#119
Engaged Learning for Practicing Ethics, Communication, and Professionalism in LICs

Future Directions and Educational Theory in LIC

Workshop
Monday, OCT 28
15:45-17:15
Boardroom

Lead Presenter: Katharine Meacham, UNC SOM Asheville Campus

Co-Presenter(s): Greeshma Somashekar   Lindsay Richier   Ira Sloan

All Author(s): Katharine Meacham, UNC SOM Asheville Campus; Greeshma Somashekar, UNC School of Medicine; Lindsay Richier, University of British Columbia

Abstract:

Teaching and learning the art of medicine – whether looking at professionalism, ethics, or communication requires a process-approach to education. Underlying this workshop are adult learning theory for transformational education (Mezirow) and a methodology of being "the guide on the side, rather than the sage on the stage" (Palmer). Mezirow's theory of transformative adult education is built on three premises: the experiences of learners, frames of reference, and disorienting dilemmas. Longitudinal integrated clerkships have been shown to be ideal settings for process-oriented education with the possibilities for transformation. This workshop will use the experiences of two different longitudinal integrated clerkship sites—one in Canada and one in the US—to explore ways of approaching teaching the art of medicine—especially ethics, professional identity formation, and communication in the particular contexts of the workshop participants, building on a process-oriented approach to education.

Proposed desired learning outcomes for workshop participants:
- To imagine adapting the models for doing ethics and professionalism developed at one US and one Canadian clerkship in the settings of the participants;
- To learn from other participants about challenges and ways of addressing them in specific contexts;
- To practice examples of engaged learning developed at two different LICs.

Issues for exploration:
- Adult learning theory
- Transformative educational possibilities for LICs
- Intentional teaching of professionalism, communication, and ethics

Activities:
15 min exercise – introductions of all and desired outcomes, etc.
30 minute exercise with a toolkit on professionalism & communications
30 minute exercise on narrative ethics
15 min wrap-up exercise

References/Citations:

Mezirow J. Transformative dimensions in adult learning. San Francisco: Jossey Press: 1991.

Palmer P. The courage to teach: exploring the inner landscape of a teacher's life. San Francisco: Jossey-Bass: 1998.

#120

The impact of LIC medical educators as reciprocal community partners in a local history project

Reflection and Engagement

Poster

Lead Presenter: Kath Weston, University of Wollongong

All Author(s):   Kath Weston, University of Wollongong; Louella McCarthy, University of Wollongong

Abstract:

Introduction: It is well-established that patients in rural areas with workforce shortage allow LIC medical students to learn directly from them, and recognise the benefits of LIC medical students as contributors to a sustainable medical workforce in their area. Medical programs directly benefit from this positive community sentiment because the curriculum is actually delivered by those patients walking through the practice doors. The question then arises: what else can medical educators contribute to these communities as reciprocal partners?

Aim: This research investigated how medical educators engaging in a rural history project could contribute to the community and broaden the sphere of impact of the university beyond the medical practice.

Method: One rural teaching location in New South Wales, Australia, was selected as the pilot project for medical educators to contribute to a local volunteer historical group. Medical education academics worked with community volunteers to develop a project charting the history of rural medicine in that area.

Results: The academics organised and contributed to community meetings, provided expert knowledge about historical artefacts, and contributed photographic and historical material to the community, and were invited to important community events.

Discussion: The medical educators were embraced by the community as partners with valuable skills and became part of the conversation of the community.

Conclusion: Working with the community to develop a local project of interest or importance is one way that the university can reciprocate the contribution of a community which is a teaching partner in a LIC medical education program.

#122

Enhancing Curriculum of LIC Inpatient Medicine Through Problem-Based Sessions (ECLIPSe): A Local Pilot Project

Sustainability/Expansion of Existing LIC

Poster

Lead Presenter: Whitney Lum, Dalhousie University

All Author(s):   Anthony Vu, Dalhousie University; Whitney Lum, Dalhousie University; David Vaillancourt, Dalhousie University

Abstract:

Introduction:
Longitudinal Integrated Clerkship (LIC) is a new approach to medical education that was recently implemented at Dalhousie Medicine New Brunswick in Fredericton. Review of literature identified gaps in student learning with respect to inpatient care.

Purpose:
This project aims to identify whether learning gaps exist in current LIC structure in Fredericton with respect to inpatient medical education, introduce a case-based educational tool for LIC students to develop core skills concerning inpatient medicine, and assess the role of this educational tool as a supplement to current LIC curriculum.

Methods:
Two cohorts of medical students participated in a case-based educational tool and completed pre- and post- surveys containing both quantitative and qualitative measures.

Results:
Participants identified learning gaps in LIC structure with respect to balance between inpatient and outpatient experiences, exposure to inpatient medicine, and addressing their personal learning objectives. Students from both cohorts felt increased comfort and continuity with inpatient medicine after participating in the case-based educational tool.

Discussion:
Several learning gaps in inpatient care were identified at the Fredericton LIC program. A case-based educational tool was developed that shows promise at addressing these gaps. Despite being delivered at different times during their clerkship, both cohorts felt the case-based educational was a valuable resource and should be continued.

