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List of Abbreviations

AACP-American Association of Colleges of Pharmacy
 AFPC- Association of Faculties of Pharmacy of Canada
 ELPD – Entry Level Doctor of Pharmacy Degree
 CanExEd- Canadian Experiential Education Project for Pharmacy
 CAPSI – Canadian Association of Pharmacy Students and Interns
 CPRB- Canadian Pharmacy Residency Board
 CPhA-Canadian Pharmacists Association
 CSHP-Canadian Society of Hospital Pharmacists
 ExEd – Experiential Education
 NAPRA-National Association of Pharmacy Regulatory Authorities
 NPAC – Neighbourhood Pharmacy Association of Canada
 OEE – Office of Experiential Education
 PEP-C – Pharmacy Experiential Programs of Canada
 SC-Steering Committee

Universities:

MUN – Memorial University of Newfoundland School of Pharmacy
 Dal – Dalhousie University College of Pharmacy
 U de M – Université de Montréal Faculté de Pharmacie
 U of T – University of Toronto Leslie Dan Faculty of Pharmacy
 U of W – University of Waterloo School of Pharmacy
 U of M – University of Manitoba College of Pharmacy
 U of S – University of Saskatchewan College of Pharmacy and Nutrition

U of A – University of Alberta Faculty of Pharmacy and Pharmaceutical Sciences
UBC – University of British Columbia Faculty of Pharmaceutical Sciences

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I. Priority #1 Appendices

A. Literature Searching Strategy

Goal

The goal of the literature search is to systematically identify and acquire available literature addressing each working priority.

What is the best practice for assessing students (content, process, attitude) for achievement of stated learning outcomes of each level of ExEd rotations

Algorithm

1. Define the specific research question with each working priority.
2. Identify and develop search terms to use
3. Determine databases that might contain relevant literature
4. Refine search terms and strategies based on information found
5. Supplement the search with key journals thought to be important (dependent on particular priority)
 - a. **American Journal of Pharmaceutical Education**
 - b. **Currents in Pharmacy Teaching and Learning** (not familiar with this but is suggested in the 2014 Poirier article)
 - c. **Pharmacy Education**
 - d. Assessment & Evaluation in Higher Education
 - e. Medical education
 - f. Advances in health sciences education
 - g. Teaching and learning in medicine
 - h. Medical education quartet
 - i. Higher education academy
 - j. Medical teacher
6. Review Abstracts for relevancy
7. Complete ancestry searches for useful citations
8. Complete summaries for relevant citations
9. Summarize and key findings from evidence

Databases for Priority #1

CINAHL, Scopus, Medline, ERIC, EMBASE, IPA

Suggested Terms and Combined Searches for Priority #1

Assessment/Evaluation

AND

Performance/ Competence

AND

Experiential/Clinical/Field placement/Rotation/Practic*

AND

Preceptor/Assessor/Rater/Supervisor/Staff/Faculty

AND

Student

AND

Pharmacy (try with this term but then remove the term to get wider catch)

Exclusion criteria

Non-english articles

Older than 20 years

B. Interview Guide

Research Questions	Associated Interview Items
<p>1. What student learning outcomes (LOs), ability guides and assessments fore each section of ExEd are currently being used?</p> <p>2. What abilities does a student arrive with to begin a given stage of ExEd (early vs. advanced)?</p>	<p>Do you use student ability/expectation guides to inform students and preceptors of what they should be able to do upon entering a given level of rotation?</p> <p>Can I gain access to your LOs and assessments (and ability guides if you use them)? If not, have you considered? Do they have benefit? Aware of any other ExEd programs using?</p>
<p>3. How are LOs and abilities ascertained?</p>	<p>What bodies provide minimum competency/performance standards informing the development of LO's, student abilities guides, Assessments?</p> <p>Can you point me to those standards?</p> <p>Are they reflective of current practice?</p> <p>What issues do you have with these standards?</p> <p>How do you integrate their content into your ExEd program?</p>
<p>4. How do preceptors best assess students for successful achievement of LOs?</p> <p>5. What assessments (forms, items, frequency) best discern LOs</p>	<p>What evidence are you using/did you use to develop your assessment tools for ExEd?</p> <p>Could you share that literature?</p> <p>If you had external expertise, could you refer me to that person/service?</p> <p>Is there an assessment guru you think should be involved in this development?</p> <p>Could you provide me with your current performance assessment tools?</p> <p>What changes do you see happening to these tools?</p>
<p>6. Is there sufficient commonality between programs for common LOs, ability guides and assessments to be developed?</p> <p>7. What degree of interest is there from stakeholders in developing common LOs, student ability guides and student assessments for multiple pharmacy faculties?</p>	<p>Once all Faculties transition over to ELPD curricula, will there be sufficient commonality between jurisdictions/curriculum to allow for collaboration on a national level to develop these student guides/LOs/Assessments?</p> <p>Do you see benefit in attempting to bring a national approach to these bookending documents?</p> <p>What would be the major concerns to attempting this collaboration?</p> <p>If a national initiative is commenced, what level of interest would you have in using the end products?</p>

C. Informed Consent for Recording of Conversations

Title of Project: Canadian Experiential Education (CanExEd) Project

Project Manager: Katrina Mulherin, BSc. Pharm, Pharm D

Organisation: Association of Faculties of Pharmacy of Canada (AFPC)

Introduction: To establish a comprehensive national picture of Canadian Pharmacy Faculties' Experiential Education programs, the CanExEd project is interviewing faculty (Entry level Doctor of Pharmacy transitioned, transitioning and yet-to transition), stakeholders within Pharmacy and experts within other professional domains. You are invited to participate because of your role within one of these categories.

Conversations, interviews and meetings will be audio and possibly video-recorded for the purposes of data analysis and eventual presentation of findings in a multimedia format. Your participation is entirely voluntary.

Procedures: The major difference in a recorded session is likely the obviousness of room arrangement and recording equipment (microphones and cameras) in face-to-face interviews and meetings. In phone or remote interviews and meetings, you will be informed when recording of the session has started. If the project team deems a section of your conversation particularly effective at portraying a theme for a larger audience, you will have the opportunity to review that footage/audio for approval before it is used more widely.

Risks, Harms or Inconveniences: Interviews and meetings will be scheduled at your convenience. The ability to approve your footage/audio in the event it is to be further used for consumption of a wider audience minimizes any risk of your words being misrepresented.

Privacy of participants' information: Data will be housed in secure computers and Canadian data platforms. Assistants with access to the multimedia data files will have signed confidentiality agreements. Rough data files will be destroyed within 3 years of project completion. The final multimedia presentations will exist indefinitely as a record of the current and projected state of Canadian Experiential Education in the profession of Pharmacy.

Contact information: At any time, if you require any clarification or further information on this project, you can contact the CanExEd Project Manager, Katrina Mulherin at katrina.mulherin@utoronto.ca or 416.931.4864

Authorisation: I have read the information on this consent form and my questions have been addressed to my satisfaction. I agree to have my conversations recorded and understand that my consent can be withdrawn at any time and that consent does not mean that I lose any legal rights.

Participant's Name:

Participant's Signature:

Date:

Project Manager/Designate Signature:

Date:

D. Structured Literature Extraction Guide

Citation	Research Goals and Objectives (Purpose)	Protocol or method used	Results & Conclusion	Relevance to CanExEd/ Notes re: quality

E. Relevant Citations

1. Amicucci B. What nurse faculty have to say about clinical grading. *Teaching and Learning in Nursing* 2012; 7: 51-55.
2. Aronson L et al. A comparison of two methods of teaching reflect ability in Year 3 medical students. *Medical Education* 2012; 46: 807-814.
3. Berendonk C, Stalmeijer RE, Schuwirth LWT. Expertise in performance assessment: assessors' perspectives. *Advances in Health Sciences Education* 2013 -10-01;18(4):559
4. Bond R et al. Preceptor Perceptions of the Importance of Experiential Guidelines. *American Journal of Pharmaceutical Education* 2013; 77(7): Article 144.
5. Boursicot K et al. Standard Setting for Clinical Competence at Graduation from Medical School: A comparison of Passing Scores Across Five Medical Schools. *Advances in Health Sciences Education* 2006; 11: 173-183.
6. Branch W, Paranjuape A. Feedback and Reflection: Teaching Methods for Clinical Setting. *Acad. Med.* 2002; 77:1185-1188.
7. Burkiewicz J et al. Pre- and Post-Rotation Assessment of Pharmacy Student Learning. *Journal of Pharmacy Teaching.* 2005; 12(2): 83-96.
8. Cook D et al. Internal structure of mini-CEX scores for internal medicine residents: factor analysis and generalizability. *Adv in Health Sci Educ* 2010; 15: 633-645.
9. Cope M et al. Relationships Between Clinical Rotation Subscores, COMLEX-USA Examination Results, and School-Based Performance Measures. *J Am Osteopath Associ.* 2007; 107: 502-510.
10. Daelmans H et al. In-training assessment: qualitative study of effects on supervision and feedback in an undergraduate clinical rotation. *Medical Education* 2006; 40: 51-58.
11. Dalack G et al. Clinical Skills Verification, Formative Feedback, and Psychiatry Residency Trainees. *Academic Psychiatry* 2012; 36: 122-125.
12. Duke L et al. Establishment of a Multi-state Experiential Pharmacy Program Consortium. *American Journal of Pharmaceutical Education* 2008; 72(3): Article 62.
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14. Emilia O et al. Measuring students' approaches to learning in different clinical rotations. *BMC Medical Education* 2012; 12:114-120.
15. Ferns S et al. Assessing student outcomes in fieldwork placements: An overview of current practice. *Asian-Pacific Journal of Cooperative Education* 2012; 13(4): 207-224.
16. Finch P. A system of performance intervention zones for use during student evaluation in the clinical environment. *J of Bodywork and Movement Therapies* 2008; 12:295-298.
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18. Govaerts M et al. Workplace-based assessment: raters' performance theories and constructs. *Advanced in Health Sciences Education* 2013 18:375-396.
19. Haase K et al. Quality Experiential Education. *Pharmacotherapy* 2008; 28(10): 219e-227e.

20. Hester E et al. Educational Outcomes Necessary to Enter Pharmacy Residency Training. *Pharmacotherapy* 2014; 34(4): e22-e25.
21. Hill L et al. Student and Preceptor Perception of Performance in Advanced Pharmacy Practice Experiences. *American Journal of Pharmaceutical Education* 2005; 69(4): 1-5.
22. Hirsh D et al. Educational Outcomes of the Harvard Medical School-Cambridge Integrated Clerkship: A way Forward for Medical Education. *Acad Med* 2012; 87: 643-650.
23. Kirton O et al. Measuring service-specific performance and educational value within a general surgery residency: The power of a prospective, anonymous, web-based rotation evaluation system in the optimization of resident satisfaction. Presented at 62nd Annual Meeting of the Society of University Surgeons, Chicago, Ill. February 8-10, 2001: 289-295.
24. Krautscheid L et al. A Descriptive Study of a Clinical Evaluation Tool and Process: Student and Faculty Perspectives. *J Nurs Educ.* 2014; 53(3, Suppl):S30-S33.
25. Lewis D et al. Competence assessment integrating reflective practice in a professional psychology program. *Journal of the Scholarship of Teaching and Learning* 2011; 11(3): 86-106.
26. McDuffie C et al. Web-based Portfolios for Pharmaceutical Care Plans During Advanced Pharmacy Practice Experiences. *American Journal of Pharmaceutical Education* 2010; 74(4): Article 59.
27. Murphy D et al. The reliability of workplace-based assessment in postgraduate medication education and training: a national evaluation in general practice in United Kingdom. *Adv in Health Sci Educ* 2009; 14: 219-232.
28. Nottingham S et al. Feedback in Clinical Education, Part I: Characteristics of Feedback Provided by Approved Clinical Instructors. *Journal of Athletic Training* 2014; 49(1): 49-57.
29. Olupeliyawa A et al. Educational impact of an assessment on medical students' collaboration in health care teams. *Medical Education* 2014; 48: 146-156.
30. Owen S et al. Experiential Placements: Dissemination and Stakeholder Engagement for Curriculum Planning Action to Prepare Future Pharmacy Professionals. *Journal of Learning Design* 2009; 3(1): 1-10.
31. Pell G et al. Setting Standards for Student assessment. *International Journal of Research & Method in Education* 2006; 29(1): 91-103.
32. Pitlick J et al. Development of assessments for use on advanced pharmacy practice experiences. *Currents in Pharmacy Teaching and Learning* 2013; 5: 431-437.
33. Powel J. An Interventional Radiology Clinical Rotation to Enhance Student Learning. *Journal of Nursing Education* 2007; 46(10): 477-479.
34. Rathburn R et al. Importance of Direct Patient Care in Advanced Pharmacy Practice Experiences. *Pharmacotherapy* 2012; 32(4): e88-e97.
35. Regehr C et al. The Development of an Online Practice-Based Evaluation Tool for Social Work. *Research on Social Work Practices* 2011; 21(4): 469-475.
36. Robles J et al. The impact of Preceptor and Student Learning Styles on Experiential Performance Measures. *American Journal of Pharmaceutical Education* 2012; 76(7): Article 128.
37. Schuwirth LWT, Southgate L, Page GG, Paget NS, Lescop JM, Lew SR, et al. When enough is enough: a conceptual basis for fair and defensible practice performance assessment. *Med Educ* 2002;36(10):925-930.

