

A LIC in an Urban Setting with Regular Clerks: Organizational Challenges and Solutions

Carolle Bernier, Nathalie Gagnon,
Marianne Xhignesse, Sylvie Bourque
Université de Sherbrooke, Québec, Canada

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Outline

- Background
 - Existing LICs
 - Our challenge
- Innovation
 - Underlying principles
 - Implementation
- Evaluation
 - Assessment of Clerks
 - Evaluation of Implementation
- Take-home message



BACKGROUND



Longitudinal Integrated Clerkships (LICs)

- Widely implemented internationally
- Recognized as an effective pedagogical alternative to standard clerkship rotations

But

- Implementation thus far has mainly been in rural settings without the presence of regular clerks

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Université de Sherbrooke

School of medicine

- Established in 1961 in Province of Québec (Eastern Townships), Canada
 - 1st cohort of students in 1966 (n = 32)
- Currently ~ 200 students / year
- 3 sites since 2006:
 - Sherbrooke (150)
 - Saguenay (32)
 - Moncton (24)



Sherbrooke Site

- Population: 162,000
- One teaching hospital- 2 locations
 - Tertiary care
- 2 Family Medicine teaching units
 - Small: 6 Residents
 - Large: 18 Residents
- Regular clerkship rotations are ongoing in every mandatory discipline





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Regular clerkship: Clinical Activities

- 18 months duration beginning in January:
 - 3 electives at the beginning
 - 1 elective at the end
 - 1 period each of:
 - Pediatrics, Obs-Gyn, General Surgery, Internal Medicine, Specialty Medicine, Psychiatry, Public health
 - 2 periods:
 - Family and Emergency Medicine
 - 3 selectives
- On call activities



Regular clerkship: Academic Activities

- 2 periods (1 week each) for integration activities
- 1 period for final exam preparation
- 56 clinical reasoning activities
 - Specific number for each discipline
 - 1h30 hr each



Our Challenge

- To develop a LIC for 8 clerks within an urban setting in a large teaching hospital and family medicine teaching unit where regular clerkship rotations are ongoing.



INNOVATION



LIC: 5 Principles of Continuity

- Continuity of Care
- Continuity of Supervision
- Continuity of Assessment
- Continuity of Context
- Continuity of Learning



Ellaway R. et al. Medical Teacher (2013)



Application of Principles

- Each LIC clerk:
 - Is paired with another LIC clerk to build a specific “patient panel” for which they will provide care and follow-up over 40 weeks (**continuity of care**)
 - Has a longitudinal relationship with supervisors in each of the disciplines (**continuity of supervision**)



Application of Principles (cont'd)

- Each LIC clerk:
 - Benefits from frequent direct observations
(continuity of assessment)
 - Receives regular formative feed-back after each day or week from each supervisor, including residents **(continuity of assessment)**
 - This is an implementation **challenge!**



Application of Principles (cont'd)

- Each LIC clerk:
 - Works with a team in a particular learning environment but this is fractioned over time instead of being a block experience (**continuity of context**)
 - Perceived as a **challenge** during initial implementation



Application of Principles (cont'd)

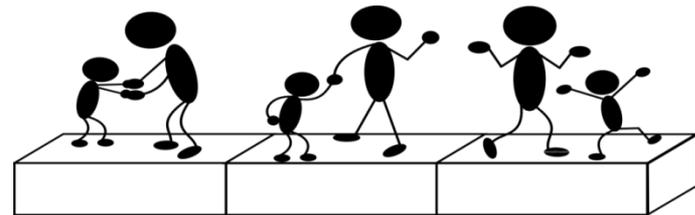
- Each LIC clerk:
 - Has an academic advisor whose role is that of a “coach” (**continuity of learning**)
 - Meetings every 6 weeks (verify log book and ensure adequate exposure, etc.)
 - Link learners’ experiences with global program objectives
 - Attends the same 56 clinical reasoning activities as regular clerks but these are not discipline-linked (**continuity of learning**)
 - This is a **challenge**

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Proposed Solutions

- Modification of existing clerkship governance
 - Establishment of a new LIC governance structure with specified roles
 - Implementation of an academic advisor for LIC clerks