Conclusion:
Future iterations of the educational tool are required to assess its full potential, but preliminary findings provide insight on how learning gaps with respect to inpatient medicine can be addressed at LIC programs.

References/Citations:

Birden H, Barker J, Wilson I. 2016. Effective of a rural longitudinal integrated clerkship in preparing medical students for internship. Medical Teacher. 38(9): 946-956.

Four Principles of Family Medicine. C1996-2019. Mississauga (ON): The College of Family Physicians of Canada; [accessed Jan 12 2019]. https://www.cfpc.ca/Principles/.

Gallivan, C. 2018. Internal Medicine Clerkship. Unpublished; [Retrieved from author on May 14 2018]

Glennie, A. 2018. Surgery Clerkship. Unpublished; [Retrieved from author on May 14 2018]

Hirsh D, Gaufberg E, Ogur B, Cohen P, Krupat E, Cox M, Pelletier S, Bor D. 2012. Educational outcomes of the Harvard Medical School-Cambridge integrated clerkship: a way forward for medical education. Academic Medicine. 87(5): 643-650.0

McLean SF. 2016. Case-Based Learning and its Application in Medical and Health-Care Fields: A Review of Worldwide Literature. Journal of Medical Education and Curricular Development. 3: MECD.S20377.

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Ogur B, Hirsh D, Krupat E, Bor D. 2007. The Harvard Medical School-Cambridge Integrated Clerkship: An Innovative Model of Clinical Education. Academic Medicine. 82(4): 397-404.

Richards PS, Inglehart MR. 2006. An Interdisciplinary Approach to Case-Based Teaching: Does It Create Patient-Centred and Culturally Sensitive Providers? Journal of Dental Education. 70(4): 284 - 291.

Simanton E, Hansen L. 2012. Long-term retention of information across the undergraduate medical school curriculum. South Dakota Medicine. 65(7):261-263.

Srinivasan M, Wilkes M, Stevenson F, Nguyen T, Slavin S. 2007. Comparing problem- based learning with case-based learning: effects of a major curricular shift at two institutions. Academic Medicine. 82(1): 74-82.

Thistlethwaite JE, Davies D, Ekeocha S, Kidd JM, MacDougall C, Matthews P, Purkis J, Clay D. 2012. The effectiveness of case-based learning in health professional education. A BEME systematic review: BEME Guide No. 23. Medical Teacher. 34(6): e421-e444.

Vaillancourt, D. 2016. Longitudinal Integrated Clerkship at Dalhousie Fredericton Program Proposal. Unpublished; [Retrieved from author on Jan 10 2019]

Williams B. 2005. Case based learning - a review of the literature: is there scope for this educational paradigm in prehospital education? Emergency Medicine Journal. 22: 577- 581.

Woloschuk W, Myhre D, Jackson W, McLaughlin K, Wright B. 2014. Comparing the performance in family medicine residencies of graduates from longitudinal integrated clerkships and rotation-based clerkships. Academic Medicine. 89(2): 296 - 300.

#124
One Team, Two LICs: Shared Structure, Different Communities

Administrative Perspectives

Oral Presentation
Wednesday, OCT 30
10:00-10:15
Pacific Ballroom

Lead Presenter: Brinsley Davis, University of Minnesota Medical School

Co-Presenter(s):   Kirby Clark

All Author(s):   Brinsley Davis, University of Minnesota Medical School; Kirby Clark, University of Minnesota Medical School

Abstract:

Introduction/background
The University of Minnesota (U of MN) Medical School is home to the oldest Longitudinal Integrated Clerkship (LIC), the Rural Physician Associate Program (RPAP). In 2008 the RPAP team of physicians and administrators created the Metropolitan Physician Associate Program (MetroPAP). MetroPAP shares the same structure and administrative team as RPAP, but differs in location, immersed in urban underserved communities. As MetroPAP has grown from 1 site and 2 students to 8 sites and 9 students, both shared and unique administrative and structural challenges have emerged. The team of physicians and administrators that runs both programs has become nimble in navigating these differences.

Aims/Objectives
- identify ways that program goals can be shared despite different locations
- identify differences between rural and urban LIC structures
- demonstrate that one team can support similar LICs

Results
Both RPAP and MetroPAP are thriving: participants have increased in the past 4 years and student residency match satisfaction continues to be high. Student feedback is worked into a continual process improvement plan for both programs.

Discussion
Both RPAP and MetroPAP are comprehensive, community-based LICs with predominantly Family Medicine preceptors. The differences in size of host communities and distance from the Medical School do not override these other typological1 similarities. Further work is needed to improve the coordination between MetroPAP and the traditional block clerkships that share the same sites.

Conclusion/Discussion
We have identified shared and unique functions in overseeing community-based LICs in rural versus urban areas. How would a different setting allow you to grow your LIC?

References/Citations:

P. Worley et al, "A typology of longitudinal integrated clerkships", Medical Education 2016: 50: 922-932

#125
Is it Burst or Bust for your LIC?

