Review of the literature on Learning Communities in Medical Education

Sunny Smith MD
UC San Diego School of Medicine

Learning communities

- Centuries old in Europe (Oxford)
- Introduced to U.S. Schools in 1930s
  - Residential colleges: Harvard/Yale
  - Divide larger schools into smaller units
- Modern LC movement in higher ed: 1980s
  - At the undergraduate level (not UGME)
  - Associated with positive outcomes including student retention and academic achievement

Learning communities in Med Ed

- More recent development
  - 1970s-80s: UM-KC, Harvard
  - 1990s-2000s: early implementers
  - 2005 LCIs first meeting
  - 2006: 18 LCs identified Ferguson et al Acad Med 2009
  - 2012: 8 years later -> 66 Smith et al Acad Med 2014
    - 52.4% of respondents (N=126).
    - At least 44% of all AAMC institutions have LCs (N=151)
    - additional 29 considering creating them

Why LCs in UGME?

- Small group learning
- Longitudinal relationships
- Role modeling
  - Faculty often chosen for humanism, professionalism, excellence, interest in MS education
- Continuity
- Social learning theory
  - bedside manner, clinical skills

LCs could address

- Not only the curriculum, but also
  - Hidden curriculum
  - Empathy
  - Burn-out
  - Depression

LCs are addressing

- Well-being
- Professionalism
- Advising
- Mentoring (faculty, peers, upperclassmen)
- Social activities
- Clinical skills
- Small group instruction (eg PBL)
- Service learning
- Interdisciplinary learning
- Milestones/ceremonies

Models

- Curricular
- Extracurricular
- Mixed

- Cost:
  - $10,000-$1.4 Million annual budget
    - Mean: $414,219; median $300k; SD $372,500

But does it make a difference?

- Widely and rapidly implemented in UGME
  - Restructuring medical education
  - Potential for positive impact, personalize medical ed.
- Literature is very limited at this stage
- Largely descriptive
- Need to assess outcomes
  - To determine if this makes a difference
  - We believe it does, but how do we measure it
  - What models are more effective
  - To justify the time, expense

Literature review

- Challenging
- Difficult to have confidence that you have been comprehensive
- No specific MeSH term, may not be a key word
- Often report on a certain aspect of their LCs
  - Clinical skills
  - Well-being
  - Professionalism
  - Advising
  - Perhaps without mention of the LC in the title, abstract, or maybe even in the manuscript

Literature review

- "Learning Communities"
  - also known as
    - Colleges
    - Advisory Colleges
    - Societies
    - Academic Communities
    - CELLS
    - Docent teams

LC in UGME Literature review

- Presented by Marjorie Wenrich - 2010
  - Available on the LCI website
  - ~30 papers published in LCs
    - Descriptive
      - UM-KC, Hopkins, U AZ, UW, Florida
    - Process
      - Engagement/leadership, career decisions, stress, mentorship, professionalism, clerkship preparation, competencies, communication, advising case presentations

UW Outcomes

- Improved comfort in clinical skills at start of clerkship
  - Clinical skills (doctoring course)
  - pre-post colleges implementation survey
    - Whipple et al. Acad Med 2006.
- Improved Clerkship performance
  - Particularly in Internal Medicine (9/12 domains, Likert scale). Pre/post evals.
    - Jackson et al. J Gen Int Med 2009.
- Positive impact of teaching on faculty clinical skills
  - Qualitative studies
    - Wenrich et al. Acad Med 2011.

Outcomes

- Hopkins
  - Clinical skills and advising Colleges system, $1.1M
  - Pre-post surveys
  - Paying clinical skills faculty teachers associated with higher student evaluation of teachers.
    - Ashar et al. JGIM 2007.

Outcomes

- U of Iowa Carver COM
  - Connections, Excellence, Leadership, Learning, Service. (.25FTE)
  - Compared progressive implementation, 1st to 3rd year LC surveys
- Improved perceptions of the LE, connections between students, access to faculty/staff, involvement in leadership & service
    - Rosenbaum et al. Acad Med 2007.

Outcomes

- UCLA
  - 4th year colleges: curricular and mentoring (acute care, anatomy, medical leadership, specialties, primary care, underserved)
  - Pre/post surveys
  - Not any decrease in flexibility, overall satisfaction, educational value of 4th year.
  - Improved experience with advisors, mentors, role models, quality of advising, career planning, increased connection.
  - GQ: Compared favorably w national mean in career planning.
    - Coates et al. Acad Med 2008.

Outcomes

- Vanderbilt
  - Wellness and career counseling
  - Pre-post. One-on-one to structured group college advising system on wellness and career counseling
  - Increase in students ability to ID their advisor, the # of student-faculty interactions, # meaningful contacts, perceived effectiveness, nearly all said important to them, agreed advisor promoted wellness and career counseling, increased satisfaction with the advisory system
    - Sastre et al. Med Teach 2010.