38. Simmons L et al. Lessons Learned from Experiential Learning: What do Students Learn from a Practicum/Internship. *International Journal of Teaching and Learning in Higher Education* 2012; 12(3) 325-334.
39. Singh T, Sood R. Workplace-based assessment: Measuring and shaping clinical learning. *Natl Med J Ind* 2013;26:42.
40. Sliwinski M et al. Clinical Performance Expectations: A Preliminary Study Comparing Physical Therapist Students, Clinical Instructors, and Academic Faculty. *Journal of Physical Therapy Education*; Spring 2004; 18(1): 50-57.
41. Stupans I et al. Enhancing learning in clinical placements: reflective practice assessment, rubrics and scaffolding *Assessment and Evaluation in Higher Education* 2013; 38:505-519.
42. Tavares W, Eva KW. Exploring the impact of mental workload on rater-based assessments. *Advances in Health Sciences Education* 2013 -05-01;18(2):291.
43. Trede F et al. Teaching reflective practice in practice settings: student' perceptions of their clinical educators. *Teaching in Higher Education* 2012; 17(5): 615-627.
44. West D. Student Experiences with Competency Domains During a Psychiatry Clerkship. *Academic Psychiatry* 2009; 33(3): 204-211.
45. Wilkes Z. A framework to support practice teachers in the assessment process. *Community Practitioner*; Dec 2011; 84(12): 24-27.
46. Williams RG, Verhulst S, Colliver JA, Dunnington GL. Assuring the reliability of resident performance appraisals: More items or more observations? *Surgery* 2005;137(2):141-147.

F. Grey Literature from ExEd Programs

Faculty	Syllabi				Assessment Forms				Other Pertinent Documents
	EPE 1	EPE 2	IPE	APPE	EPE 1	EPE 2	IPE	APPE	
MUN	✓	✓	✓	✓	✓	✓	✓	✓	
Dalhousie	X	✓	✓	✓	X	✓	✓	✓	
Laval									3 courses?
U de Montreal	✓	✓	X	✓	✓	-	X	-	
U of T	✓	✓	X	✓	✓	✓	X	✓	Ability guide
Waterloo	X (coop)	X (coop)	X (coop)	✓	✓	✓	✓	✓	
U of M	X	✓	✓	✓	X	✓	✓	✓	
U of S	X	-	-	✓	X	-	-	✓	Ability guide
U of A	✓	✓	X	✓	✓	✓	X	✓	Skills map
UBC	X	✓	✓	✓	X	✓	✓	✓	Cognitive model for new curriculum

Light grey shading indicates faculties that have transitioned to ELPD curricula

Abbreviations:

SL: Service learning

EPE 1: Early Pharmacy Experience in Year 1 of curriculum

EPE 2: Early Pharmacy Experience in Year 2 of curriculum

IPE: Intermediate Pharmacy Experience in Year 3 of curriculum

APPE: Advanced Pharmacy Experience in Year 4 of curriculum

x: not included in program

-: offered in program but not available/analysed

G. Grey Literature Identified as Pertinent to Best Practice

Ranking is in order of frequency mentioned by interviewees.

1. AFPC's Educational Outcomes for Professional Degree Programs in Pharmacy (Entry-to-Practice Pharmacy Programs) in Canada (5)
2. NAPRA's Professional Competencies for Canadian Pharmacists at Entry to Practice(6)
3. Respective Faculties' curricular maps and course content descriptions
4. Faculties' ExEd current assessment forms (See [Appendix F](#))
5. Faculties' ExEd Syllabi (See [Appendix F](#))
6. CCAAP's Accreditation Standards (7)
7. AACP's CAPE Educational Outcomes (38)
8. NAPRA's Model Standards of Practice for Canadian Pharmacists (39)
9. NAPRA's Framework for Assessing Canadian Pharmacists' Competencies at Entry-to-Practice through Structured Practical Training Programs (40)
10. Health Canada's Accreditation of Interprofessional Health Education (41)
11. CanMEDS Physician Competency Framework (42)

H. Prototypes

Tier 1 (Base Documents):

1. Student Learning Outcomes common to all ExEd programs

AFPC Categories	AFPC Educational Outcomes	Corresponding CanExEd Learning Outcomes
Care Provider	<p>Assess Patients</p> <p>1.1 Develop and maintain professional, collaborative relationships required for patient care.</p> <p>1.2 Elicit and complete an assessment of required information to determine the patient's medication-related and other relevant health needs.</p> <p>1.3 Assess if a patient's medication-related needs are being met.</p> <p>1.4 Determine if a patient has relevant, priority health and wellness needs.</p> <p>Plan Care</p> <p>1.5 Refer patients for management of priority health and wellness needs that fall beyond the scope of practice of pharmacists</p> <p>1.6 Develop a care plan that addresses a patient's medication-therapy problems and priority health and wellness needs.</p> <p>1.7 Implement the care plan.</p> <p>Follow-Up and Evaluate</p> <p>1.8 Elicit clinical and / or lab evidence of patient outcomes.</p> <p>1.9 Assess and manage patients' new medication-related needs</p> <p>Document</p> <p>1.10 Support the continuity of patient care by documenting their patient care activities</p>	<p>Assessment</p> <p>1.1 Develop and maintain professional, collaborative relationships required for patient care.</p> <p>1.2 Elicit and complete an assessment to determine the patient's medication-related and other relevant health needs.</p> <p>1.3 Assess if a patient's medication-related needs are being met.</p> <p>1.4 Determine if a patient has relevant, priority health and wellness needs.</p> <p>1.5 Refer patients for management of priority health and wellness needs that fall beyond the scope of practice of pharmacists</p> <p>Care Plan</p> <p>1.6 Develop a care plan that addresses a patient's medication-therapy problems and priority health and wellness needs.</p> <p>1.7 Implement the care plan.</p> <p>Follow-Up</p> <p>1.8 Elicit clinical and / or lab evidence of patient outcomes.</p> <p>1.9 Assess and manage patients' new medication-related needs</p> <p>Documentation</p> <p>Note: For broader communication outcome see next section</p> <p>1.10 Support the continuity of patient care by documenting their patient care activities</p>
Communicator	<p>2.1. Communicate non-verbally and verbally with others.</p> <p>2.2. Communicate in writing.</p> <p>2.3. Present information.</p> <p>2.4. Use communication technology.</p>	<p>2.1. Communicate non-verbally and verbally with others.</p> <p>2.2. Communicate in writing.</p> <p>2.3. Present information.</p> <p>2.4. Use communication technology.</p>
Collaborator	<p>3.1. Function as members of teams.</p> <p>3.2 Support team-based care in a community setting with geographically distinct centres of care.</p> <p>3.3 Work collaboratively with the patient and his/her health care professionals to provide care and services that facilitate management of the patient's health needs.</p>	<p>3.1. Function as members of teams.</p> <p>3.2 Support team-based care in a community setting with geographically distinct centres of care.</p> <p>3.3 Work collaboratively with the patient and his/her health care professionals to provide care and services that facilitate management of the patient's health needs.</p>
Manager	<p>4.1 Manage their personal practice.</p> <p>4.2 Manage the safe and efficient distribution of medications</p> <p>4.3 Participate in quality assurance and improvement programs.</p> <p>4.4 Manage the staff under their direct supervision.</p> <p>4.5 Manage to maintain the sustainability of the practice.</p>	<p>4.1 Manage personal practice.</p> <p>4.2 Manage safe and efficient distribution of medications.</p> <p>4.3 Participate in quality assurance and improvement programs.</p> <p>4.4 Manage staff under direct supervision</p> <p>4.5 Manage to maintain sustainability of the practice.</p>
Advocate	<p>5.1 Interpret the advocacy role of pharmacists / profession of pharmacy.</p> <p>5.2 Promote the health of individual patients, communities, & populations</p> <p>5.3 Support the role of pharmacists in evolving health care systems.</p>	<p>5.1 Interpret the advocacy role of pharmacists / profession of pharmacy.</p> <p>5.2 Promote health of individual patients, communities, & populations</p> <p>5.3 Support the role of pharmacists in evolving health care systems.</p>
Scholar	<p>6.1 Demonstrate a thorough understanding of the fundamental knowledge required of pharmacists and apply this knowledge in daily practice.</p> <p>6.2 Provide drug information and recommendations.</p> <p>6.3 Educate regarding medications and appropriate medication use, including the pharmacist's role.</p> <p>6.4 Apply principles of scientific inquiry and critical thinking while participating in practice-based research.</p>	<p>6.1 Demonstrate a thorough understanding of the fundamental knowledge required of pharmacists and apply this knowledge in daily practice.</p> <p>6.2 Provide drug information and recommendations.</p> <p>6.3 Educate regarding medications and appropriate medication use, including the pharmacist's role.</p> <p>6.4 Apply principles of scientific inquiry and critical thinking while participating in practice-based research.</p>
Professional	<p>7.1 Demonstrate professionalism throughout patient encounters</p> <p>7.2 Practice in an ethical manner which assures primary accountability to the patient</p> <p>7.3 Maintain their competence to practice through life long learning</p> <p>7.4 Practice in manner demonstrating professional</p>	<p>7.1 Demonstrate professionalism throughout patient encounters</p> <p>7.2 Practice in an ethical manner which assures primary accountability to the patient</p> <p>7.3 Maintain their competence to practice through life long learning</p> <p>7.4 Practice in manner demonstrating professional</p>

	accountability. 7.5 Display a sense of pride in and commitment to the profession and its evolving role in the health care system.	accountability. 7.5 Display a sense of pride in and commitment to the profession and its evolving role in the health care system.
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2. Summative/Certificative assessment form (Formative essentially the same)

GLOBAL RATING	Unsatisfactory	Developing	Satisfactory	Good	Excellent
In general, the knowledge, skills, and behaviours observed and demonstrated by the student to date are:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Important: When overall performance is rated as "Unsatisfactory or Developing" a student will be required to develop and implement a plan to address the identified area(s) of deficiency and will be deemed to have failed the rotation. If the preceptor deems the student to have passed the rotation but indicates there are certain areas in which the student should focus on improvement, Learning Contract #3 should be completed and the office of experiential will forward it to the preceptor of the next similar rotation. When overall performance is rated as "satisfactory" or "very good", the student will be deemed to have passed the rotation.

A copy of the assessment may be printed for your preceptor/student to facilitate discussion. Date discussion occurred: _____

Number of sick days: _____

Direct Patient Care Rotation# _____

Number of personal days: _____

INDIVIDUAL ROTATION OBJECTIVES	Unsatisfactory	Developing	Satisfactory	Good	Excellent
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<p>Assessment</p> <p>1.1 Develop and maintain professional, collaborative relationships required for patient care.</p> <p>1.2 Elicit and complete an assessment to determine the patient's medication-related and other relevant health needs.</p> <p>1.3 Assess if a patient's medication-related needs are being met.</p> <p>1.4 Determine if a patient has relevant, priority health and wellness needs.</p>	<p>Patient Relationship: Engages patients with prompting. Attitude: Concerned, but more about perceived problems than the patient. Data gathering: Superficial, disorganised with variable accuracy impacting negatively on patient. Common/Major DTPs: Sometimes recognised and sometimes stated clearly. Degree of Preceptor Intervention : Direct and Extensive</p>	<p>Patient Relationship: Discussions with patients are proactive but may lack focus. Attitude: Empathetic, concerned. Data gathering: Formulaic, copious yet accurate Common/Major DTPs: Actual DTPs are generally identified and somewhat clear. Potential DTPs are inconsistently identified. Degree of Preceptor Intervention: Regular</p>	<p>Patient Relationship: Engages patients independently and effectively. Attitude: Empathetic, concerned and helpful. Data gathering: Systematic, accurate and relevant. DTPs: Actual and potential DTPs are consistently recognised and stated. Degree of Preceptor Intervention: Occasional</p>	<p>Patient Relationship: Engages patients independently, effectively with a focussed approach Attitude: Responsible, empathetic and helpful. Data gathering: Fluid, comprehensive, accurate and relevant DTPs: Actual and potential DTPs are consistently recognised, stated and prioritised. Degree of Preceptor Intervention: Appropriate and can sometimes self-identify when assistance required</p>	<p>Patient Relationship: Engages patients independently, effectively with an individualised approach Attitude: Responsible, empathetic and helpful. Data gathering: Fluid, precise, perceptive, accurate and relevant DTPs: Actual and potential DTPs are consistently recognised, stated, justified and prioritised. Degree of Preceptor Intervention: generally unnecessary and can consistently self-identify when assistance required.</p>
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<p>Care Plan</p> <p>1.5 Refer patients for management of priority health and wellness needs that fall beyond the scope of practice of pharmacists</p> <p>1.6 Develop a care plan that addresses a patient's medication-therapy problems and priority health and wellness needs.</p> <p>1.7 Implement the care plan.</p>	<p>Goals and Outcomes: Inconsistently stated or done so with difficulty leading to irrelevant or unfocussed plan that do not consider the patient. Clinical decisions: indicate lack of knowledge or consideration of data and/or arrived at only with difficulty. Therapeutic alternatives: not considered Follow-up schedule: safety and efficacy endpoints partially established. Degree of Preceptor Intervention: Extensive so that patient receives safe, effective care.</p>	<p>Goals and Outcomes: stated for each disease state/indication with some success at considering patient factors. Clinical decisions: inconsistently consider all relevant patient data so that patient or team members are not confident in decisions. Therapeutic alternatives: include some indicated medications. Follow-up schedule: safety and efficacy endpoints established Responsibility: proactively established for priority aspects of the care plan. Degree of Preceptor Intervention: Regular to ensure patient needs are met.</p>	<p>Goals and Outcomes: Stated and include timeframe for each disease state/indication as well as considering patient preference (complete) Clinical decisions: consider most patient factors and do not pose undue risk. Patients and team members generally satisfied. Therapeutic alternatives: Reasonable and rationally selected. Follow-up schedule: Realistic safety and efficacy endpoints (with timeline) determined. Responsibility: established and maintained as the student's. Degree of Preceptor Intervention: Occasional</p>	<p>Goals and Outcomes: Address (including timeframe) each disease state/indication incorporating patient beliefs, lifestyle and preference. Clinical decisions: Show good judgement that satisfies patients and team members. Therapeutic alternatives: Fully considered and chosen logically considering patient and best practice. Follow-up schedule: Targeted safety and efficacy endpoints, timelines and responsibility determined appropriately. Responsibility: maintained as the student's. Degree of Preceptor Intervention: Appropriate</p>	<p>Goals and Outcomes: Tailored to the patient and focus the plan. Clinical decisions: Consistently reasonable and timely judgement that satisfies the patient and team members. Therapeutic alternatives: Analysed efficiently and rationally using current literature and all patient considerations. Follow-up schedule: Targeted safety and efficacy endpoints, timelines and responsibility determined appropriately. Responsibility: maintained as the student's. Degree of Preceptor Intervention: generally unnecessary and can consistently self-identify when assistance required.</p>
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<p>Follow-Up</p> <p>1.8 Elicit clinical and / or lab evidence of patient outcomes.</p> <p>1.9 Assess and manage patients' new medication-related needs</p>	<p>Responsibility: assigned patients are assessed for success of implemented plan. Degree of Preceptor Intervention: Extensive</p>	<p>Responsibility: student self-identifies patients requiring follow-up assessment and proactively completes task. Some DTPs are identified. Degree of Preceptor Intervention: Regular</p>	<p>Responsibility: student self-identifies patients for follow-up and identifies most DTPs in the process. Degree of Preceptor Intervention: Occasional</p>	<p>Responsibility: student follows-up own patients, identifies all actual and potential DTPs arising. Degree of Preceptor Intervention: Appropriate</p>	<p>Responsibility: maintained as student's and transferred appropriately to other health care professionals. Degree of Preceptor Intervention: generally unnecessary and can consistently self-identify when assistance required.</p>
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<p>Documentation</p> <p>Note: For broader communication outcome see next section</p> <p>1.10 Support the continuity of patient care by documenting their patient care activities</p>	<p>Clinical documentation: attempted with direction. Content: Information requires revision before release to intended user. Format: lacks organisation. Degree of Preceptor Intervention: Extensive</p>	<p>Clinical documentation: inconsistently completed. Content: minor inaccuracies and omissions that are corrected completely and safely prior to release. Format: follows standard format with some difficulty. Degree of Preceptor Intervention: Regular</p>	<p>Clinical documentation: consistently completed with variable delay Content: accurate, comprehensive and useable. Format: well-developed, organised according to standards (SOAP, CADRMP, or other site-mandated/payer template) and clearly presented. Degree of Preceptor Intervention: occasional.</p>	<p>Clinical Documentation: consistently completed in a timely manner. Content: succinct, accurate, comprehensive. Format: well-developed, organised according to standards (SOAP, CADRMP, or other site-mandated/payer template and clear. Elicits intended effect on the reader. Degree of Preceptor Intervention: rare</p>	<p>Clinical Documentation: consistently completed in a timely manner. Content: succinct, accurate, comprehensive and tailored. Format: well-developed, organised according to standards (SOAP, CADRMP, or other site-mandated/payer template coherent and clear. Impactful. Degree of Preceptor Intervention: Generally unnecessary. Consistently self-identifies when assistance required</p>
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Student met patient load expectation as per, "[Patient Load Guidance](#)" YES NO