Sustainability/Expansion of Existing LIC

Oral Presentation
Wednesday, OCT 30
10:15-10:30
Pacific Ballroom

Lead Presenter: Kirby Clark, University of Minnesota Medical School

Co-Presenter(s): Brinsley Davis   Javad Keyhani

All Author(s): Brinsley Davis, University of Minnesota Medical School; Kirby Clark, University of Minnesota Medical School

Abstract:

Introduction/Background: The Rural Physician Associate Program (RPAP), a third-year 9-month longitudinal community-based curriculum, has coexisted with traditional block clerkships (TBC) for nearly 50 years. In response to TBC scheduling changes, and to adapt to practice patterns in rural Minnesota, "burst" experiences were added to the RPAP curriculum in 2017.   Burst experiences/immersion blocks have been employed by a number of LIC's to ensure specific patient experiences, particularly inpatient experiences[1-2]. Our three, two-week bursts employ sites and physicians teaching primarily TBC students. Development of burst-specific objectives, post-burst, and post-LIC student surveys evaluated effectiveness of the bursts.

Aims/Objectives
* Identify curricular or institutional needs that could be addressed with bursts
* Develop strategies to add bursts to an established LIC model
* Plan feedback strategies for improving burst experiences

Results
With bursts, RPAP students were able to complete most core required clerkships, including psychiatry, during their 3rd year. RPAP was able to sustain students in communities that were no longer providing inpatient experiences in pediatrics or obstetrics/gynecology. Initial survey data show that most, but not all, students met expected curricular goals during their bursts and identified specialty specific gaps mapped to particular burst or LIC-community sites.

Discussion
Two-week bursts allowed the RPAP program to adapt to meet a medical school charge to complete most core clerkships in the 3rd year. Initial survey data has identified that the "burst" needs of students varies depending on their community LIC site placement.

Conclusion/Discussion
Bursts can be added to a very established LIC curriculum and the future may lie in tailored burst objectives/placement based on LIC-community site placement.

References/Citations:

Poncelet, A and Hirsh, D. eds. Longitudinal Integrated Clerkships: Principles, Outcomes, Practical Tools, and Future Directions. Syracuse, NY: Gegensatz Press, 2016.
Morgenstern, BZ ed. Guidebook for Clerkship Directors, 4th edition. Syracuse, NY: Gegensatz Press 2012

#126

Training in the Era of the EHR: Examining the Experience of Medical Student Documentation

Future Directions and Educational Theory in LIC

Oral Presentation
Monday, OCT 28
11:45-12:00
Pacific Ballroom

Lead Presenter: Julia Bellantoni, Duke University School of Medicine

All Author(s):   Julia Bellantoni, Duke University School of Medicine; Charlton Tsai, Duke University School of Medicine; Omar Martinez-Uribe, Duke University School of Medicine; Bruce Peyser, Duke

Abstract:

Introduction: Medical schools across the U.S. have increasingly adopted Longitudinal Integrated Clerkships (LIC) as a way to implement a developmentally progressive curriculum that emphasizes continuity as learners develop the skills of a physician. One important skill is documentation in the EHR. The AAMC has identified clinical documentation as a core entrustable professional activity for starting residency, while the the AMA has emphasized EHR training to prepare medical students for practicing in the modern healthcare system. Reflecting this increased emphasis, CMS revised their policy in 2018 to allow medical student documentation to be utilized for billing. With students now playing an active role in the documentation process, the challenge becomes finding a way to seamlessly integrate the note into the clinical workflow and optimize the educational value of notewriting. Aim: Examine the experience of medical student documentation in an LIC curriculum, including: 1) How student note writing is incorporated into clinic workflow, 2) Benefits derived by students from documenting in the EHR, 3) Areas of improvement to the experience of documentation. Methods: Data from this study will come from an online survey administered to a target of 50 medical students participating in an LIC-type program. The survey will include both Likert scale and free response questions in order to capture both quantitative and qualitative data. Discussion: We will provide a holistic review of the medical student experience with documentation and emphasize the key elements that optimize a student's learning. Conclusion: This study will identify future directions for student documentation in LICs.

References/Citations:

1. Longitudinal integrated clerkships for medical students: an innovation adopted by medical schools in Australia, Canada, South Africa, and the United States.Norris TE1, Schaad DC, DeWitt D, Ogur B, Hunt DD; Consortium of Longitudinal Integrated Clerkships. https://www.ncbi.nlm.nih.gov/pubmed/19550184

2. Medical Student Documentation in the Emergency Department in the Electronic Health Record Era—A National Survey

Virden, Ryan A., MD*; Sonnett, F. Meridith, MD*†; Khan, Abu N.G.A., MD, MSc*†

Pediatric Emergency Care: March 2019 - Volume 35 - Issue 3 - p 220–225 doi: 10.1097/PEC.0000000000001095 Original Articles

https://journals.lww.com/pec-online/fulltext/2019/03000/Medical_Student_Documentation_in_the_Emergency.12.aspx

3. Medical Student Documentation in the Electronic Medical Record: Patterns of Use and Barriers.

Kathleen Wittels, MD,* Joshua Wallenstein, MD,† Rahul Patwari, MD,‡ and Sundip Patel, MD§

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https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5226747/pdf/wjem-18-133.pdf