Implementation: Sherbrooke Site

- Beginning in January
 - 3 electives, 1 selective
 - Same as regular clerkship
- End of April
 - *Beginning of LIC*
 - Duration : 40 weeks (equivalent to 10 four-week periods)
 - Divided in 2 blocks of 20 weeks
- End of February the next year
 - Finish as regular clerks with:
 - 1 month specialized medicine
 - 1 month preparation for final clerkship exam
 - 1 month of electives



Simulation of regular and LIC clerkship rotations for 2016-2017 SHERBROOKE site



		A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	F1	F2	LIC	
3 rd year	January 4 th to 31 st 2016	ELE 1	ELE 1	ELE 1	ELE 1	ELE 1	ELE 1	ELE 1	ELE 1	ELE 1	ELE 1	ELE 1	ELE 1	ELE 1	
	February 1 st to 28 th 2016	ELE 2	ELE 2	ELE 2	ELE 2	ELE 2	ELE 2	ELE 2	ELE 2	ELE 2	ELE 2	ELE 2	ELE 2	ELE 2	
	February 29 th to March 24 th 2016	ELE 3	ELE 3	ELE 3	ELE 3	ELE 3	ELE 3	ELE 3	ELE 3	ELE 3	ELE 3	ELE 3	ELE 3	ELE 3	
	March 28 th to Mai 22 nd 2016	March 28 th – April 24 th	INT MED	SPE MED	PSY	PUBLIC HEALTH	SURG	SEL # 2	FAM MED	FAM MED	OBS-GYN	SEL # 3	PED	SEL #1	SEL #2
		April 25 th – Mai 22 nd	SPE MED	INT MED	PUBLIC HEALTH	PSY	SEL #2	SURG	FAM MED	FAM MED	SEL #3	OBS-GYN	SEL #1	PED	SEL #2
	May 23 rd to July 15 th 2016	May 23 rd – June 19 th	PED	SEL #1	INT MED	SPE MED	PSY	PUBLIC HEALTH	SURG	SEL #2	FAM MED	FAM MED	OBS-GYN	SEL #3	LIC Block
June 20 th – July 15 th		SEL #1	PED	SPE MED	INT MED	PUBLIC HEALTH	PSY	SEL #2	SURG	FAM MED	FAM MED	SEL #3	OBS-GYN	LIC Block	
Summer vacation July 15 th to July 24 th 2016															
4 th year	July 25 th to September 16 th 2016	July 25 th – Aug. 21 st	OBS-GYN	SEL #3	PED	SEL #1	INT MED	SPE MED	PSY	PUBLIC HEALTH	SURG	SEL #2	FAM MED	FAM MED	
		Aug. 22 nd – Sept 16 th	SEL #3	OBS-GYN	SEL #1	PED	SPE MED	INT MED	PUBLIC HEALTH	PSY	SEL #2	SURG	FAM MED	FAM MED	
Integration week I from September 19 th to September 23 rd 2016 (CARMS deadline)															
4 th year	September 26 th to November 20 th 2016	Sept. 26 th – Oct. 23 rd	FAM MED	FAM MED	OBS-GYN	SEL #3	PED	SEL #1	INT MED	SPE MED	PSY	PUBLIC HEALTH	SURG	SEL #2	
		Oct. 24 th – Nov. 20 th	FAM MED	FAM MED	SEL #3	OBS-GYN	SEL #1	PED	SPE MED	INT MED	PUBLIC HEALTH	PSY	SEL #2	SURG	
4 th year	November 21 st to January 29 th 2017	Nov. 21 st – Dec. 16 th	SURG	SEL #2	FAM MED	FAM MED	OBS-GYN	SEL #3	PED	SEL #1	INT MED	SPE MED	PSY	PUBLIC HEALTH	
		Christmas vacation December 17 th to January 2 nd 2017													
4 th year	January 30 th to March 26 th 2017	Jan. 2 nd – Jan. 29 th	SEL #2	SURG	FAM MED	FAM MED	SEL #3	OBS-GYN	SEL #1	PED	SPE MED	INT MED	PUBLIC HEALTH	PSY	
		Jan. 30 th – Feb. 26 th	PSY	PUBLIC HEALTH	SURG	SEL #2	FAM MED	FAM MED	OBS-GYN	SEL #3	PED	SEL #1	INT MED	SPE MED	
4 th year	March 27 th to April 28 th 2017	Feb. 27 th – March 26 th	PUBLIC HEALTH	PSY	SEL #2	SURG	FAM MED	FAM MED	SEL #3	OBS-GYN	SEL #1	PED	SPE MED	INT MED	
		Preparation for final clerkship exams													
Integration week II from May 1 st to 5 th 2017 (OSCE) and LMCC															
4 th year	May 8 th to June 2 nd	ELE 4													