Student met patient complexity expectation as per, "[Patient Complexity Guidance](#)" YES NO

Student uses knowledge, skills and professional judgement to provide pharmaceutical care and facilitate the management of the patient's medication and overall health needs

	Unsatisfactory	Developing	Satisfactory	Good	Excellent
<p>Communicate with diverse audiences, using a variety of strategies that take into account the situation, intended outcomes of the communication and the learner.</p>	<p>Communicate</p> <p>2.1. Communicate non-verbally and verbally with others. 2.2. Communicate in writing. 2.3. Present information. 2.4. Use communication technology.</p>				
	<p>Organisation: Formulaic, inconsistently coherent sometimes causing confusion in patients and team members. Content: imprecise and/or oversimplified. Inconsistently tailored to the recipient's culture, language and health literacy. Challenging Scenarios: Are avoided. Listening Skills: Sometimes misses information. Written: contains omissions or major errors in grammar or sentence structure Degree of Preceptor Intervention: Extensive.</p>	<p>Organisation: Rational and coherent. Approach elicits positive interventions. Content: accurate but imprecise. Recipient's culture, language and health literacy considered in interaction. Challenging Scenarios: Attempts to address. Listening Skills: Appears to listen. Written: Minor errors in grammar or sentence structure Degree of Preceptor Intervention: Acceptable extent</p>	<p>Organisation: Rational, coherent, focused resulting in a positive interaction. Content: accurate, precise taking into account recipient's culture, language and health literacy. Challenging Scenarios: addressed adequately. Listening Skills: Attentive and sensitive to nuance. Written: Complete, clear. Degree of Preceptor Intervention: Occasional</p>	<p>Organisation: Rational, coherent, focused, tailored resulting in effective interactions. Content: accurate, precise, comprehensive and takes into account the recipients culture, language and health literacy. Challenging Scenarios: are responded to with fluidity and appropriate demeanour. Listening Skills: Attentive, sensitive. Written: Complete, clear, precise. Degree of Preceptor Intervention: Rare.</p>	<p>Organisation: Rational, focused, tailored and creative resulting in optimal interactions with patients and team. Content: accurate, precise, succinct, comprehensive, tailored. Challenging Scenarios: handled fluidly, confidently and proficiently. Listening Skills: Attentive, sensitive. Written: complete, clear, precise. Excellent command of expression. Degree of Preceptor Intervention: generally unnecessary and can consistently self-identify when assistance required.</p>
<p>Strengths, areas for improvement, concerns, comments: (Please indicate educational plan for ratings of "Unsatisfactory" or "Developing" within the Supplemental Assessment: Communication)</p>					
<p>Work collaboratively with teams to provide effective, quality health care and to fulfill professional obligations to the community and society at large.</p>	<p>Collaborate</p> <p>3.1. Function as members of teams. 3.2 Support team-based care in a community setting with geographically distinct centres of care. 3.3 Work collaboratively with the patient and his/her health care professionals to provide care and services that facilitate management of the patient's health needs.</p>				
	<p>Attitude and behaviour: contributes to positive inter and intraprofessional relationships. Leadership: ability is limited. Pharmacist Role: superficially articulated when required. Does not yet fulfill his/her role in collaborative care. Degree of Preceptor Intervention: Extensive</p>	<p>Attitude and behaviour: conducive to inter and intraprofessional relationships. Avoids conflict. Leadership: ability is developing. Pharmacist role: well-articulated to others. Degree of Preceptor Intervention: Acceptable extent.</p>	<p>Attitude and behaviour: invites inter and intraprofessional relationships. Conflict is managed with difficulty. Leadership: ability appropriately displayed. Pharmacist Role: consistently well-articulated to others. Flexible in undertaking or referring responsibility as per others' scope of practice. Degree of Preceptor Intervention: Occasional</p>	<p>Attitude and behaviour: fosters linkages inter and intraprofessionally. Conflict is appropriately managed. Leadership: ability is evident. Flexible and adapts to the required role within the team. Pharmacist Role: Clearly articulates and assists others in articulating their roles and responsibilities for the benefit of the team. Routinely collaborates with others. Degree of Preceptor Intervention: rare.</p>	<p>Attitude and behaviour: fosters development and maintenance of inter and intraprofessional relationships between all members of the team. Conflict is effectively and efficiently managed for positive outcomes for all. Leadership: Initiates creation of teams and recognised as a leader within the team. May develop formalised process and procedure for collaborating. Degree of Preceptor Intervention: generally unnecessary and can consistently self-identify when assistance required.</p>
<p>Strengths, areas for improvement, concerns, comments: (Please indicate educational plan for ratings of "Unsatisfactory" or "Developing" Supplemental Assessment: Collaboration)</p>					
<p>Lead and manage daily practice to optimize the care of patients, to ensure the safe and effective distribution of medications, and to make efficient use of resources.</p>	<p>Lead and Manage</p> <p>4.1 Manage personal practice. 4.2 Manage safe and efficient distribution of medications. 4.3 Participate in quality assurance and improvement programs. 4.4 Manage staff under direct supervision 4.5 Manage to maintain sustainability of the practice.</p>				
	<p>Responsibility: Unaware of or avoids committee work, quality assurance measures (i.e. audits, reviews, policy and procedure development), advocacy bodies. Contribution: minimal to none. Degree of Preceptor Intervention: Extensive</p>	<p>Responsibility: Accepts duties of committee work, quality assurance measures (i.e. audits, reviews, policy and procedure development), advocacy bodies. Contribution: somewhat relevant and useful. Degree of Preceptor Intervention: Regular</p>	<p>Responsibility: Readily accepts duties of committee work, quality assurance measures (i.e. audits, reviews, policy and procedure development) or advocacy bodies. Contribution: usually relevant, timely. Degree of Preceptor Intervention: frequent</p>	<p>Responsibility: Seeks duties of committee work, quality assurance measures or advocacy bodies. Contribution: relevant, organised, precise, insightful and timely. Challenged to balance this work other duties. Degree of Preceptor Intervention: rare.</p>	<p>Responsibility: Embraces duties of committee work, quality assurance measures, or advocacy bodies. Contribution: leadership, relevant, organised, precise, insightful and timely. Balances other obligations with this work. Degree of Preceptor Intervention: generally unnecessary and can consistently self-identify when assistance required.</p>
<p>Strengths, areas for improvement, concerns, comments: (Please indicate educational plan for ratings of "Unsatisfactory" or "Developing" Supplemental Assessment: Leader and Manager)</p>					
<p>Expertise and influence advances the health and well-being of individual patients, communities, and populations, and to support pharmacist's professional role.</p>	<p>Advocate</p> <p>5.1 Interpret the advocacy role of pharmacists / profession of pharmacy. 5.2 Promote health of individual patients, communities, & populations 5.3 Support the role of pharmacists in evolving health care systems.</p>				
	<p>Responsibility: Does not recognise role as educator in all opportunities. Quality: Provides basic education with some inaccuracies. Degree of Preceptor Intervention: Extensive</p>	<p>Responsibility: Accepts role in educating about familiar medications and conditions in patient encounters. Unsure or unaware of role in educating students and health care providers. Quality: Provides accurate (written material, demonstration aids) and safe information. Degree of Preceptor Intervention: Regular</p>	<p>Responsibility: Accepts role in educating junior students and/or other healthcare providers and patients. Quality: Provides competent patient education using written material and demonstrations. Provides useful didactic teaching to students and healthcare providers. Content: Accurate, comprehensive. Degree of Preceptor Intervention: occasional.</p>	<p>Responsibility: Seeks educator role in the learning of junior students, healthcare providers and patients. Quality: Provides insightful, tailored education to patients using a variety of techniques. Students and healthcare providers benefit from implementation of didactic, experiential and self-reflection techniques. Content: Focused, accurate, comprehensive. Degree of Preceptor Intervention: rare</p>	<p>Responsibility: Embraces the role of educator in all populations. Quality: Variety of techniques used and tailored to the given individual or audience. Student strives for self-improvement of teaching approach. Creative and passionate in teaching opportunities. Content: Applicable, focused, accurate and comprehensive. Degree of Preceptor Intervention: generally unnecessary and can consistently self-identify when assistance required.</p>
<p>Strengths, areas for improvement, concerns, comments: (Please indicate educational plan for ratings of "Unsatisfactory" or "Developing" Supplemental Assessment: Advocate)</p>					
<p>Apply the core knowledge and skills required to be a medication therapy expert, and are able to master, generate, interpret and disseminate pharmaceutical and pharmacy practice knowledge.</p>	<p>Scholar</p> <p>6.1 Demonstrate a thorough understanding of the fundamental knowledge required of pharmacists and apply this knowledge in daily practice. 6.2 Provide drug information and recommendations. 6.3 Educate regarding medications and appropriate medication use, including the pharmacist's role. 6.4 Apply principles of scientific inquiry and critical thinking while participating in practice-based research.</p>				
	<p>Process: Researching strategy is organised. Quality: accurate, useful, and safe but superficial (tertiary references such as CPS, AHFS DI, Uptodate, etc. predominate) Degree of Preceptor Intervention: Extensive</p>	<p>Process: Research and response structure is organised and rational. Quality: accurate, useful and safe using tertiary references such as CPS, AHFS DI, Uptodate, etc. Degree of Preceptor Intervention: Regular intervention required to assist in identification and use of primary and secondary literature important to the response</p>	<p>Process: Able to identify knowledge gap and formulate research query to address. Research strategy is somewhat successful in identifying relevant literature Quality: Literature identified includes tertiary references (guidelines, compendiums, reviews) with some primary and secondary literature of acceptable quality. Application: Student can discern whether findings apply to clinical scenario but has difficulty interpreting where evidence in particular area is lacking. Degree of Preceptor Intervention: occasional</p>	<p>Process: Self-identified knowledge gap sparks formulation of focussed, rational clinical research inquiry that student can describe/explain. Quality: Literature identified as potentially relevant to query is critically appraised for application, quality, validity and reliability. The utility is accurately determined. Application: Uses reasonable judgement in applying evidence. Degree of Preceptor Intervention: Rare</p>	<p>Process: Self-identified knowledge gaps routinely spark formulation of focussed, rational clinical inquiry that student can justify and describe. Quality: resulting information is appropriately appraised and utility appropriately determined. Application: Uses reasonable judgement in applying evidence and where evidence lacking, seeks expert opinion and can propose future research. Degree of Preceptor Intervention: generally unnecessary and can consistently self-identify when assistance required.</p>
<p>Strengths, areas for improvement, concerns, comments: (Please indicate educational plan for ratings of "Unsatisfactory" or "Developing" Supplemental Assessment: Scholar)</p>					

		Does Not Meet Expectations	Partially Meets Expectations	Meets Expectations
Honour the role of self-regulated professional through both individual patient care and fulfillment of their professional obligations to the profession, the community and society.	Professional	LINK to organisation's rubric for Professionalism	LINK to organisation's rubric for Professionalism	LINK to organisation's rubric for Professionalism
	7.1 Demonstrate professionalism throughout patient encounters.			
	7.2 Practice in an ethical manner which assures primary accountability to the patient.			
	7.3 Augment practice competence through reflection and self-education			
	7.4 Practice in manner demonstrating professional accountability.			
7.5 Display a sense of pride in and commitment to the profession and its evolving role in the health care system.				
Comments: MANDATORY if a student has <i>Not Met</i> , <i>Partially Met</i> Expectations please describe the specific behaviour meriting this rating and contact the Office of Experiential Education at: e-mail link				

3. Reflection induction and assessment tool

A learning portfolio could be the home for all reflective documents e.g. Learning contracts (sample from U of T below), student self-assessments, preceptor’s assessment of the student but it could also be the common thread joining EPE-1 to EPE-2 to APPE to subsequent APPEs. Students could self-identify areas of weakness or specific learning outcomes they’d like to achieve on their next EPE or APPE. These could be included in the next APPE’s learning contract. These could also be identified by the preceptor in their evaluation of the student as a recommendation to focus on during their next APPE. Portfolios could also enable students to showcase their best work e.g. presentations, tools/resources developed etc. Structured reflective questions/exercises could also be included such as the example from U of A below.