4. Evidence for longitudinal ambulatory care rotations: a review of the literature. Ogrinc G1, Mutha S, Irby DM.

https://www.ncbi.nlm.nih.gov/pubmed/12114141

#128
Scheduling tool to manage fully distributed LIC

New LIC

Oral Presentation
Wednesday, OCT 30
10:30-10:45
Saltspring C Room

Lead Presenter: Kayla Beeler, TCU AND UNTHSC School of Medicine

Co-Presenter(s): Brian Dixon

All Author(s): Kayla Beeler, TCU AND UNTHSC School of Medicine; saji pillai, TCU/UNTHSC SCHOOL OF MEDICINE; Whitney LeFevre, TCU and UNTHSC School or Medicine; Brian Dixon, TCU and UNTHSC School of Medicine; Stephen Scott, TCU and UNTHSC School of Medicine; Adam Jennings, TCU and UNTHSC School of Medicine; Shanna Combs, TCU and UNTHSC School of Medicine; Claudia Perez, TCU and UNTHSC School of Medicine; John Birbari, TCU and UNTHSC School of Medicine; Amani Terrell, TCU and UNTHSC School of Medicine

Abstract:

Background
In our fully distributed Longitudinal Integrated Clerkship (LIC), students will complete their ambulatory clinical clerkships over forty weeks. Each student will be paired with a single preceptor for each of their eight clerkships and will have an individualized schedule. These schedules will be dependent on approximately 480 different clinical educator schedules. We sought to create a personalized scheduling tool to help us create and manage our LIC.

Objectives
We created a web-based scheduling application that interfaces with both student and preceptor schedules and provides students autonomy to generate their own schedules.

Methods
We recruited a group of undergraduate computer science students, in collaboration with their faculty instructor, to help design a web-based application to pair students with their eight preceptors and assist in tailoring schedules to the students' time and geographic preferences. Key features of the application include a mechanism for preceptors to submit their availability and for students to build and submit their preferred schedules. All preceptor information including name, clinic, and hospital is hidden from the students when generating schedules to avoid bias. Students only see available times they can complete a specific clerkship and the location or community. Once submitted, the LIC office will review and publish individual schedules for each student and preceptor. Constraints and variables such as distance traveled and cluster of rotations are included.

Discussion and Conclusions
We anticipate that the ease of this tool will allow the LIC team to generate clerkship schedules with confidence in a timely and less labor-intensive manner.

#129
The NOSM Administration Model – Keeping Connected is Key

Administrative Perspectives

Oral Presentation
Monday, OCT 28
10:30-10:45
Pacific Ballroom

Lead Presenter: Claudia Rocca, NOSM

Co-Presenter(s):   Sue Featherston

All Author(s):   Claudia Rocca, NOSM; Susan Featherston, Northern Ontario School of Medicine

Abstract:

Introduction:
The Northern Ontario School of Medicine (NOSM) runs a mandatory Longitudinal Integrated Clerkship (LIC) in the third year of the MD program called the Comprehensive Community Clerkship (CCC). There are currently, 15 separate sites distributed across Northern Ontario. The administrative relationship between NOSM and the Site Administrative Coordinator (SAC) has proven to be crucial for how both the learners and physicians experience the CCC.

Objectives:
- Describe how the administrative model of NOSM's LIC functions in a distributed community-engaged learning model
- Explain how NOSM administration and the Site Administrative Coordinators support achieving balance between comparability of sites and contextualized community-engaged learning
- Identify advantages and challenges in setting up administrative support for a LIC in a community setting

Discussion:
The CCC can be a challenging year for students and the NOSM administration model works to minimize challenges, eliminate barriers to learning, support students and ensure comparability across the distributed sites. NOSM has an administrative coordinator responsible for supporting the CCC and a SAC in each CCC community. Keeping connected to the CCC sites ensures the medical students have an enhanced educational experience.

Conclusion:
Having the right administration model in place makes successful CCCs possible. The NOSM Administration model works to ensure 15 CCCs are providing a positive LIC experience. There are many unique challenges to running a distributed LIC and having a connected administration works to meet these challenges, learn from each other, all with the shared goal of ensuring the success of the students.

#133

The Preceptor Card: High Value Teaching Behaviors of Family Medicine Preceptors in a Longitudinal Integrated Clerkship

Future Directions and Educational Theory in LIC

Poster

Lead Presenter: Payam Sazegar, Kaiser Permanente

All Author(s):   Payam Sazegar, Kaiser Permanente

Abstract:

Introduction: Over the past two decades, several tools for clinical preceptors have been developed to provide a framework for teaching but their successful application produces variable results. Nuances between teaching practices of different preceptors can create significant variability in the quality of clinical teaching. This feasibility study has a two-fold purpose: to create a tool that will familiarize preceptors with practical teaching tips based on student feedback and to apply the tool to promote a learner-centered culture in our longitudinal family medicine (FM) clerkship. The development of a 'preceptor card' is described here as a feasible tool for understanding teaching behaviors associated with high learning value.

Methods: A list of 37 distinct teaching behaviors were compiled by FM faculty at a teaching practice. Behaviors ranged from direct observation to the maintenance of a dermatology photo bank. All 6 medical students from years 1-3 at this faculty practice were surveyed to determine which teaching strategies had the highest value to them, based on a 5-point likert scale.