Major Change

- Replacement of 2 selectives (2 x 4 weeks) by two integrated clerkship rotations (A and B)



LIC (10 months)

Family Medicine

(including 5 days of Anesthesia and Emergency Medicine shifts)

Block 1 (20 weeks)

Psychiatry

Public Health

Internal medicine

Integrated clerkship rotation A:*

- 1 wk of family med hospitalization;
- 1 wk emergency;
- 1 wk geriatrics;
- 1 wk selectif (orthopedics/urology)

Block 2 (20 weeks)

OBGYN

Pediatrics

Surgery

Integrated clerkship rotation B:

- 1 wk of family med hospitalization;
- 1 wk emergency;
- 1 wk psychiatry/OBGYN
- 1 wk according to pedagogical needs of clerk

Figure 2

*Integrated clerkship rotation A could be during Block 1 or Block 2, but it must be during the first block done by the clerk.



« Marketing » of the LIC

- High level support from the dean and vice-dean
- Statutory point at each clerkship committee meeting early in the process
- Presence of students on the LIC planning committee
- Presentation to future students by current LIC clerks



Faculty Development

- For the 3 years prior to LIC implementation:
 - During regular faculty development workshops with clinical supervisors, once a year
 - 5-10 minutes for LIC information and questions
- The year prior to LIC implementation:
 - One 3 hr workshop with academic advisors and LIC disciplinary rotation directors



EVALUATION



Assessment of Clerks

- Same evaluation process as for regular clerkship (summative)

PLUS

- Regular formative feed-back after each day or week from each supervisor, including residents
 - Use of a Lime survey...One/45 tool “fiche de continuité” to enhance continuity (documentation of progression in each discipline)
 - For clerks
 - For supervisors

.....**Still a challenge!**





* indique une réponse obligatoire

Fiche du continuité

Rappel: Le contenu de ces fiches sera vu en intégralité par les externes ELI ainsi que par leur accompagnateur académique

Veillez sélectionner une discipline

*Veillez sélectionner une réponse ci-dessous

- | | |
|---|---|
| <input type="radio"/> Anesthésie | <input type="radio"/> ORL |
| <input type="radio"/> Chirurgie | <input type="radio"/> Orthopédie |
| <input type="radio"/> Chirurgie spécialisée | <input type="radio"/> Pédiatrie |
| <input type="radio"/> Gériatrie | <input type="radio"/> Psychiatrie |
| <input type="radio"/> Médecine de famille | <input type="radio"/> Santé communautaire |
| <input type="radio"/> Médecine interne | <input type="radio"/> Urgence |
| <input type="radio"/> Médecine spécialisée | <input type="radio"/> Urologie |
| <input type="radio"/> Obstétrique-gynécologie | <input type="radio"/> Stage intégré A |
| <input type="radio"/> Ophtalmologie | <input type="radio"/> Stage intégré B |

Moment de la supervision

*Veillez sélectionner une réponse ci-dessous

- AM
- PM
- Toute la journée
- Soir
- Nuit
- Ne s'applique pas

*CONTINUER à faire plus de ... (points forts)

*COMMENCER à faire ou MODIFIER (points à améliorer)

Commentaires descriptifs (incluant info sur les ARCs, gardes)

Soumettre

Sauvegarder et fermer

Annuler

Evaluation of Implementation

- Regular monitoring of clinical exposure
- Focus groups to better understand:
 - Perceived quality of supervision
 - Challenges of integrating LIC clerks within each of the disciplines
 - Perceived advantages/challenges compared to the traditional clerkship



Initial Focus Group with Clerks at 12 weeks (n = 8/8)

- **Perceived advantages** compared to the traditional clerkship:
 - They are told they function as residents
 - They are more aware of existing community resources and make links
 - For Family Medicine: definitely patient follow-up



Results of Focus Group- cont'd

- **Quality of clinical supervision:**
 - Currently seems fine
 - Clerks appreciate the written feedback they receive on the “fiche de continuité”
 - We need to ensure residents are informed and fill out these forms