Sample Learning Contract with Tips for Use (courtesy of U of T’s OEE) for EPE:

Identifying and Stating Learning Objectives
 Supplemental Information for Students Completing Learning Contracts

As a component of Advanced Pharmacy Practice Experience (APPE) placements, students (with preceptor input and agreement) identify learning needs and rotation learning objectives distinct from those mandated within the APPE course outlines. Each rotation practice site affords unique opportunities for learning and students must articulate learning objectives clearly. The following document includes:

- A. Tips for assisting students in writing learning objectives (LOs)
- B. Literature pertaining to LOs
- C. A sample Learning Contract (LC)

A. Tips

LOs can be knowledge or skill based. **Knowledge** related LOs are generally centred on certain therapeutic topics like infectious disease, nephrology, cardiology etc. **Skill** based objectives pertain to learning “how” to do something. Skill based LOs often encompass:

- Pharmaceutical care process
- Patient relationships
- Inter or intraprofessional collaboration
- Self-direction
- Communication

Experiential rotations are an opportunity to move from “recall” and “comprehension” to “application”, “analysis”, “synthesis” and “evaluation” and as such, the verbs used in experiential LOs shift from those used in classroom settings. Bloom’s taxonomy is a good place to find the verbs associated with these higher-level LOs (#1 link below).

The “SMART” approach is commonly used to get learners started with the process. The 3rd link below outlines the SMART approach. The 4th link is an interesting recent publication on the use of SMART in pharmacy curricula.

In effect, SMART is the structure to which Bloom’s taxonomy verbs are applied.

B. Literature

1. Bloom’s Taxonomy: https://ca.e-value.net/nwf/EvalueMProd_Collections/5000004/5000004General%20Information/Bloom_Taxonomy.pdf

- Writing Academic LOs: (page 4 and 5) https://ca.e-value.net/nwf/EvalueMProd_Collections/5000004/5000004General%20Information/WritingAcademicLOs.pdf
- Using the SMART method for writing LOs: https://ca.e-value.net/nwf/EvalueMProd_Collections/5000004/5000004General%20Information/SMART.pdf
- SMART in pharmacy curricula: https://ca.e-value.net/nwf/EvalueMProd_Collections/5000004/5000004General%20Information/SMART_in_CPD.pdf

Example of Completed Learning Contract for EPE

Student: _____ Practice Type: Community_ Institutional ____
 Preceptor: _____ Rotation start date: _____ End Date: _____
 Site: _____ Date contract confirmed: _____

Instructions:

- The student will provide a copy to the preceptor.
- Student and preceptor meet and agree on contract within 3 days after start of rotation.
- Student may add additional objectives, with preceptor's agreement.
- The 'Specific Actions' column for each objective should be reviewed and adapted as necessary.
- The student and preceptor will review progress on contract at mid point and final assessment at the conclusion of the rotation.
- The student will indicate any objectives for future rotations on lower part of form, based on final assessment.

The following objectives for this rotation are the result of discussion between myself (student) and the preceptor. Next to each objective are actions I will undertake to achieve objective:

LEARNING OBJECTIVES By the end of the rotation I will be able to:	SPECIFIC ACTIONS TO ADDRESS OBJECTIVE	DATE REVIEWED AND COMMENTS*
1. Demonstrate professional behaviour at all times	-Frequent daily contact with members of the health care team (patient, other pharmacy staff and health care professionals)	
2. Communicate effectively with patients, pharmacists and other health care professionals	-Engage in diverse interactions (written, verbal, electronic) throughout the rotation with patients and site personnel	
3. Demonstrate an understanding of patient safety procedures in the practice site, including process for identification, analysis and reporting of adverse drug events related to medication incidents, and near misses	-Observe, discuss and/or participate in review of patient safety processes currently in place and/or planned at the site; differentiate formal (written) from informal processes -Discuss how medication incidents and near misses are identified, analyzed, and reported at the practice site -Based on The Safety Competencies, ISMP guidelines, and discussion with preceptor/other site personnel, write a 250-500 word reflective summary	
4. Practice collaborative with pharmacy technicians, pharmacists and other health care professionals	-Participate with the practice site team in providing professional services -Become familiar with roles and responsibilities of each team member	
5. Participate in technical components of the prescription/medication process used at the site	- under supervision, accept and fill prescriptions - maintain required documentation	
6. Provide patient medication education for chronic conditions with an emphasis on therapeutic areas and devices covered in Year 1 courses.	-Provide patient education on prescription and non-prescription medications, under the direct supervision of a pharmacist, as required by law and based on patient need (suggest 1-2 times per day [Community] or once/week [Institution]) - Identify patients with [blank condition] requiring medication education	
7. Document patient education provided about medications in the patient record, under appropriate guidance.	-Involvement in regular (number and frequency specified according to site/preceptor) patient interactions and information provision	

LEARNING OBJECTIVES By the end of the rotation I will be able to:	SPECIFIC ACTIONS TO ADDRESS OBJECTIVE	DATE REVIEWED AND COMMENTS*
8. Provide competent responses to and appropriately document routine drug information requests from patients or health care providers	-Respond to drug information requests, including appropriate documentation, relevant to the practice site (suggest 4-6 during rotation)	
9. Conduct a Best Possible Medication History (BPMH) or Medication Review (e.g. MedsCheck) according to professional standards	-Engage in medication histories and reviews as either a Best Possible Medication History (BPMH) or a MedsCheck, in collaboration with a pharmacist (suggest 6 to 10 during rotation)	

* Student to enter info in review/comment column; Review and assessment should occur at mid-point and end of rotation; Preceptor completes 'Preceptor Assessment of Student - Midpoint and Final' forms on E*Value

Based on the final assessment discussion with preceptor, I will focus on the following areas during subsequent rotations and/or other courses:

LEARNING OBJECTIVE	SUBSEQUENT ROTATION AND/OR COURSE	SPECIFIC ACTIONS TO ADDRESS OBJECTIVE

Learning Contract (courtesy of U of T's Pharm D Program and the OEE) for APPE:

LEARNING CONTRACT #1 - Beginning Rotation

Student Name: _____ Preceptor Name: _____

Rotation Dates: _____ Rotation Type: _____

Rotation Site: _____

The following objectives for this rotation are the result of negotiation between myself and the preceptor and include objectives identified in final learning contracts from other rotations (include specific ways in which objectives will be addressed)

What should you do with this learning contract?

The student uploads to the Electronic Platform; the preceptor will be asked to log in to review and 'accept' or suggest revisions.

The Contract should be reviewed at the midpoint and final assessment meetings.

LEARNING OBJECTIVES	SPECIFIC WAYS IN WHICH OBJECTIVES WILL BE ADDRESSED

LEARNING CONTRACT #2 - Mid-Rotation

Use of Mid-point learning contract

1. Optional: if ratings of 'satisfactory' or higher in all criteria (e.g. student may use this contract to add newly identified learning issues)
2. Mandatory*:if overall rating of 'unsatisfactory' or 'unsatisfactory but remedial'; student needs to prepare an action plan

LEARNING OBJECTIVES	SPECIFIC WAYS IN WHICH OBJECTIVES WILL BE ADDRESSED

LEARNING CONTRACT #3 - For Subsequent Rotations

Student Name: _____ Preceptor Name: _____

Rotation Dates: _____ Rotation Type: Direct Patient Care

Rotation Site: _____

Based on the final rotation assessment and the mid-point rotation learning contract, I will focus on improvement in the following areas during subsequent rotations:

IF A STUDENT RECEIVED 'Unsatisfactory' or 'Unsatisfactory but remedial' IN ANY ONE CRITERIA or FAILED THE ROTATION, A DETAILED ACTION PLAN MUST BE OUTLINED IN THIS CONTRACT.

What to do with this Learning Contract?

Student to upload to E*Value. Faculty will determine if subsequent rotation preceptors will receive a copy.

OBJECTIVES	RELEVANT SUBSEQUENT ROTATION	SPECIFIC WAYS IN WHICH OBJECTIVES COULD BE ADDRESSED

OBJECTIVES	RELEVANT SUBSEQUENT ROTATION	SPECIFIC WAYS IN WHICH OBJECTIVES COULD BE ADDRESSED

I. Sample Rubric for providing Feedback on a patient encounter that required clinical judgment (Courtesy U of A’s OEE)

Clinical Judgment Assignment Rubric

Clinical Judgement Assignment	Resubmission Required	Satisfactory	Excellent
Summary Provide a brief description of the patient care interaction that required clinical judgement.	Incomplete, unclear description	Description is complete but basic.	Description of the interaction is complete & includes the factors involved; including the urgency and seriousness of the situation.
Analysis Include information regarding; What questions were asked? What lab or clinical data was needed? (include how it was retrieved)	Incomplete or unclear information	General analysis of the interaction & inclusion of data used.	Complete & thorough description of all data used. Includes what information was not retrievable
Outcome What was the outcome for the patient? What skills were required to be used to achieve the outcome?	Basic information about the outcome and skills used	More complete information about the outcome & the skills used to achieve the outcome. (i.e. documentation)	Insightful information about the outcome achieved & thorough explanation of the skills used. (including critical thinking & decision making skills and challenges) .

Tier 2 components (optimal additions)

1. Supplementary Assessments

The intention of the supplementary assessment is threefold:

- To reduce the cognitive load on preceptors working with students performing at a satisfactory or excellent level by eliminating irrelevant diagnostic and supplementary tools only pertaining to sub-optimal performing students
- To facilitate collaborative establishment of best practice for assisting struggling students and their preceptors to surmount learning deficits
- To reduce workload on constrained offices of ExEd as increasing (increasing performance expectations and absolute numbers of rotations) numbers of students and preceptors will require extra attention

The following supplemental assessment is an example meant to generate discussion, revision and subsequent expansion to all learning outcome/assessment domains.

Supplemental Assessment: Communication

Name: _____ student/preceptor

Site: _____

Date: _____

Rotation Number: _____

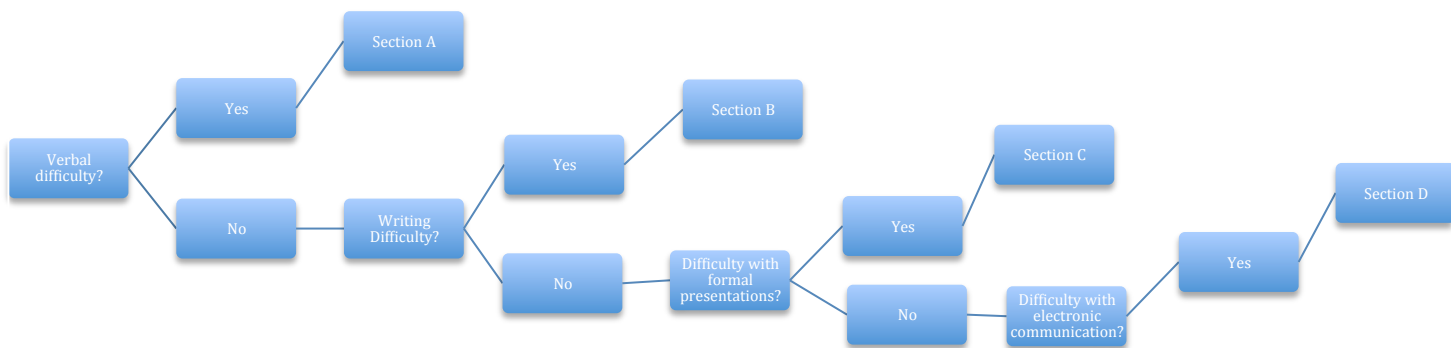
This extra assessment is being completed because the student has been rated as “Developing” or “Unsatisfactory” within the communication domain before or at the mid-point of the rotation.

Purpose: This tool is meant to identify the issue/s and assist students having difficulty with communication in improving performance. Students are responsible for achieving a satisfactory level of communication. Preceptors and the Office of Experiential Education will assist the student in identifying achievable goals and timeframes for improving performance.

Implications: Communication is a necessary competency for safe and effective professional practice. Failure to achieve a “satisfactory” rating on the Final Assessment of the rotation may result in the some or all of the following:

- Delay further rotations
- Complete remedial communication programs
- Repeat the rotation
- Delay in graduation

Instructions: Immediately work through the flow sheet to determine remediation section



SECTION A (Note: Section B-D to be developed)

Introduction: Students having difficulty with verbal communication will have difficulty with all other aspects of the communication outcome (writing, formal presentations, electronic communication). As a result, this issue takes priority in remediation. The other dimensions of communication can only be addressed once the student has successfully improved his or her verbal communication.

Components to effective verbal communication include:

- Language skills
- Listening skills
- Clarity of thought
- Conflict resolution
- Respectful assertion
- Feeling safe and supported

Note: If the major issue is language skills, please contact the Office of Experiential Education

Step 1-Student Exercise:

Consider which of the five components above you feel particularly challenged to apply. In a short recording or written (maximum 250 words) composition, identify one or two components that strike you as being especially difficult for you during this rotation. Can you identify an underlying reason for you being particularly challenged with these aspects of verbal communication? When have you experienced a similar feeling as it relates to verbal communication? How did you manage the situation? Will a similar approach work in this rotation?

Upload this reflection to the learning platform. Discuss your reflection with your preceptor before moving onto the next step.