Results: Our response rate was 100%. Survey responses were analyzed for statistical significance and the top 15 strategies were compiled into a one-page preceptor guide. Teaching behaviors including in the card had an average score of 4.2/5 or higher. Initial impressions of this preceptor card from our FM residency faculty were consistently positive.

Conclusions: A hierarchy of learner preferences exists pertaining to teaching behaviors of FM preceptors. Creation of a customized preceptor card is a potential strategy for learner-centered teaching in the longitudinal clerkship.

References/Citations:

Barker ER and Pittman O. "Becoming a super preceptor: A practical guide to preceptorship in today's clinical climate" J Am Acad Nurse Pract. 2010 Mar; 22(3):144-9.

Biagioli FE and Chappelle KG. "How to be an Efficient and Effectvie Preceptor". Fam Pract Manag. 2010 May-Jun;17(3):18-21.

Cayley WE. "Effective Clinical Education: Strategies for Teaching Medical Students and Residents in the Office". WMJ. 2011 August. 110(4): 178-181

Dobbie AE, Tysinger JW, Freeman J. "Strategies for Efficient Office Precepting". Fam Med. 2005 Apr;37(4):239-41.

Lazarus J. "Precepting 101: Teaching Strategies and Tips for Success for Preceptors". J Midwifery Womens Health. 2016 Nov;61(S1):11-21.

#134

Narrative Assessment Protocol for Medical Students in a Longitudinal Integrated Clerkship

Assessment

Oral Presentation
Monday, OCT 28
17:00-17:15
Pacific Ballroom

Lead Presenter: Michael McShane, Penn State College of Medicine

All Author(s): Michael McShane, Penn State College of Medicine; Daneil Wolpaw, Penn State College of Medicine; Britta Thompson, Penn State College of Medicine

Abstract:

With the goal of achieving objectivity in assessments, educators have relied on methods that deconstruct observed behaviors into likert scales. These values fail to offer either meaningful feedback or the promised "objectivity". This has led to increased emphasis on narrative assessments, which have demonstrated to reliably identify learners at risk, and provide authentic feedback. However, it is challenging to get clinical faculty to do more than write short narratives such as "read more". Here, we describe our efforts to overcome these barriers through a narrative assessment protocol (NAP).

Four months into our LIC, we implemented the NAP. Narrative prompts were created using clerkship specific feedback opportunities (FO) combined with two semi-scripted statements. Faculty and students were surveyed by email. Students met with the LIC director in a "Calibration Meeting", where this information was reviewed to recalibrate about clerkship performance, and create an across clerkship goal. In a collaborative meeting, clerkship directors discussed how to best help the student fulfill their goal. To better understand the quality of the NAP, qualitative analysis of faculty narrative statements and student goals was performed.

Response rate for faculty narrative statements was 77%. Narrative statements were with limited judgmental or non-specific feedback. The clerkship director's discussion was characterized by supportive conversation and helpful recommendations.

Using this protocol, we were able to create a meaningful combination of narrative feedback and refined goals for LIC students.

We feel that this approach to capturing narrative faculty feedback and supporting student learning and professional growth in the clerkships is promising.

References/Citations:

Allen, David, ed. Assessing student learning: From grading to understanding. Teachers College Press, 1998.
Ginsburg, Shiphra, et al. "Competencies "plus": the nature of written comments on internal medicine residents' evaluation forms." Academic Medicine 86.10 (2011): S30-S34.
Regehr, Glenn, et al. "Using "standardized narratives" to explore new ways to represent faculty opinions of resident performance." Academic Medicine 87.4 (2012): 419-427
ten Cate Olle PhD, Regehr Glenn. "The Power of Subjectivity in the Assessment of Medical Trainees." training 333.7571 (2006): 748-751.

#135
NOSM's Theme-based integrated curriculum framework: Balancing standardization with contextualized experiences during an LIC

Sustainability/Expansion of Existing LIC

Poster

Lead Presenter: John Dabous, NOSM

All Author(s):   John Dabous, NOSM; Peter Istvan, NOSM

Abstract:

Introduction
The Northern Ontario School of Medicine (NOSM) utilizes a Theme-based integrated curriculum to deliver a distributed community-engaged Longitudinal Integrated Clerkship called the Comprehensive Community Clerkship (CCC). The CCC takes place during the 3rd year of the MD program, across 15 different sites. The Theme-based curriculum framework organizes the content of NOSM's MD program by clearly articulating which content needs to be covered during the mandatory LIC. Students achieve learning outcomes at all sites through a mix of clinical time, whole group sessions, small group sessions, and self-directed study.

Aims/objectives
- Describe the NOSM Theme Integrated Curriculum and how it is applied during the Longitudinal Integrated Clerkship to maintain comparability of experiences across sites
- Describe the various learning modalities and approaches used to achieve the intended learning outcomes across all sites

Discussion
NOSM utilizes a standardized Theme based curriculum to ensure students achieve the same learning outcomes regardless of which site they learning in. The structure of the LIC builds in formal academic sessions, both whole group and small group, in a flexible schedule to support students in achieving the learning outcomes. The schedule also supports community-engaged learning and clinical time to allow for rich, contextualized learning resulting in positive LIC experience.