Results of Focus Group- cont'd

- **Perceived challenges** compared to the traditional clerkship:
 - Formative assessment
 - Some technical difficulties with the timing that will have to be clarified
 - In psychiatry, they find it difficult to be on the ward for only one day at a time
 - Eventually, in the next block when they are scheduled for a single day in psychiatry, they will not be scheduled on the ward

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Messages of New LIC Clerks to the Next Cohort (May 2016)

- Advantages perceived:
 - Varied schedule
 - Academic activities shared with regular clerks
 - Major change related to replacement of 2 selectives (2 x 4 weeks) by two integrated clerkship rotations (A and B) much appreciated
 - One benefit of this change is an increased number of emergency shifts (at least 8)

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Messages of New LIC Clerks to the Next Cohort (May 2016)

- Challenges:
 - Adaptation !!
 - Supervisors not necessarily well informed
 - Often supervise both regular and LIC clerks



Corridor Talk

With Academic Advisors

- Seem very happy and impressed
 - General quality of the clerks
 - Autonomy
 - Take responsibility for their own learning
 - Learning stance rather than evaluation stance
- Wish they could keep them as residents
 - Sometimes feel LIC clerks are “better than residents”
- Describe meetings with LIC clerks as motivating and “easy”



What's to Come

- Questionnaires and focus groups with:
 - LIC clerks
 - Disciplinary directors
 - Academic advisors
 - Clinical supervisors
 - Residents
 - Family Medicine
 - Specialty



Take-home Messages

- A LIC in an urban setting with regular clerks is feasible and a promising alternative to the traditional approach
- High level support (dean, vice-dean) is essential
- Early implication of all potential stakeholders is important



QUESTIONS OR *SUGGESTIONS FOR US?*



References

- 1-Ellaway, R., Graves L, Berry S, Myhre D, Cummings B-A, Konkin J; (2013). Twelve tips for designing and running longitudinal integrated clerkships,. *Medical Teacher* ,vol 35;:12 , 989-995.
- 2-Poncelet, Ann et Al. Longitudinal Integrated Clerkship (LIC), Alliance for Clinical Education, chapter 10, p. 173-224
- 3-Ogur, Barbara et al. The Harvard Medical School-Cambridge Integrated Clerkship: An Innovative Model Clinical Education, *Academic Medicine*, Vol.82, No.4 (April 2007), p.397-404
- 4- Fogarty, John P. et al. Florida State University College of Medicine: From Ideas to Outcomes, *Academic Medicine*, Vol.87, No.12 (December 2012) p.1699-1704
- 5- Hirsh, David A. et Al. «Continuity» as an Organizing Principle for Clinical Education Reform, *The New England Journal of Medicine*, [Document électronique]. Massachusetts Medical Society. www.nejm.org, N Engl J Med 356:8 , p.858-866 (22 février 2007)
- 6- Poncelet, Ann N. et Al. Medical Education: The Longitudinal Integrated Clerkship, *Virtual mentor*, Vol 11, (Novembre 2009) p. 864-869
- 7- Hauer, Karen E. et Al. Longitudinal, Integrated Clerkship Education: better for Learners and Patients, *Academic Medicine*, Vol. 84, No.7 (Juillet 2009) p. 821
- 8- Norris, Thomas E. et Al. Longitudinal Integrated Clerkships for Medical Students: An Innovation Adopted by Medical Schools in Australia, Canada, South Africa and the United States, *Academic medicine*, Vol 84, No.7 (Juillet 2009) p. 902-907



References- cont'd

- 9- Walters et al: Outcomes of longitudinal integrated placements for students, clinicians and society; Medical Education 2012: 46: pp 1028-1041
- 10- Greenhill et al: AM last page: longitudinal intergreted clerkships. Academic Medicine 2014: vol 89 no3 p 526
- 11- Heck, JE: The Third-Year Longitudinal Integrated Clerkship at the Asheville Campus of the University of North Carolina School of Medicine; NCMJ Janv 1, 2014, vol 75: pp 22-27
- 12- Hirsh, David et als: Time to Trust: Longitudinal Integrated Clerkships and Entrustable Professional Activities; Academic Medicine vol 89 #2, feb 2014 pp 201-204
- 13- Myhre, Douglas L; Academic Performance of Longitudinal Integrated Clerkship Versus Rotation-Based Clerkship Students: A Matched-Cohort Study; Academic medicine vol 89 #2 feb 2014, pp 292-295
- 14- Bates J et als; Student perceptions of assessment and feedback in longitudinal integrated clerkships; Medical education vol 47#4 April 2013 pp 362-374
- 15- Bates, J et als; Longitudinal integrated clinical placements: where are we going? Medical education Nov 2012 vol 46#11 pp 1024-1026
- 16- Hirsh D et als; Better learning, better doctors, better delivery system: Possibilities from a case study of longitudinal integrated clerkships; Medical teacher, vol 34 #7 2012 pp 548-554
- 17- Hudson, JN et als: Medical students on long-term regional and rural placements: what is the financial cost to supervisor; Rural and remote health 12;1951 (online) 2012