Step 2-Remedial Tasks:

Based on the discussion with your preceptor regarding your reflection, determine the two most relevant tasks to assist you in improving your verbal communication skills and complete them prior to the beginning of your 2nd half of the rotation.

Step 3-Learning Plan:

A learning plan is a focal document that ensures you and your preceptor are both clear on what you must achieve during the remainder of the rotation to ensure success. You (with your preceptor's input) identify a reasonable number of outcomes for achievement, define the tasks undertaken to allow you to practice this skill, the performance required and the timeframe for achieving this improvement. The chart below should be used to develop your learning plan. It contains a single example for your reference.

What outcome/s do you need to achieve?	What tasks will I engage in to develop my knowledge/skill/attitude?	Learning Objectives: By the end of this rotation I will...	Timeframe	Assessment Schedule
Feel supported and safe in the clinical environment so that I don't worry about my recommendations being incorrect.	Check in with preceptor ½ hour before rounds to review my recommendations Attend rounds daily and proactively speak	Ensure realistic and correct care plans by <u>daily previewing</u> of patients with a preceptor. Convey care plans for my patients confidently and clearly (tone of voice, organisation, volume) during <u>daily rounds</u>	This week. Reassess next week to see if previewing still required. 90% of the time for the remainder of the rotation.	Weekly-every Thursday to assess and refine

Step 4-Interim Weekly Formative Assessments:

The use of the Supplementary Assessment process generates automatic weekly self assessments for students and weekly assessments for preceptors to provide ongoing direction for students and update the OEE regarding student progress. If at any time, patient safety is at risk, the OEE may elect to remove the student from the practice environment. The electronic learning platform will generate these assessments. Please check with the OEE if they do not appear on your assessment page in the system within 2 working days.

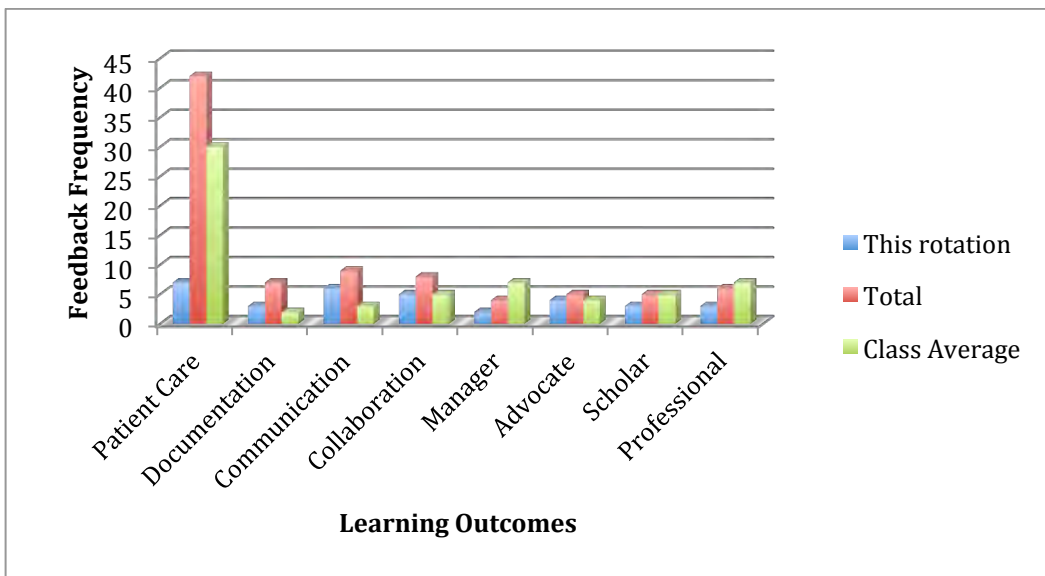
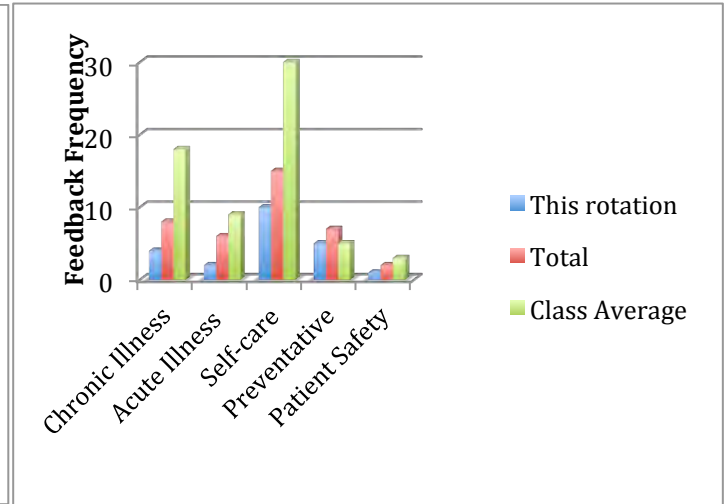
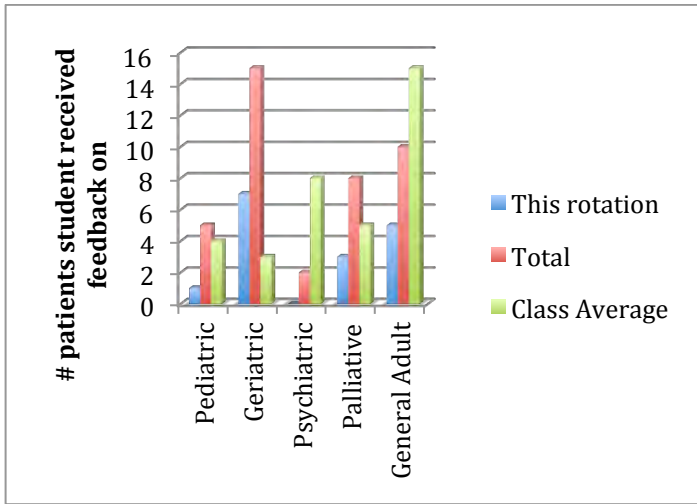
2. Formative feedback e-forms (360° Feedback)

With the introduction of sophisticated electronic platforms to administer rotation assessment and feedback, students will have opportunities to receive constructive feedback from patients, the interprofessional team and preceptors. Short feedback documentation can be provided and collected using Student Feedback e-Forms. Please go to: <http://fluidsurveys.com/s/CanExEdform/> for a sample electronic feedback form. These documents would feed into a central student repository that would inform the formal mid-point and final performance assessments.

Minimum numbers may contribute to reliability of feedback and could be mandated by individual ExEd programs. In addition, the types of patients and therapeutic areas of practice could be provided to students and preceptors as a live graphical representation of experience to date. The next section, "Feedback Dashboard" contains further detail on this concept.

3. Feedback dashboard

Students and preceptors could check to see whether students were seeing and receiving feedback/assessment on a broad representation of patients and their associated therapeutic issues. The Formative Feedback e-Forms (above) would provide the data. A few sample charts follow.



II. Priority #2 Appendices

A. Literature Searching Strategy and Results

Goals

The general project goal of literature searching is to systematically identify and acquire available literature addressing each working priority.

The major goal of this Priority is to optimise the number and quality of learner placements with preceptors at their practices using novel or alternative learner-preceptor models

Algorithm

10. Define the specific research question with each working priority.
11. Identify and develop search terms to use
12. Determine databases that might contain relevant literature
13. Refine search terms and strategies based on information found
14. Supplement the search with key journals thought to be important (dependent on particular priority)
 - a. **American Journal of Pharmaceutical Education**
 - b. **Currents in Pharmacy Teaching and Learning** (not familiar with this but is suggested in the 2014 Poirier article)
 - c. **Pharmacy Education**
 - d. Assessment & Evaluation in Higher Education
 - e. Medical education
 - f. Advances in health sciences education
 - g. Teaching and learning in medicine
 - h. Medical education quartet
 - i. Higher education academy
 - j. Medical teacher
15. Review Abstracts for relevancy
16. Complete ancestry searches for useful citations
17. Complete summaries for relevant citations
18. Summarize and key findings from evidence

Databases for Priority #2

CINAHL, Scopus, Medline, ERIC, EMBASE, IPA

Suggested Terms and Combined Searches for Priority #1

Education

AND

Model

AND

Student

AND

Preceptor/Supervisor

AND

Experiential/Field Placement/Rotation/Practic*

Exclusion criteria

Non-english articles

Older than 20 years

Database	Actual Search Terms	Limitations	Citations Identified (#)	Relevant Citations (#)
Referrals from Interviews	Legal Referrals Other		70 8	70 8
CINAHL	(MH "Models, Educational") AND Students AND Precept*	1995-Present	36	7
Scopus	Experiential AND Education AND Rotation or Placement AND Preceptor or Supervisor AND Student AND NOT Assessment AND NOT Reflection	1994-2014	95	28
Medline	Exp Models, Educational AND Exp Students, Health Occupations AND Exp Preceptorship OR Preceptor.mp	Humans English 1996-present	137	12
ERIC	Model AND Student AND Precept*/Supervisor AND Experiential/field placement/rotation/practice*	1994-Present	91	6
Embase	Exp Models, Educational OR rotation OR placement AND Exp students, Health Occupations AND Experiential AND Exp Preceptorship OR Preceptor.mp	1994-Present	94	4
IPA	Model AND Precept* AND Students (pharmacy)/interventions (pharmacy students)	No limitations	67	8
	Total:		598	143 (22 duplicates removed)

B. Interview Guide

Research Questions	Associated Interview Items
<p>1. What models of preceptor-learner relationship (characterisation and ratio) exist? (Rx and non-Rx, Canada and international, practice type)</p>	<ol style="list-style-type: none"> 1. What research have you undertaken to enumerate all possibilities of model for preceptor-learner relationships? 2. What models have you decided to include as acceptable models within your program? 3. How did you select them? 4. Could you share your research into these models? 5. Are there particularly important papers that should be included in our bibliography/qualitative analysis on this topic? 6. Did you establish a construct or categorisation scheme for the various models? (I.E. numerical ratios, description of the nature of the relationship, degree of autonomy, practice setting, etc.) 7. Is there someone I should speak with about their knowledge and opinion on various preceptor models?
<p>2. Describe how various models are ideally/intelligently used in practice.</p>	<ol style="list-style-type: none"> 1. Do you have a sense of whether certain models work well in certain settings or practices or with certain types of preceptor? I.E. community vs. institutional, clinical vs. non-clinical, urban vs. rural, early vs. late ExEd, novice vs. experienced preceptor, strong vs. struggling learner. 2. What cautions would you have regarding using a particular model in general or in a given situation?
<p>3. How would these models be evaluated for effectiveness?</p>	<ol style="list-style-type: none"> 1. Have you examined these novel models for effectiveness? 2. If so, how are you evaluating and what are you finding? 3. If not, why? 4. What indicators should be used and what would constitute success vs. failure? 5. Do you have a preceptor who you could refer us to who may have tried various models and would provide an informed perspective on one or more novel models?
<p>4. What factors might impede or facilitate the use of novel models of preceptor-learner partnering/grouping. Are there regulations that dictate or exclude particular models? Why?</p>	<ol style="list-style-type: none"> 1. For these novel models to be fully realised, what factors need to be in place? 2. What are the major barriers for uptake of these novel models? 3. What questions remain for you regarding preceptor-learner models in Ex Ed? 4. What could be done on a national level to encourage increased uptake of new models? 5. Why is it important that new models be integrated into Ex Ed? 6. What are the risks of using these newer models?

C. Informed Consent for Recording of Conversations

Title of Project: Canadian Experiential Education (CanExEd) Project

Project Manager: Katrina Mulherin, BSc. Pharm, Pharm D

Organisation: Association of Faculties of Pharmacy of Canada (AFPC)

Introduction: To establish a comprehensive national picture of Canadian Pharmacy Faculties' Experiential Education programs, the CanExEd project is interviewing faculty (Entry level Doctor of Pharmacy transitioned, transitioning and yet-to transition), stakeholders within Pharmacy and experts within other professional domains. You are invited to participate because of your role within one of these categories.

Conversations, interviews and meetings will be audio and possibly video-recorded for the purposes of data analysis and eventual presentation of findings in a multimedia format. Your participation is entirely voluntary.

Procedures: The major difference in a recorded session is likely the obviousness of room arrangement and recording equipment (microphones and cameras) in face-to-face interviews and meetings. In phone or remote interviews and meetings, you will be informed when recording of the session has started. If the project team deems a section of your conversation particularly effective at portraying a theme for a larger audience, you will have the opportunity to review that footage/audio for approval before it is used more widely.

Risks, Harms or Inconveniences: Interviews and meetings will be scheduled at your convenience. The ability to approve your footage/audio in the event it is to be further used for consumption of a wider audience minimizes any risk of your words being misrepresented.

Privacy of participants' information: Data will be housed in secure computers and Canadian data platforms. Assistants with access to the multimedia data files will have signed confidentiality agreements. Rough data files will be destroyed within 3 years of project completion. The final multimedia presentations will exist indefinitely as a record of the current and projected state of Canadian Experiential Education in the profession of Pharmacy.

Contact information: At any time, if you require any clarification or further information on this project, you can contact the CanExEd Project Manager, Katrina Mulherin at katrina.mulherin@utoronto.ca or 416.931.4864

Authorisation: I have read the information on this consent form and my questions have been addressed to my satisfaction. I agree to have my conversations recorded and understand that my consent can be withdrawn at any time and that consent does not mean that I lose any legal rights.

