sense of community which results in increased student satisfaction with and connection to the medical school journey.6–9

Unpublished data circa 2016 from our institution revealed that students did not have adequate advising in the pre-clinical years, connection to faculty, or a longitudinal sense of community. Acknowledging these short-comings, and in light of local and national challenges with medical student mental health, leaders in the College of Medicine (COM) at the University of Arkansas for Medical Sciences (UAMS) opted to implement the LC model.

The LC at UAMS has provided students with scholastic, career, and personal support via 7 academic houses since...
Results
A total of 227 medical students responded to the survey (31% response rate). First year students numbering 62 made up 27% of respondents along with 70 (31%) second years, 56 (25%) third years and 39 (17%) fourth year students. “Highly-engaged” students accounted for 20 (8%) submissions. While 120 students (53%) indicated that 2 face-to-face meetings with the LC advisor occurred within the preceding year, 12 students (5%) had 3 or more, 68 students (30%) had only 1 meeting and 27 (12%) responded that they did not have any meetings during that time period.

Guidance in different realms
The realms of guidance and selected representative remarks are presented in Table 1.

Student satisfaction
Approximately two-thirds of students responded satisfied or very satisfied with the guidance provided by advisors [very satisfied (n = 83 (37%)), satisfied (n = 77 (34%))]. Seventeen (8%) were dissatisfied and 6 (3%) strongly dissatisfied (Figure 1).

About 74% of freshman and 79% of sophomore respondents were satisfied or very satisfied compared with 64% of Juniors and 49% of seniors. Sub-grouped by meeting frequency in the preceding year—1, 2, and 3 or more—43 out of 68 (63%), 97 out of 121 (%80), and 11 out of 12 (91%) students responded satisfied or very satisfied.

Of total respondents, 80% indicated that the assigned LC advisor was extremely skilled at active listening; 80% deemed the advisor extremely approachable and more than 70% rated the advisor as extremely skilled at giving constructive feedback and establishing relationships based on trust.

Discussion
Of respondents, 70% reported satisfaction with LC faculty advising. This is broadly consistent with published outcomes from other learning communities.\(^1\) The most common areas of discussion in advisor sessions at UAMS were similar to those in other LCs: USMLE Step 1 preparation, specialty choice, and personal wellbeing.\(^1,5,11\) The percentage of respondents indicating satisfaction increased linearly along with the frequency of meetings suggesting a correlation, and satisfaction and meeting frequency were both highest in the preclinical years. From this we can imply that students derive significant benefit from the LC in the beginning of medical school and that the benefit waned during the third and fourth years. Institutions aiming to solve similar challenges to ours by using the LC model, but with limited resources, could thus focus on the first- and second-year students and derive the most benefit per investment.

Using aspects of previously validated tools we asked students to assess advisors on best practices of communication and

### Methods

#### Subjects

An online survey was assigned to 723 medical students (all enrolled, first through fourth years) at UAMS in March 2019. The study was determined as not human subject research by the Institutional Research Board.

#### Instrument

The survey consisted of 25 items (10 multiple-choice, 8 on the Likert scale, and 7 open-ended questions). This survey was adapted from previously published surveys which have assessed LCs and medical student advising.\(^10\) The survey was disseminated on OASIS, an online curriculum database, and was open to responses for 4 weeks.

Briefly, the survey assessed the (a) count of responders from each academic house and their year in medical school, (b) students’ experiences with current advising (frequency of face-to-face meetings, locations, type of guidance received, characteristics of advisors), and (c) overall satisfaction. The open-ended questions asked students to describe barriers and challenges and provide suggestions on how the LC could be improved. LC leaders reviewed a list of respondents (disaggregated from survey responses) and denoted the percentage of respondents who were “highly engaged” in the LCs.

#### Statistical analysis

Descriptive statistics were described using frequency and percentages for categorical variables. Responses to open-ended questions, were assessed thematically using open coding and review of codes to identify and categorize emergent themes. Analysis was performed using the IBM SPSS24\(^*\) software.
More than 70% of students indicated that LC advisors were extremely approachable and skilled at listening, giving feedback, and establishing a trusting relationship. This baseline allows the program to re-calibrate and improve faculty development and advisor selection in hopes of uniform excellence.

Notably, 27 (12%) students did not have any meetings in the preceding year. The most frequently reported reason for not meeting was faculty or student time constraint—a ubiquitous issue plaguing most mentoring programs. The unexpected magnitude of this finding highlights the importance of regular evaluation to identify slippage in practice and the need for constant improvement efforts.

A number of programs and collaborations have published on overall student satisfaction with LCs and pre-enrollment desires for advising. Conversely, few—if any—have described the features that post-participation students generate as opportunities for program improvement and development. The most unexpected and/or salient feedback on the UAMS LC (Table 2) included student preference for an advisor within a preferred specialty, with more detailed knowledge of student performance/progress, and with better familiarity with opportunities/resources for student development.

Advisors have access to student schedules, grades, and evaluations yet many students perceived that advisors did not make...
use of this information. It is likely that faculty would benefit from more protected time for LC activities (currently 5% FTE/25 advisees) and from a more intuitive system of academic progress review to stay abreast of student advancement. Despite advisors being provided with a detailed advising packet, orientation, and faculty development, just one-quarter of respondents indicated that the advisor connected the student to opportunities and/or resources. This level of counterintuitive, actionable feedback from students is difficult to ascertain from quantitative survey methodology alone and stands out as a strength of this study.

Our suggestions for new/developing LCs, based on the above findings, are: (1) perform frequent evaluation of the program using validated tools and be transparent with students and faculty about results and improvement goals, (2) strive to heed student interests in advisor pairing and develop a system that will maximize student/advisor career concordance (at least at the basic level—generalist/specialist/surgeon etch), and (3) routinely conduct robust faculty development sessions to ensure advisors remain expert communicators and purveyors of resources for students.

In response to these results and conclusions, we have strengthened our LC and we share believing that these will provide helpful insight for LCs broadly. Our suggestions will be particularly useful for burgeoning LCs or institutions considering the LC model.

**Limitations**

One significant limitation is the low response rate to the survey. However, this is not unique to our study and is a common pitfall of survey methodology. Another common limitation of surveys is representativeness and at UAMS 20% of students are “highly engaged” in LC activities. It is surprising that “highly engaged” students (HES) accounted for only 8% of survey responses. Given the relatively-low proportion of HES respondents, it is unlikely that our results are skewed toward satisfaction by HES. In fact, the lack of representation of HES in responses may color results with a more negative light on student experiences than is lived by the average LC participant. Other limitations include lack of reminders to complete the survey and use of a digital platform in place of paper. As a single institution, the generalizability of our findings may be limited however it is vital that all LCs and especially new programs see that not all programs have immediate, unfiltered success and have the opportunity to learn from our experiences and conclusions.

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**Author Contributions**

Jasna Vuk, Steven McKee, and Priya Mendiratta designed the work, performed data analysis and interpretation, drafted the article, performed critical revision of the article and approved the final version to be published. Sara Tariq conceived of the work, aided in the design and interpretation of data, performed critical revision and final approval of the version to be published.

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