2010 LCI literature review

- Followed by discussion, then break out groups
- >40 schools with LCs involved in LCI
  - though last study published said 18
- No multi-institutional studies
- Goals set:
  - Update of the state of LC in UGME
  - Multi-institutional outcomes studies

Achieved those goals

- Updated national survey
  - Describing current state of LC in UGME
  - Obtained details on areas of focus, funding, strengths, weaknesses
    - Smith et al. Acad Med 2014.

- Faculty outcomes study
  - Five institutions, 150 faculty
  - Serving as a mentor in LCs: strong sense of job satisfaction
    - correlated with more FTE support and more structured faculty development
      - Wagner et al. Med Teach 2014.

Other recent LC literature

- Stanford
  - E4C description (Clinical skills, wellness, every other month reflection in clinical years)
    - Osterberg et al. Medical Student Wellness: An essential role for mentors. Med Sci Educ 2011.
  - E4C Outcomes:
    - Osterberg. From High School to Medical School: The Importance of Community in Educaiton. Med Sci Educ 2014.
    - E4C (LC) students scored sig higher on all domains of CPX
    - No sig decrease in empathy from first to second clinical year (as is usually seen in other institutions)
    - Faculty: increased job satisfaction, sense of belonging at institution

Recent LC literature

- Vanderbilt.
  - Pre (2004) vs post full colleges implementation (2012)
  - $580,000 / year
  - GQ data: satisfaction with personal counseling high, sig increase in satisfaction with career planning
  - Student affairs survey:
    - 91% stated colleges contributed meaningfully or somewhat meaningfully to their experience
    - Coll Mentors: approachable, accessible, responsive, students were satisfied with advising
      - Fleming et al. Building LCs: Evolution of the Colleges at Vanderbilt U SOM. Acad Med 2013.

Recent LC literature

- St Louis University
  - Curricular change to improve wellness, including LCs
    - Students may join more than one LC (service, global health, wellness, med ed, research
    - Change to pass/fail, decrease contact hours, longitud. Electives, resiliency/MBSR, moved anatomy later
  - Examined pre/post implementation changes
  - Lower depression sx, anxiety sx, stress
  - Higher levels of community cohesion
  - Increased GQ scores for programs that promote well being
  - Step 1 scores increased, but the national mean also increased
    - Slavin et al. Medical student mental health 3.0: improving student wellness through curricular changes. Acad Med 2014.

These were outcomes from different types of LCs

- Stanford
  - E4C: weekly clinical skills course and longitudinal mentoring, then every other month for reflection in the clinical years
  - Largest budget of the three (unpublished data)
- Vanderbilt
  - Wellness, CiM, advisory colleges, college colloquim four year course in humanities
  - $580,000/year
- St Louis
  - Students may belong to more than one LC (service, research, global health, wellness, med ed): electives, service, lunch, research, longitudinal relationships.
  - $10,000/year

What about Advising Deans?

- Columbia
  - "Although there are some similarities between advisory deans and LCs (e.g., both seek to foster a sense of belonging to a small community and to mentor students), the types of programs vary in purpose and execution by school".
  - Meet regularly in groups and a min # of times individually with each student (30/class)
  - $280,000 (.20 FTE/dean)
  - Assessed reflections: articulating goals, activities, admin, dean selection, turnover, fac development, time management, symbolism,
    - Swan-Sein et al. Sustaining and Advisory Dean Program Through Continuous Improvement and Evaluation. Acad Med 2014.

Research related posters at LCI this year

- Jim Wagner (UTSW)
  - Does LC mentor specialty result in any differences in OSCE or Step 2 scores?
- Rob Shochet (Hopkins) and Meg Keeley (U VA)
  - Assessed the LE at two institutions using 28-item JHLES
- Michael Ennis (U Massachusetts)
  - Faculty Turnover in LCs, examined reasons, plans for replacement during temporary or permanent absence
- Pamela Baker (U Cincinnati)
  - Assessing LC Outcomes

Related presentations elsewhere

- Many of us are presenting on LCs at other regional or national meetings
- ? Compile some of these presentations on LCI website for others to reference
- Consider turning your presentation into a publication
  - With information from your institution, or by adding a multi-institutional collaborator

Conclusions

- Some data to suggest that LCs are making a difference in UGME experience
- Literature is still sparse given the wide implementation of this educational model
- Opportune time to examine what impact LCs have on the way we educate future health care providers (?transforming med ed)

Future directions???

- Brainstorm

- Then
  - Break out groups
  - Attempt to identify projects/leaders
  - Plan next steps
  - Report back