Participant's Name:

Participant's Signature:

Date:

Project Manager/Designate Signature:

Date:

D. Structured Literature Extraction Guide

Citation: First author last name, Initial; Title; Journal; year	Research Goals and Objectives (Purpose)	Protocol or method used to determine value	Setting/ Perspective of the benefit/ value Comm (clinic vs. retail) / Inst	Population	Results	Conclusion

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F. AGILE Literature Searching Strategy and Results

Learner Preceptor Models in Health Discipline Experiential Education

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Design

- Narrative systematic review of reports describing advantages and disadvantages of learner-preceptor models

Inclusion Criteria

- Qualitative or quantitative English language articles published after January 1980-2014
- Compared or discussed advantages and/or disadvantages of specific learner- preceptor models used across all health disciplines
- Organized health care setting or institutional environment

Exclusion Criteria

- Systematic reviews, editorials and commentaries
- Articles that focused on length of placement or styles of precepting

Databases Searched

- MEDLINE (Ovid, PubMed), Embase, Cochrane library
- CINAHL (Cumulative Index to Nursing & Allied Health Literature)
- ERIC (Educational Resources Information Center), PsycINFO
- Google Scholar

Search Terms

Terms in each column were combined using 'OR' and each row was combined using 'AND'. Results were limited to the English language. Some specific adaptations of the terms were required for individual databases.

Learner Level	Health Discipline	Type of Learning	Model
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<ul style="list-style-type: none"> • Entry-level learner • Undergraduate • Resident / Residency • PharmD Learner • Masters learner 	<ul style="list-style-type: none"> • Pharmacy • Medicine • Nursing • Occupational therapy • Physiotherapy • Physical therapy • Dietetics • Speech therapy • Audiology • Podiatry • Dentistry 	<ul style="list-style-type: none"> • Experiential learning • Experiential education • Institutional learning • Institutional experience • Institutional education • Institutional practicum • Hospital experience • Hospital-based learning • Hospital practicum • Clinical experience • Clinical competence • Clinical education • Clinical learning • Clinical placement • Hospital practicum • Clinical practicum 	<ul style="list-style-type: none"> • Model(s) • Educational model(s) • Organizational model(s) • Rotation model(s) • Curriculum • Peer-assisted learning • Capacity • Preceptor(s) • Preceptorship(s) • Mentor(s) • Mentorship(s) • Supervision
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Critical Appraisal

- Quantitative and qualitative articles were scored from 0 to 14 based on their respective critical appraisal checklists as per *Lekkas et al*

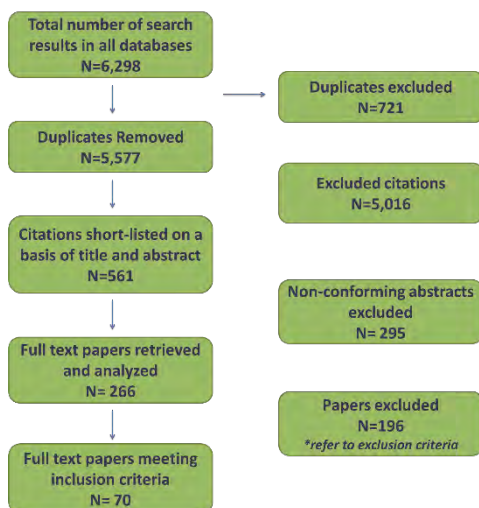
Data Analysis

- Relevant data were extracted by from each report and recorded on a standardized collection form
- Advantages and disadvantages were grouped into themes to determine which were most commonly cited for each learner-preceptor model
- Narrative synthesis was used to summarize the advantages and disadvantages of different learner-preceptor models

Results

- A total of 70 papers were included in the review (Figure 1)
- Eight distinct learner-preceptor models were identified
- Main advantages and disadvantages of each model are outlined Table 1

Figure 1. Study Flow Diagram

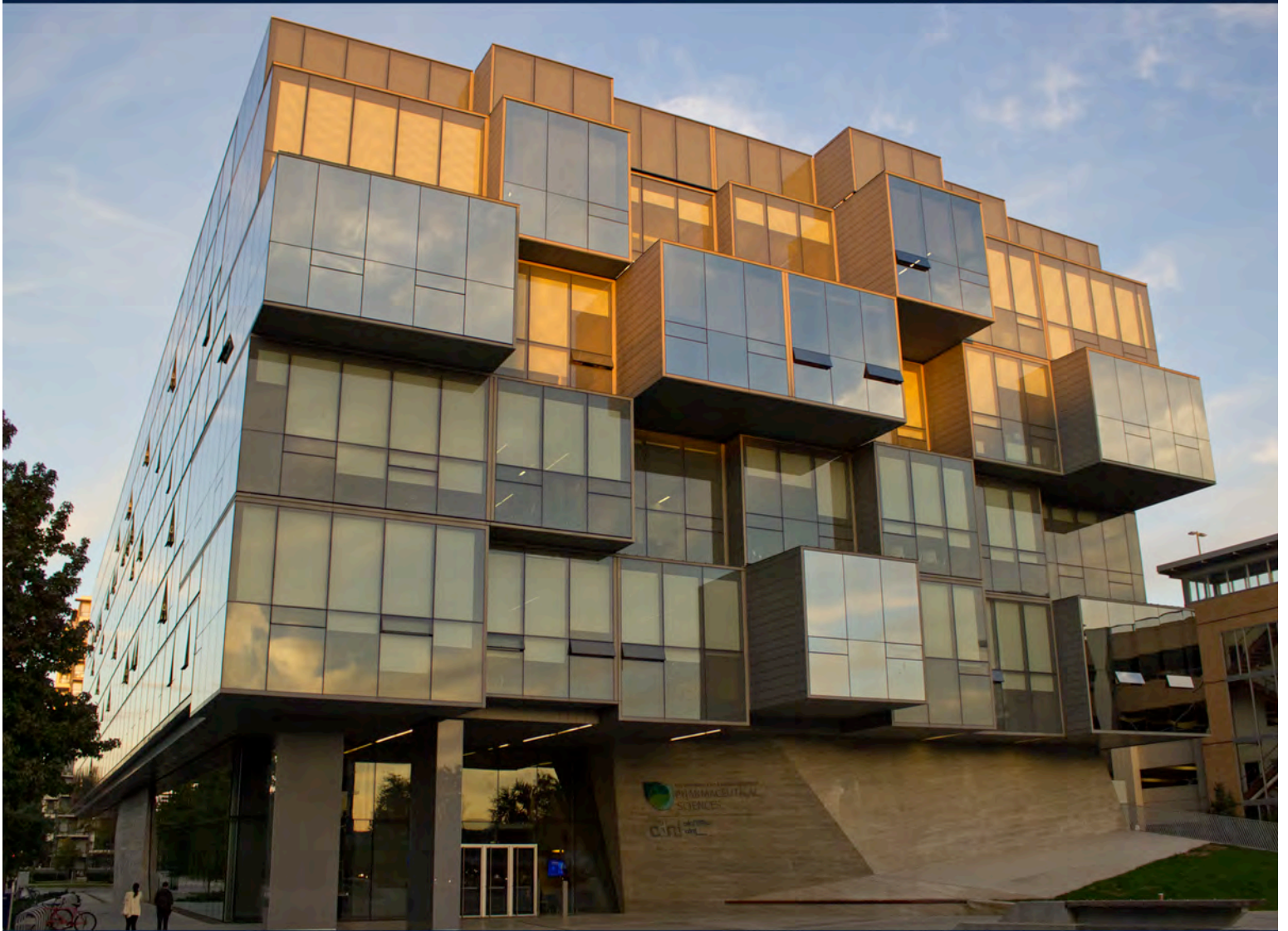


Breakdown of articles by discipline n=70

30- Nursing, 14- Physiotherapy, 13- Occupational Therapy, 4- Pharmacy, 2- Dietetics, 1- Speech & Language Therapy, 6- multiple disciplines

G. Prototypes

- a. The AGILE Project Guidebook (UBC):



Paired Placements in Experiential Education

March 2015

A Guidebook for Practice Educators

Introduction

The AGILE Project Final Report (**Advancing Experiential Learning in Institutional Pharmacy Practice**), made available in December 2013, focused on recommendations to inform approaches to inpatient experiential education in pharmacy in British Columbia. In particular, it sought to identify solutions for placement capacity concerns and identify the support needs of practice educators, learners and sites.

Paired placements have the potential to increase placement capacity. From the report, practice educators indicated that the placement of learners in pairs (two learners at the same level) was a viable option. In addition, paired placements seem to be viewed favourably by learners. The literature suggests that paired placements offer significant advantages in promoting peer-assisted learning and in increasing learner comfort during their placement.

In July of 2014, local practice educators and learners who recently employed paired placements were contacted to participate in this follow-up to the AGILE Project. This guidebook was constructed from a compilation of feedback and real-life experiences from these practice educators (N=17) and learners (N=9). We hope you find this guidebook useful and that it provides you with some “tips and tricks” to make your first foray into paired learning models a positive experience for you and the learners.

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Terminology

Office of Experiential Education (OEE)

The Office of Experiential Education, Faculty of Pharmaceutical Sciences is responsible for the administration of learner placements in the Entry to Practice Program at the University of British Columbia. This includes site recruitment and retention, learner transitional learning and support, scheduling of learner placements and practice educator development.

Entry to Practice Program (E2P Program)

The Faculty of Pharmaceutical Sciences' Entry-to-Practice program.

E2P Learners

Learners from the Faculty of Pharmaceutical Sciences' Entry-to-Practice program who are at a site completing an experiential placement. Practice educators sometimes refer to these learners as OEE (Office of Experiential Education) learners or SPEP (Structured Pharmacy Experiential Program) learners.

Pharmacy Practice Residents (or Resident)

Graduate pharmacists who are enrolled in one of the province's Health Authority administered Pharmacy Practice Residency programs.

Practice Educators

Practicing pharmacists who dedicate their time to supervise learners on their experiential placements. Practice educators will be used interchangeably with preceptors in this document.

Traditional 1:1 Model

A precepting model used on experiential placements where one practice educator supervises one learner (e.g. an E2P learner, resident or PharmD).

Paired Model

A precepting model used on experiential placements where one practice educator supervises two learners who are at the same level (e.g. two E2P learners, two residents or two PharmD learners).

The Paired Model

As reported in the AGILE Project, most practice educators in British Columbia currently continue to use the traditional 1:1, preceptor: learner model. However, there are preceptors who routinely employ other models. Preceptors (N=17) and learners (N=9) who recently participated in a paired placement (one preceptor supervising two learners who are at the same level) provided their perceptions of the paired model (outlined in the tables below). While not an exhaustive list, it illustrates how the paired model is perceived by local preceptors and learners across British Columbia.

Table 1. Positive perceptions of the paired model

Positives

- **Learners are more independent as a pair**
 - may solve problems together without approaching preceptor
- **Encourages preceptors to expand their precepting skills and abilities**
 - experimenting with precepting strategies that work with two learners; may learn from learners as well
- **Learners are exposed to peer-assisted learning**
 - can bounce ideas off each other; learn from observing each other; group work opportunities
- **Discussions are more rich and interesting**
 - more learners provide different ideas and perspectives
- **Learners feel less intimidated and are more confident**
 - having extra support from someone in the same situation, especially in rural areas
- **Learners are exposed to more patient cases and scenarios**
 - get to see their peers present; talk amongst themselves regarding their patients
- **More efficient use of time for preceptors**
 - can precept two learners in one month as a pair, compared to two months if precepting one at a time
- **More efficient use of time for learners**
 - activities can be done together; can split workload

Table 2. Negative perceptions of the paired model

Negatives

- **Differences in ability, learning styles and/or personalities may be an issue**
 - one learner could be more vocal and overpower the other learner; learners may not get along; learners may compete for preceptor's attention
- **Evaluations take up more time**
 - two sets to do (can't be done together)
- **Preceptor needs to spend more time keeping track of the two learners**
 - need to be cognizant of the patients each learner has had to ensure that learners get a variety of learning opportunities
- **Learners may get less one on one time with the preceptor**
 - more group activities; struggling learner may require more guidance
- **Learners may be less productive**
 - learners may distract each other (chatting during rounds)

Table 3. Perceived barriers with switching to the paired model

Barriers

- **Space and technology limitations**
 - not enough computers or desk space; crowding in rooms/wards
- **Slow patient turnover rate**
 - not enough patients for learners to work-up, especially lower acuity wards
- **Workload and time**
 - taking on a pair of learners is perceived to be double the amount of work and time
- **No prior experience with paired model**
 - may not be confident in their skills to precept a pair of learners
- **Preceptors are unaware of what learners are capable of doing**
 - unsure of which activities learners can complete independently and which activities require assistance

Timeline

Most preceptors indicated that they had no prior experience with the paired model and stated that they “jumped into it” and “learned as they went”. Here is a general timeline with some tips on what these preceptors do to prepare prior to and during a paired placement.

Must do's before the placement.

1. Contact learners.

Make sure learners are aware that they are being precepted as a pair. Not only is this beneficial for the learners in terms of finding accommodations and supporting one another (especially in rural areas), but learners will also have the expectation to work together as a pair.

2. Contact site stakeholders.

Make sure the stakeholders at your site (e.g.: doctors, nurses, and other allied health care professionals) are aware that pharmacy learners are on rotation and see to it that they follow up with you if they have any questions or concerns.

3. Be familiar with learner goals and activities.

Learners will have a list of patient care objectives and activities that must be completed during their placement. Most learners will want to complete these activities as soon as possible and may need your assistance in identifying suitable patients to work-up.

4. Plan ahead.

Have an idea of when certain patient care activities should be completed. Preceptors usually space the major activities 10 days apart. *Please see page 10 for details on scheduling activities.*

5. Adjust your schedule.

As much as possible, keep the first week relatively flexible and free because you may need to spend more time with the learners at the beginning. Try to push back administrative work and/or meetings into the later weeks as the first week is critical in setting learner expectations for performance and patient care. Once learners increase their confidence, comfort level and independence, they may require less of your time in the later weeks.

6. Be open-minded.

Part of the solution is tackling the situation with the right mentality. Don't restrict yourself in doing things one particular way.

“Be patient that things may not work out exactly as they are expected and you should be open to flexibility and adjustment.” – Practice Educator 5

Must do's on the first day

The first day will generally be more administrative. For some learners (especially E2P learners), this may be their first time in an inpatient care setting so they may find it intimidating. Allowing the learners to feel comfortable and become familiar with the environment will make placement run more smoothly.

1. General orientation.

Introduce your learners to the members of your team. This make your learners feel more welcomed and allow them to gain a better understanding of the different health disciplines pharmacists need to collaborate with.