Issues for discussion
A challenge for LICs is to ensure comparability of learning experiences and achievement of learning outcomes for all students at all sites. The model NOSM has developed clearly articulates the requirements for student progress, but also allows for flexibility in scheduling of academic events to support contextualized learning.

#136
Let's Learn from Each Other: Navigating Student Scheduling in a LIC Program

Administrative Perspectives

Workshop
Tuesday, OCT 29
10:00-11:30
Waddington Room

Lead Presenter: Danielle Gunder, University of Washington School of Medicine

Co-Presenter(s): Jessica Poston

All Author(s): Danielle Bienz, University of Washington School of Medicine; Jessica Poston, UNC School of Medicine Asheville Campus

Abstract:

Introduction
Longitudinal Integrated Clerkships (LICs) are becoming increasing popular among medical schools as an alternative way of teaching the clinical clerkships. Although "LIC" is the accepted terminology for all of these experiences, they are implemented in a wide variety of ways. Specialists at two American medical schools, UNC and UWSOM, will lead this 90-minute workshop to discuss their experiences with the unique nature of scheduling a LIC program. The session will review the many levels of scheduling an integrated experience, beginning with the registration setup with the Registrar to the day-to-day scheduling. Participants will break into small groups, mixed with new and seasoned LIC administrators, to discuss the challenges and potential solutions to scheduling a LIC. Each group will report back to the larger audience at the end of the workshop to share ideas and knowledge with the group.

Learning Objectives/Outcomes
At the end of this workshop, participants will be able to:
o   Explain different ways longitudinal integrated clerkships are scheduled.
o   List challenges in scheduling a longitudinal integrated clerkship.
o   Determine potential solutions to scheduling difficulties specific to the participant's LIC.

Issues/areas for exploration
o   What strategies do established LICs use to create and manage student scheduling?
o   How do existing LIC programs schedule students to ensure clerkship goals and objectives are being met while still allowing for the unique fluidity of an LIC schedule?
o   What resources/knowledge can be brought back by attendees to improve the current scheduling processes or assist with scheduling difficulties?

Activities
o   Presentation of example LIC structures
o   Small group breakout
o   Large group report-back

References/Citations:

Ellaway R, Graves L, Berry S, Myhre D, Cummings B, Konkin J. (2013). Twelve tips for designing and running longitudinal integrated clerkships. Medical Teacher, 35:12, 989-995

Poncelet A, et. al. (2011). Development of a longitudinal integrated clerkship at an academic medical center. Medical Education Online, 16:1, 5939-5948

Teherani A, Irby DM, Loeser H. (2013). Outcomes of different clerkship models: longitudinal integrated, hybrid, and block. Acad Med, 88:1, 35-43.

#137

Balancing Education and Clinical Productivity: Exploring the Challenges in a Rural LIC

New LIC

PeArLs
Wednesday, OCT 30
10:00-10:45
Saltspring A Room

Lead Presenter: Michael McShane, Penn State College of Medicine

Co-Presenter(s): Sondra Struble

All Author(s): Michael McShane, Penn State College of Medicine; Sondra Struble, PennState University; Daneil Wolpaw, Penn State College of Medicine

Abstract:

LICs in rural communities present both opportunities and challenges. One ongoing challenge is helping interested volunteer faculty "find the time" to teach in busy clinical practices and demanding compensation structures. How can we help volunteer faculty balance teaching with clinical productivity? Located in a rural setting, the Penn State College of Medicine University Park Track is now in the third year of a new four year curriculum that features extensive early clinical experience and full LIC in the second year. The LIC utilizes a high percentage of volunteer faculty from the community, working in a productivity-based clinical compensation model. "Finding the time" to teach and mentor our students is a problem. The challenge is not new, but rural LICs are uniquely vulnerable, and we would like to access the collective experience and wisdom of the CLIC group to explore potential solutions.

In this session, we aim to:
- Discuss individual and structural challenges that develop when balancing teaching with clinical productivity.
- Identify opportunities for authentic learning experiences for students that simultaneously reduce the impact on clinical productivity.

We anticipate that the discussion will focus on multiple levels including faculty development, curricular design, and health systems adjustments. How can faculty development be structured to help support professional development of volunteer faculty? How can we adjustment curricular structure to create authentic learning experiences for students that reduces the demand on clinical productivity? In what way can the health system be modified to promote teaching?

References/Citations:

Poncelet, Ann, and David Hirsh, eds. Longitudinal Integrated Clerkships: Principles, Outcomes, Practical Tools, and Future Directions. Gegensatz Press, 2016.

Sheu, Leslie, et al. "Understanding Clerkship Student Roles in the Context of 21st-Century Healthcare Systems and Curricular Reform." Teaching and learning in medicine 30.4 (2018): 367-376.