References- cont'd

- 18- Hirsh D et al: Educational Outcomes of the Harvard Medical School–Cambridge Integrated Clerkship: A Way Forward for Medical Education; Acad. Medic. Vol 87 #5 pp 643-650 may 2012
- 19- Hansen L et al: Comparison of Third-Year Student Performance in a Twelve-Month Longitudinal Ambulatory Program with Performance in Traditional Clerkship Curriculum: South Dakota Medicine Journal, Aug. 2009
- 20- Mc Laughlin K, Bates J et als: A Comparison of Performance Evaluations of Students on Longitudinal Integrated Clerkships and Rotation-Based Clerkships; Academic Medicine vol 86#10 pp S25-S29, oct 2011
- 21- Longitudinal integrated clerkships: transforming medical education worldwide?
- 22- Poncelet, Ann et al: Development of a longitudinal integrated clerkship at an academic medical center; Medical Education online 2011: 16:5939
- 23- Diengstad, JL: Evolution of the New Pathway Curriculum at Harvard Medical School: the new integrated curriculum: Perspectives in Biology and Medicine: vol 54#1, winter 2011: pp 36-54
- 24- Hemmer, P; Longitudinal, Integrated Clerkship Education: Is Different Better? Acad. Medic. Vol 84#7 July 2009 p. 822
- 25- O'Brien BC et als: Students' workplace learning in two clerkship models: a multi-site observational study; Medical Education vol 146#6 pp 613-624 June 201



EXTRAS



LIC: Goals and expected Outcomes of Educational Continuity

Table 1. Goals and Expected Outcomes of Educational Continuity.

Continuity	Goals	Specific Objectives	Operational Requirements	Expected Outcomes
Care	Learning through patient connection, caring, and advocacy	Involvement with patients at the site and time of initial medical decision making and during the full course of illness Custom-designed patient enrollment	Longitudinal patient care experiences Collaborative, interdisciplinary delivery of care Ability to identify, track, and follow patients across care venues	Promotion of a full range of clinical skills, including chronic-disease management Enhanced professionalism Patient-centered health care
Curriculum	Learning in an integrated fashion to promote foundational knowledge and clinical skills	Acquisition of relevant competencies in a structured, developmental fashion Application of biomedical science to clinical problem solving Developmentally appropriate, competency-based assessment	Interdisciplinary curriculum design and management “Horizontal” and “vertical” curriculum integration Continuous formative assessment Interdisciplinary summative assessment and grading	Promotion of core doctoring skills, including communication and clinical reasoning Enhanced evidence-based practice and lifelong learning Learner-centered education and assessment
Supervision	Learning from close and serial connection with the most able educators	Community of learners, educators, and caregivers engaged in a transparent dialogue about patient care and medical science Faculty coaching, role modeling, and mentorship	Longitudinal student oversight and assessment Protected time for teaching and faculty development	Promotion of medical collegiality and interdisciplinary values Interprofessional understanding and collaboration Enhanced pedagogy and learning

(N Engl J Med 356;8 feb22 2007)



Example of a month schedule



Governance Structure





Rappel : le contenu de ces fiches sera vu en intégralité par les externes ainsi que par les accompagnateurs académiques.

•
Identification du contributeur

Nom
Prénom

•
Veillez sélectionner votre discipline

Veillez sélectionner une réponse ci-dessous

Veillez choisir ... ▼

•
Identification de l'externe

Veillez sélectionner une réponse ci-dessous

Date ou durée de la supervision
Moment de la supervision (am, pm, toute la journée, soir, nuit, n/a
Évaluation formative mi-stage (oui ou non)
Continuer à faire plus de
Commencer à faire ou Modifier.....
Commentaires descriptifs (incluant info sur les ARCs, gardes)