2. Go over your expectations and the learners' learning goals.

Preceptors have emphasized that this tip is probably the most important aspect of a successful placement. While you can review expectations with the learners simultaneously, it is better to review learning goals individually. This ensures that each learner can express his or her learning goals privately. Going over these expectations and learning goals, in the first 72 hours of the placement, will minimize conflicts later in the rotation.

3. Stress a team and collaborative learning environment.

One of the most common concerns with precepting a pair of learners is that the learners may not get along due to differences in abilities, personalities, or learning styles. The key is to prevent conflict from happening in the first place. If learners understand the value in the opportunity to learn and work together, they may be more understanding of each other's differences and help each other; instead of focusing on each other's weaknesses, they may draw on each other's strengths to improve their skills. Set a tone of collegiality and emphasize that joint discussions are a safe setting to ask questions and discuss issues. *For more information on how to deal with conflict between learners, see page 11.*

4. Set a defined time to meet every day.

Most preceptors meet up with their learners at a set time every day. For example, preceptors may choose to meet up with learners 1-2 hours before rounds to work-up patients before discussing patient care issues with the rest of the healthcare team. Preceptors have found this method beneficial in terms of keeping learners organized on rotation. It also allows the learners to feel more at ease, knowing that they will have an opportunity to review the care provided with you on a daily basis.

Must do's in the first week

1. Take leadership.

For most E2P learners this may be their first experience in an institutional setting and it may take a week or so for them to get familiar and comfortable with what is happening around them. For this first week, try to be more instructive in terms of what they need to do; assign patients to them and show them how certain tasks need to be done.

For example, show both learners (together) how you typically do a patient interview. Then allow each learner to do one on his or her own under your supervision.

Learners may lack in confidence when performing tasks for the very first time. Take leadership and show them the “correct” way, so that they have a goal standard of how to carry out the task. For the following weeks, they will be more independent and may even be able to assist you in carrying out some of your daily duties/tasks.

2. Try to gauge the learners' learning styles.

Understanding how your learners learn will allow you to tailor your teaching style to their needs. This may save you time as well.

For example, if you know that your learner's learning style is more hands on and getting right into it, you do not need to spend so much time explaining and showing them how to do it before hand. On the other hand, if your learner likes to think thoroughly before carrying out a certain task, you can assign some pre-readings for him/her to go through a day before and ask them to perform that task the next day.

If you want to learn more about the different learning styles, please visit this site for more information at <http://www.practiceeducation.ca/contact.html>

3. Open communication and check in with learners more frequently.

Exchange contact information with your learners so that they know that you are available to them. Make sure the learners are aware that they can approach you either together as a pair or separately if necessary. You should check in with them more frequently during the first week to see how they are doing. If conflicts do arise, especially if it involves the other learner, solving these conflicts as early as possible will make the placement more enjoyable for yourself and for the learners. Do not hesitate to talk to other colleagues for their opinions as well if you are unsure of how to approach the situation.

General Tips

Scheduling Activities

Before the actual rotation, it is a good to have a rough idea of when you want the learners to complete their activities. Preceptors mentioned that the schedule outline for two learners is similar to having just one learner. You may want to schedule journal clubs, presentations, and nursing in-services throughout the rotation. Some preceptors have suggested spacing the more complicated activities approximately 10 days apart as this will prevent the learners from being overwhelmed in the last week. The final presentations are generally done in the last week, but it is a good idea to have learners present on the same day so you only need to find a suitable audience once.

Since the two learners will have the same list of activities and objectives for the rotation, you can schedule activities together to be more time efficient. See the table below for a list of activities that preceptors have their learners complete together.

Table 3. Suggested activities to be done together

Activities
<ul style="list-style-type: none"> • Introduction/orientation • Therapeutic discussions • Journal clubs • Patient reports • Pre-planned in-services

MAIN POINTS

- 34 Before the rotation, have an idea of when the activities need to be completed
- 35 Space more complicated activities approximately 10 days apart
- 36 Implement activities to be done together

Introduction/orientation

It may take more time to orient two learners versus one learner as there may be more questions that come up. Further into the rotation, you will get less administrative questions (i.e. how to use the computer, how to access certain resources), as the learners tend to figure it out amongst themselves. Preceptors find the orientation quite similar with the exception of just more bodies following you around.

Therapeutic discussions

The major concepts discussed during therapeutic discussions will be the same whether you do them separately or together. The ideas and perspectives from the two learners participating in the discussion can make it more interesting. Try to alternate directing questions between the learners to ensure that each learner has adequate opportunities to showcase their knowledge.

Journal clubs

Depending on the topic of interest, learners may be overwhelmed with the number of trials they need to learn and be familiar with. By having the learners split up the required trials and articles makes it less daunting. During the journal clubs, the learners can teach the most important aspects of the trials and articles to each other. This way, the learners are exposed to variety of primary literature.

Patient work-ups

With having two learners, you may need to be more cognizant in terms of which patients they worked up. For example, if one learner worked up a patient with diabetes already, you may want to assign the next patient with diabetes to the other learner to ensure variety. Another way is to let the learner alternate who gets to choose their patient first.

Once the learners have their patients assigned, set a time to meet and go over the patients together. Reporting together provides the learners with the opportunity to be exposed to more patient cases and scenarios. In addition, by observing other patient reports, the learners can provide each other with feedback. Some preceptors have mentioned that this method doesn't work for them because it ends up taking too much of their time, so you may want to experiment and find which method works best for you. Some preceptors ask the learners to review the patients with each other first before meeting with the preceptor. This may help them organize their thoughts and arrive better prepared for the discussion with the preceptor.

Pre-planned in-services

One preceptor mentioned that getting learners to provide in-services to the nursing staff really helped reduce the workload. For example, there was an issue with the management of delirium on the ward and the preceptor thought that it would be a great learning opportunity for the learners. The learners were assigned to read up on the topic of delirium during the first week and notified that they would be providing in-services in the fourth week. These pre-planned in-services provided by the learners not only encouraged peer-assisted learning, but it also helped with the preceptor's workload.

Dealing with Conflict

One of the main concerns you may have regarding the paired model is if conflict develops between the two learners. As mentioned previously, the main goal is to prevent conflicts from occurring, but if they do occur, how do you approach the situation? What if the conflict was due to a difference in learning ability or personality?

Difference in learning ability

After spending the first week with the learners, you will start to get a sense of each learner's abilities. The two learners may be at the same learning level, but it is not uncommon to have one learner who is stronger. You may need to spend more one-on-one time with the weaker learner. When working with the weaker learner, try to avoid comparing him/her to the stronger learner. It may be challenging but try not to make the learner feel as if they are "weaker". You can try to focus on their strengths and then throw in some of your suggestions on how to improve. Keep in mind that if you spend more time with the weaker learner, the stronger learner may feel "sacrificed" or left out. To help keep the balance, while you are providing some extra guidance to the weaker learner, you

MAIN POINTS

Difference in learning ability:

- ✓ May spend more time with weaker learner but also keep the stronger learner busy as well
- ✓ Focus on their strengths and then throw in suggestions for improvement
- ✓ Encourage learners to help each other

Difference in personalities:

- ✓ Direct questions specifically to each learner and then alternate
- ✓ Sit down with both learners and try to come to some common ground
- ✓ May need to conduct activities separately

can keep the stronger learner busy by assigning an extra activity (e.g. drug information request, patient work-up). If the learners work well together, you can also encourage the stronger learner to help the weaker learner too.

Difference in personalities

In one situation, you may have one learner who is more vocal, and another learner who is much more quiet. The more vocal learner may be more dominant in answering the questions that you pose, which may cause the other learner to feel more left out. To ensure that both learners have the opportunity to showcase their knowledge, you can direct questions specifically to each learner and then alternate.

If the difference in personalities has progressed to a point where the learners cannot get along with one another, you may need to sit down with both learners to resolve any issues and try to come to some common ground. Usually learners are receptive to working together but on the rare occasion, you may need to start conducting activities separately (i.e. therapeutic discussions, journal clubs, patient work-ups). This will definitely be more work as everything is essentially doubled when certain activities cannot be conducted together, but keep in mind that every rotation is going to be different and you will need to adjust accordingly. The different dynamics from each pair will help you enhance your precepting skills as well.

If at any time you feel overwhelmed, you can contact OEE for support.

Feedback and Evaluations

Preceptors contemplating taking on a pair of learners are often worried about the extra time involved in providing feedback and completing the evaluations. It is true that the process takes longer because there are two separate evaluations to complete. However, preceptors who have experience with pairs have some tips to make this process less overwhelming.

Feedback

Learners have mentioned that they wished their preceptor had given them more feedback. One strategy is to give feedback right after a certain task. You may not want to wait until the end of the day to give it to them because it is easy to forget, especially when you have two learners to keep track of. You can also ask the other learner to provide some feedback as well. The other learner may be able to provide a different perspective easier for the learner to understand since they are in similar shoes.

It is important to remember that you may have to provide some feedback to the learners separately, particularly if one learner is struggling. There are times where both learners can benefit from the feedback provided, but there are also times where comments could make one learner feel singled out. To try to minimize any conflict, if you are in doubt, provide the feedback individually.

If you have a creative way that helps you keep track of the feedback given, that would be even better. One preceptor uses a plus/minus card system. After the learner completes a specific task, the preceptor would write down three positive and three negative comments on a card. The preceptor would give this card to the learners to view and then collect them again to use for the final evaluation. Having these “reminders” will make the midpoint and final evaluations easier to write.

Evaluations

MAIN POINTS

Feedback

1. Encourage learners to provide feedback on each other
2. Implement a system to help keep track of feedback
3. Check in with learners individually from time to time

Evaluations

4. Set dates for midpoint and final evaluations
5. Evaluations should be done separately
6. Try completing evaluations online

As mentioned previously, the most important aspect regarding evaluations is to set tentative dates for both the midpoint and final evaluations. This keeps it organized and ensures that you and the learners are all on the same page.

Even though some activities throughout the rotation were done together, it is recommended to meet with each learner separately to discuss and complete the evaluations. Try to free up more time during the last couple of days as it will take up more of your time. If you found a way to keep track of the feedback you gave throughout the rotation, the evaluations will be a lot easier. It might also be a good idea to check in with the learners to get their feedback as well. From their comments, you may get a better sense of whether what you see is consistent with what they see when they are working together. Preceptors have also suggested using the online evaluation forms as they found them more efficient. These can be found on the OEE website at <http://oee.pharmacy.ca>.

Frequently Asked Questions

Do preceptors already take pairs?

Yes. Although the most preceptors in BC use the traditional 1:1 model, there are preceptors who routinely employ other models such as the paired model. Of the many preceptors we talked to, the majority of them (15/17) would continue to take pairs.

“I would never go back to the 1:1 if I have the choice. I think two is the threshold.” – Practice Educator 8

Can I request to take on a pair of learners?

Yes. Contact OEE for more information at <http://oee.pharmacy.ca>.

Do I need any training?

Not necessarily. The preceptors we spoke to did not have any formal training for taking on a pair of learners. Most of them switched to the paired model because of the increase in demand for placements so they learned as they went. They did suggest new preceptors experiment with supervising one learner first before jumping into the paired model.

Did the learners like being paired up?

In general, yes. Learners sometimes expressed a desire to have more one-on-one time with the preceptor on a paired rotation, but didn't find this to impede their learning. In fact, the majority of the learners enjoyed being in a pair and would recommend future placements to be done this way. These learners found the institutional setting to be less intimidating and felt that they benefited in many aspects from peer-assisted learning.

“If it's independent, the student might have your undivided attention but I found that a lot of students actually like to work in pairs.” – Practice Educator 5

Are learners really more independent as a pair?

In general, yes. For simple questions, instead of coming to you for the answer, they can get reassurance from the other learner before carrying out a specific task. However, you need to be comfortable with them going off as a pair as well. Sometimes when you see them struggling, you may want to step in right away, but you need to be okay with allowing them to struggle a bit so that they can learn.

“It would give the preceptor a little more free time because they're not constantly one-on-one with the students.” – Practice Educator 11

Does it really take more time to precept a pair of learners?

Yes. However, you might expect that taking on two learners would double the time amount of time you need to spend with them. However, most preceptors feel that taking pairs is more time efficient. They feel that it is only an incremental increase in time commitment because there are many activities that the learners can do together.

b. Excerpt from 'Innovative Teaching Model for Hospital Rotations' (Texas Tech)

Innovative Teaching Model for Hospital Rotations

P3 Hospital Pharmacy (PHAR4274) & P4 Hospital or Health-System Pharmacy (PHAR4674)

Overview:

At Texas Tech University Health Sciences Center School of Pharmacy students are introduced to the practice of pharmacy during their 1st professional year of the program. During this year, students are required to complete a minimum of 12 hours at a hospital, community, or specialty practice site.

In their 3rd year of the program they have the opportunity to take either a Community or Institutional (Hospital) selective didactic course. During this year, students are also required to complete a Basic Hospital pharmacy rotation. The rotation is 4 hours/day for 4 days/week for a total of 6 weeks (96 hours). During this rotation, students are required to gain experience in (a) drug distribution activities, (b) non-sterile compounding, (c) sterile compounding, (d) pharmacy technology, (e) controlled substances, (f) purchasing/inventory control, (g) basic pharmaceutical calculations, and (h) drug class reviews. This rotation has been structured to provide students with the basic skill set necessary to function in a hospital setting.

Finally, in the 4th year of the program, students are required to complete an Advanced Hospital or Health System pharmacy rotation. The rotation is 8 hours/day for 5 days/week for a total of 6 weeks (240 hours). During this rotation, students are required to gain experience in (a) basic fiscal/budgetary processes, (b) department managing of staff and resources, (c) development of new patient care services, (d) medical emergencies, (e) business planning related to pharmacy services, (f) quality improvement activities, (f) preparing and dispensing medications, and (g) protocol and formulary development. In addition to these activities, students must also complete a project focused on pharmacy practice management of which they must present the results/deliverable at the end of the rotation experience. Students will also be asked to perform an in-service over a drug/disease state topic deemed important to the pharmacy department staff. This rotation has been structured to build upon the basic skills students have developed during their 3n1 year hospital experience.