#138

The Parents of LIC's: The Guiding Support and Impact of LIC Administrators on Student Mentorship

Administrative Perspectives

Poster

Lead Presenter: Sondra Struble, PennState University

All Author(s):   Sondra Struble, PennState University; Michael McShane, Penn State College of Medicine; Daneil Wolpaw, Penn State College of Medicine

Abstract:

Core to LICs is longitudinal learning relationships with faculty, peers, and patients. Primary mentors are usually thought of as physicians1. Mentors can be defined as those that provide personal support, role modeling, and career advice2. While in an LIC, students interact with administrators on a daily basis, forming natural, mentoring relationships. These interactions are highly valued by students navigating new professional environments, but these relationships are often overlooked as key longitudinal mentors. We plan to explore how this group serves as important informal mentors for students, providing personal support, role modeling, and even career advice.

The University Park Curriculum Track of the Penn State College of Medicine features a full LIC during the second year. Using qualitative methods, we are exploring the nature and impact of longitudinal mentoring relationships between students and administrators. Interviewing students and administrators using a semi-structured guide we hope to unpack perceptions and experiences and explore frequent interactions.

Following IRB approval, interviews will be recorded, and subjected to a thematic qualitative analysis followed by member-checking to validate findings.

The importance of administrative staff in the professional development of trainees has been discussed and recognized. We would like to apply qualitative scholarship to unroof this area in the context of an LIC.

Administrators serve as key supporters for the professional development of students in an LIC. We believe that in-depth study of these relationships can help us to further leverage this additional layer of continuity to advance the goals of the LIC.

References/Citations:

Poncelet, Ann, and David Hirsh, eds. Longitudinal Integrated Clerkships: Principles, Outcomes, Practical Tools, and Future Directions. Gegensatz Press, 2016.

Aagaard, Eva M., and Karen E. Hauer. "A cross-sectional descriptive study of mentoring relationships formed by medical students." Journal of General Internal Medicine 18.4 (2003): 298-302.

#139

Student Perception of their Value to Patients, Physicians, Health Care Systems and the Community

Reflection and Engagement

Poster

Lead Presenter: Lori Hansen, University of South Dakota

All Author(s):   Lori Hansen, University of South Dakota; Mark Beard, University of South Dakota

Abstract:

Introduction/Background: There has been a perception by some of a decline in the engagement of students in patient care roles. Students enter clinical sites as observers of attending physicians to learn "doctoring skills." The longitudinal curricular model has promoted continuity with patients, preceptors and curriculum to engage students in direct patient care and be a valued member of the health care team. In 2016, medical educators met to explore value added medical student roles into care delivery systems. The impact of student value added roles in clinical settings, barriers and strategies were identified. The Sanford School of Medicine is a multi-campus community based medical school. The primary clinical year (Pillar 2) is longitudinal, ambulatory based, problem based, student centered and promotes continuity of care.

Objective: The purpose of this survey was to obtain student perceptions of their current value and areas that they could add additional value.

Methods: We surveyed the Pillar 2 students to obtain their perceptions of their value to the physicians, patients, community and hospital system. Students could also add comments.

Results:
Students perceived their highest value:
- Education of the patient
- Direct care of the patient
- Service learning benefit to the community

Lowest perceived value:
- Service learning to physicians
- Research and system projects value to patient

Student Comments: Will be reported.

Discussion: Students identified areas where they added value to physicians, patients, the community and the hospital. They commented on additional ways to be of benefit.

Conclusion: Curricular design should implement programs/opportunities to capitalize on student value.

References/Citations:

Gonzalo, Jed D.; Dekhtyar, Michael; Hawkins, Richard E.; Wolpaw, Daniel R. How Can Medical Students Add Value? Identifying Roles, Barriers, and Strategies to Advance the Value of Undergraduate Medical Education to Patient Care and the Health System. Academic Medicine. September 2017, Vol. 92, No. 9, p 1294-1301.

#140
Promoting Self-Regulation through a Longitudinal Personalized Learning Plan

Future Directions and Educational Theory in LIC

Oral Presentation
Tuesday, OCT 29
15:30-15:45
Pacific Ballroom

Lead Presenter: Jo Anna Leuck, TCU and UNTHSC SOM

All Author(s):   Jo Anna Leuck, TCU and UNTHSC SOM; Amber Heck , TCU and UNTHSC SOM

Abstract:

Introduction/Background:
Self-regulation is the process of defining and reaching goals by generating thoughts and behaviors that facilitate achievement. Skill in self-regulation is key to success as a life-long learner, and evidence demonstrates that it can be learned. One strategy to promote self-regulation is a personal learning plan (PLP), which is developed by learners as a way to achieve learning goals. Longitudinal Integrated Clerkships (LICs) require students to exercise self-regulated learning skills. We propose a PLP-based intervention within an LIC to promote self-regulation. We believe that increased skill in self-regulation will lead to improved academic performance and promote wellness.

Aims/Objectives:
By introducing a PLP with each student in an LIC, we aim to:
- Create a PLP that is satisfying to learners.
- Positively affect learner growth in self-regulation, academic performance, and wellness.

Description of methods
A PLP will be implemented across the LIC experience. Each PLP entry will allow learners to identify a need, a goal, resources, strategies, and outcomes to evaluate. Faculty will be able to provide feedback. Both quantitative and qualitative assessment will occur through interviews, focus groups, and the use of validated instruments.

Anticipated outcomes
We believe the PLP will impact learner self-regulation by establishing a strategic process for improvement across multiple affective and cognitive domains. After creation of student PLPs with our inaugural class in July 2019, we look forward to sharing experiences, feedback, and initial assessment. We anticipate learners will become more aware of their needs and the strategies they can employ to meet their goals, thus leading to improved academic success within the LIC.

References/Citations:

Challis, M. (2000). AMEE medical education guide no. 19: Personal learning plans. Med Teach, 22(3), 225-236.

Gagnon, M.-C. J., Durand-Bush, N., & Young, B. W. (2016). Self-regulation capacity is linked to wellbeing and burnout in physicians and medical students: Implications for nurturing self-help skills. International Journal of Wellbeing, 6(1), 101-116.

Murad, M. H., Coto-Yglesias, F., Varkey, P., Prokop, L. J., & Murad, A. L. (2010). The effectiveness of self-directed learning in health professions education: a systematic review. Med Educ, 44(11), 1057-1068.

Sandars, J., & Cleary, T. J. (2011). Self-regulation theory: applications to medical education: AMEE Guide No. 58. Med Teach, 33(11), 875-886.

Simon, F. A., & Aschenbrener, C. A. (2005). Undergraduate medical education accreditation as a driver of lifelong learning. J Contin Educ Health Prof, 25(3), 157-161.

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. Theory into practice, 41(2), 64-70.

#141

Bringing it back to the playground: Developing games as an approach for knowledge application and assessment in medical education

Future Directions and Educational Theory in LIC

Workshop
Tuesday, OCT 29
10:00-11:30
Saltspring A Room

Lead Presenter: Margaret Lewis, Carolinas Medical Center, Atrium Health

Co-Presenter(s):   Courtney Brantley

All Author(s):   Margaret Lewis, Carolinas Medical Center, Atrium Health; Courtney Brantley, Levine Children's Hospital, Carolinas Medical Center, Atrium Health

Abstract:

In medical education, educators are looking for innovations that disrupt education and create a new model for competency-based learning. Adult learners benefit from active engagement. Serious games used as an education learning tool have been shown to increase learner satisfaction and knowledge over traditional methods. Traditional teaching is based on knowledge dissemination and memory whereas games offer an engaging situation in which the student must apply knowledge and utilize application and analysis.

Games in medical education can be creative games can force the learners to apply knowledge in new ways and to use critical thinking skills.

Learning Objectives:
1.) Discussion of gaming in medical education and our experiences
2.) Brainstorming and development of an educational game
3.) Testing of game and feedback and idea sharing

Issues/Areas for exploration:
We will discuss gaming in medical education as well as our experiences. Attendees will be able to brainstorm ideas for developing games that can be utilized for more innovative student education at their home institution followed by testing the games and giving feedback. Attendees will be encouraged to share ideas.

Activities:
Activities in this workshop include discussion of gaming in education as well as small group development of an education game and testing of each game. Following discussion, the audience will divide into small groups and each group will be tasked with developing a game based on a given topic in medical education. Once each group has developed their game, the small groups will test each other groups' game and give feedback.

References/Citations:

Boulger C et al. A National Point-of-Care Ultrasound Competition for Medical Students. J Ultrasound Med. 2019 Jan (1): 253-258.
Megta NB, Hull A, Young JB. Just Imagine: new paradigms for medical education. Academic Medicine. 2013 Oct (10): 1418-23.

#147

How can the education and training of students on Longitudinal Integrated Clerkships (LICs) transfer to practise and benefit patients? : An evidenced based model developed using realist inquiry

Future Directions and Educational Theory in LIC

Workshop
Monday, OCT 28
10:30-12:00
Waddington Room

Lead Presenter: Jan Illing, Newcastle University

All Author(s):   Jan Illing, Newcastle University

Abstract:

Background
This workshop will present an evidence based model to explain how education and training of staff and students can transfer to practise and benefit patients (through improved clinical effectiveness, patient safety, and patient experience).

The model was developed using a realist approach, starting with a transfer of learning theory, then a systematic search of 24,000 papers from the international literature and draws on evidence from 368 studies which were synthesised to create a Four-Step Programme Theory. This was then tested using primary data collection from five live UK health service case studies, a survey with over 600 healthcare staff and tested by modelling National Health Service data.

The model identifies the processes and resources that are needed to gain a positive outcome and ensure education and training targeted at staff benefits patient. However, few studies focused on generating patient outcomes following pre-qualification education and training, as the student was the intended outcome. As LIC students have ongoing relationships with patients, LICs provide a strong instance of how data showing patient benefit could be collected at the pre-qualification level.

Learning objectives
- Participants will learn about the development and testing of the model.
- Learn how to ensure educational interventions transfer to practise to benefit patients.
- Learn how to apply the model to their own LIC intervention to ensure it generates patient outcomes.

Activities
Participants will be supported to work on their own topics and be guided through the application of the Four-Step model to generate patient data following LICs.

References/Citations:

Illing J, Corbett S, Kehoe A, Carter M, Hesselgreaves H, Crampton P, et al. How does the education and training of health and social care staff transfer to practice and benefit patients? A realist approach. Final Report for Department of Health. 2018.