Innovative Strategy:

Many hospital or health-systems have the opportunity to provide simultaneous experiences to both 3rd and 4th year students. For this to be successful, significant organization and planning is required. Considering many of the activities cross-over between the 3rd and 4th year rotations this model can prove effective. When considering implementing this strategy the following key steps should be considered:

- (1) Knowledge of Course Syllabi: (See Appendix A - P3 Hospital, See Appendix B - P4 Hospital or Health-System)
- (2) Knowledge of Relationship Between 3rd & 4th year Hospital Rotations: (See Appendix C)
- (3) Utilization of Peer Assisted Learning (PAL): In this model, 4th year students are responsible for teaching 3rd year students on predetermined activities. *Examples may include technology utilization, drug reviews, and pharmacy calculations.* In addition, 3rd year students can learn from other 3rd year students and 4th year students from other 4th year students.
- (4) Utilization of a Team-Based Approach: In this model, there is a preceptor of record who is ultimately responsible for formal evaluation of each student, however, a team of other pharmacy preceptors, technicians, nurses, physicians, and other administrators would assist in delivery of

experience, providing feedback to preceptor record as necessary.

- (5) Development of Schedule of Activities: A detailed daily schedule for both P3 and P4 hospital 6 week experiences, with specific dates and responsible parties for each required activity. (*See Appendix D*)
- (6) Determination of Capacity of P3 and P4 Students: This will vary by institution. Ratios of 1 to 3 P3 students with 1 to 3 P4 students have been successfully used. The ITUHSC School of Pharmacy will work with you to determine the optimal student ratio for your practice site.
- (7) Develop Checklist for pre-rotation requirements: (*See Appendix E*)

Guidebook Content (Texas Tech)

EXAMPLE SCHEDULE:

Note: The following schedule is an example of how preceptor(s) could assign (2) 3rd Year Hospital & (2) 4th Year Hospital or Health System Students to required activities during the same pharmacy practice experience (ie. rotation). For this schedule to be effective, multiple preceptors must be involved in the overall process.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	Orientation P3 (A & B) P4 (C & D)	Packaging (A) Pyxis Stock (B) Accred/Regul (C, D)	Packaging (A) Charge/Credits (B) Budg/Purcha (C, D)	Calculations (A - D) Drug Review (A - D)	Work/Prod . (C, D)
Week 2	Sterile Products (A) Dispensing (B) Project Time (C, D)	Sterile Products (A) Dispensing (B) Pro/Form Mgt (C,D)	Dispensing (A) Sterile Products (B) Medical Emerg.(C) Investigational (D)	Dispensing (A) Sterile Products (B) Drug Reviews (A,B) Investigational (C) Medical Emerg.(D)	Busin. Plan (C, D)
Week 3	Pyxis Stock (A) Packaging (B) Dispensing (C) Sterile Comp. (0)	Charges/Credits (A) Packaging (B) Dispensing (C) Sterile Comp. (D)	Narcotics (A,B) Sterile Comp. (C) Dispensing (D)	Calculations (A -D) Drug Review (A -D) Midpoint (A, B)	Sterile Comp.(C) Dispensing (D) Midpoint (C, D)
Week 4	Decentralize #1 (A) Decentralize #2 (B) Project Time (C, D)	Decentralize #2 (A) Decentralize #1 (B) Qual. Improv (C, D)	Sterile Products (A) Dispensing (B) Pro/Form Mgl (C,D)	Sterile Products (A) Dispensing (B) Drug Reviews (A, B) Busin. Plan (C, D)	Decentralize #1 (C) Decentralize #2 (D)
Week 5	Dispensing (A) Sterile Products (B) Decentralize #2 (C) Decentralize #1 (D)	Dispensing (A) Sterile Products (B) Qual. Improv. (C,D)	Watch "Chasing Zero" Four parts series about medication errors (A - D)	Budgel/Purch (A, B) Drug Reviews (A-D) Business Plan (C,D)	Staff Develop (C,0)
Week 6	TPN Team (A) Warfarin Dosing (B) Project Time (C,D)	Warfarin Dosing (A) TPN Team (B) Staff Develop (C,D)	Technol Pres. (A,B) Accred/Reg (C,D)	Exam / Eval (A,B) In-Service (C,D)	Proj/Eval (C,D)

Legend:

P3 Students are listed as either (A) or (B).

P4 Students are listed as either (C) or (D).

NOTE: Each color represents a different preceptor for a given day. For instance in Week 3 (on Monday), it would require (4) different preceptors to deliver the schedule. One preceptor for Pyxis Stock with P3 Student (A), one preceptor for Packaging with P3 Student (B), one preceptor for Dispensing with P4 Student (C), and one preceptor for Sterile Compounding with P4 Student (D). Not all days will require (4) preceptors, it will vary from 1-4 each/day based on activities for the day. Also note, that I have included "Project Time" for P4 Students on different days that would not require direct supervision of preceptor. I have also included Calculations and Drug Reviews days where P3 and P4 students could work together and again would not require direct supervision of preceptor.

IMPT: This specific schedule of activities may not work for your specific institution however the same principles could be applied.

SAMPLE DAY 1 CHECKLIST:

- o Proof of immunization status and intern license must be provided on the first day of rotation. o Proof of completing the non-employee orientation . Website:
<http://education.covhs.org/player.html>
- o Scrub size-preceptor to fill out form so that students may have access to scrubs for IV rooms.
- o Please read the provided HIPPA handbook and sign the agreement to return to your preceptor by the 2^d day of rotation. Please return the handbook to the appropriate mailbox as indicated.
- o When your schedule indicates Surgery at CMC or Lakeside or NICU Lakeside, it is **YOUR** responsibility to contact the pharmacists at least 2 days prior to your scheduled day(s). If you are unable to contact the pharmacist, your preceptor should be notified immediately. Failure to contact the site may result in missed opportunities and grade penalties.
- o Scrubs should be worn when assigned to sterile products, or Pediatric Hospital. You must also wear your lab coat when at the Pedi hospital. Lab coats are **not** necessary when assigned to **sterile products** at CMC or Lakeside. Professional dress and lab coat should be worn at all other times.
- o TTUHSC-SOP nametags should be worn at all times while at rotation. When not assigned to sterile products, lab coats must be worn while on rotation.
- o You are required to review the USP Chapter 797 Guidelines prior to your scheduled days in sterile products. These are posted on EMS for convenient access. **NOTE: You are not allowed to wear make-up or artificial nails in the sterile products clean room.**

c. Preceptor Instructor Sheets for Models of Fieldwork (Occupational Therapy, University of Manitoba): http://umanitoba.ca/faculties/health_sciences/medrehab/ot/fwk_models.html

d. Near-Peer Learner Survey (Included with Permission from C Findlater, Sunnybrook Health Science Center's NICU Pharmacist)

Estimate the total number of teaching hours you received from a near-peer teacher in the NICU rotation__

1. Which teacher roles have the near-peer teacher served in? (check all that apply)

Information provider (lecturer, skills trainer)	
Role model (demonstrator of behaviour as a teacher, clinician, etc.)	
Facilitator (mentor, small group tutor or moderator)	
Assessor (evaluator of students or their work)	
Planner (curriculum planner, making schedules, designing education)	
Resource developer (writer of study guide, writer of texts)	

2. Which roles do you consider suitable for a near-peer?

	Not		Neutral		Very
Information provider					
Role model					
Facilitator					
Assessor					
Planner					
Resource developer					

3. What is your opinion about the following statements?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
In general, near-peers who taught me performed well in their teacher roles					
In general, I believe near-peers can serve as effective teachers					

4. Think of the last experience you had with a near-peer as a teacher. Whose teaching would you have learned more from: this near-peer teacher or a regular teacher (considering this type of teaching or class)?

Regular teacher	1	2	3	4	5	Near-peer teacher

5. Please list what you consider strengths and weaknesses of students as near-peer teachers.

Strengths	Weaknesses

e. Near-Peer Learner Survey (Included with Permission from C Findlater, Sunnybrook Health Science Center’s NICU Pharmacist)

1. In which types of teaching did you participate? (please check all that apply)

Tutorials (small group teaching)	
----------------------------------	--

Preceptor for history taking skills		
Preceptor for physical examination		
Lab classes/practicals		
Lecturer of large classes		
Other, please specify		

2. Estimate the total number of hours you have actually taught fellow students:

3. Estimate the total number of hours you have invested in preparing for this teaching:

4. Which teacher roles have you executed as a near-peer teacher (NPT)? (please check all that apply)

Information provider (lecturer, skills trainer)	
Role model (demonstrator of behaviour as a teacher, clinician, etc.)	
Facilitator (mentor, small group tutor or moderator)	
Assessor (evaluator of students or their work)	
Planner (curriculum planner, design education, etc.)	
Resource develop (writer of study guide, texts, etc.)	

5. Which roles do you consider suitable for NPT?

	Not		Neutral		Very
Information provider					
Role model					
Facilitator					
Assessor					
Planner					
Resource developer					

6. Please state your opinion about the following:

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I felt comfortable in my role as a teacher.					
I believe that students benefited from my teaching.					
I learned a lot about techniques of teaching.					
I learned a lot about the subject matter while teaching.					
If I had the same chance, I'd choose to be					

a NPT again.					
Every pharmacy student should learn how to teach.					

7. Please list what you consider strengths and weaknesses of students as near-peer teachers.

Strengths	Weaknesses

8. Please state what type of preparation and guidance you think a near peer teacher should have, to enhance their performance in these teacher roles, and to yield maximum benefit for the students who receive this teaching.

f. UHN’s Student Survey for PAL participants (with permission from author)

Pharmacy Experiential Education Peer to Peer Learning Feedback Form

Please help us evaluate the peer to peer model by rating the following statements. Your feedback will enable us to gain insight into the usefulness of the peer to peer model to those involved, and how its implementation could be improved for next year.

Comments are not mandatory but are encouraged. Please make an effort to comment if you disagree or strongly disagree with any of the following statements:

1 = strongly disagree 2 = disagree 3 = neutral 4 = agree 5 = strongly agree

	1	2	3	4	5	Comments
General						
My learning was enhanced through peer to peer teaching						

The peer to peer model improved my confidence when discussing topics and/or presenting material to others, including my preceptor						
I felt more comfortable asking my preceptor a question than my peer(s)						
My time management skills improved as a result of this rotation						
My skills for giving constructive feedback improved as a result of this rotation						
I felt apprehensive when providing feedback in the presence of my peer(s) and preceptor.						
The feedback I received from my peer(s) was more helpful than feedback I received from my preceptor.						
The presence of another student(s) within the peer to peer model affected my preceptor's evaluation of me (i.e. my evaluation would have been different without the peer to peer model)						
When I worked with other student(s), I felt it was more competitive than collaborative						
The peer to peer model met my learning objectives						
I was incorporated as a member of the service						

	1	2	3	4	5	Comments
Clinical responsibilities were clearly defined by the preceptor						
I felt that I was given progressive responsibility for patient care over the course of the rotation? (Please comment with regards to completing aspects of the pharmacotherapeutic work up such as BPMH, assessment, care-plan and monitoring). If so, how?						
If I had the same choice, I would enroll in a peer to peer model again						
Activity Specific						
The topic discussions were useful						
I felt comfortable with my peer(s) and preceptor being present during the topic discussion						
I would have preferred if the topic discussions were 1:1 with my preceptor						
I felt comfortable with my peer(s) and preceptor being present during daily review of patient cases						
I would have preferred if the patient reviews were 1:1 with my preceptor						
Comments						
What are some of the strengths of the peer to peer model within this rotation? What activities did you like?						
What are some areas for improvement in the peer to peer model within this rotation? What activities did you dislike? (Please list at least one area for improvement)						

Would you recommend this site to other students? (Please explain).

Any other comments?

III. Priority #3 Appendices

A. Interview Guide

Research Questions	Associated Interview Items
1. What preceptor development approaches are being used across ExEd in Canada and abroad (specifically Australia, NZ, UK, US? (Rx and non-Rx, content, medium)	<ol style="list-style-type: none"> 1. What is the current philosophy to preceptor development in your program? 2. What media are you using and content are you including? 3. How did you decide on this approach? 4. Are you aware of other approaches or philosophies to preceptor development within Canadian Ex Ed? 5. What about outside of Canada and outside of Pharmacy? 6. Could you share your preceptor development materials with me?
2. Determine best practices for ensuring well-prepared, engaged, effective ExEd preceptors (content, medium, session duration, format, financial sustainability, administrative, progression).	<ol style="list-style-type: none"> 1. Have you examined evidence to determine best practice for ensuring well-prepared, effective ExEd preceptors in terms of content, medium, session duration, format, financial sustainability, administrative support or progression? 2. Can you provide me with your evidence or synthesis of the evidence? 3. Are there experts that I should interview on this topic?
3. Feasibility: Describe what is necessary to achieve best practice on this priority (time, expertise, funding, responsibility)	<ol style="list-style-type: none"> 1. Will you achieve these best practices? 2. Why or why not? Feasibility? 3. Would this be achievable nationally? 4. What interest level do you/your Faculty have in contributing to a national preceptor development program?
4. Describe the benefits and risks of national standardisation of preceptor development.	<ol style="list-style-type: none"> 1. Are there benefits to a national preceptor development program? 2. Are there potential detriments to taking a national approach? 3. What would your laundry list look like for a national approach in terms of development expertise, implementation and evaluation?
5. What indicators (immediate vs. long-term, preceptor, organizational, student sources) will show this new approach to be successful?	<ol style="list-style-type: none"> 1. What immediate (short-term) quality indicators should be measured regarding success of the educational program? 2. What would be a benchmark to assess the findings as being positive? (Or not indicate a change is necessary?) 3. What long-term quality indicators should e measured regarding success of the educational/training program? (Preceptor, organisational, student sources) 4. What would be a benchmark to assess these findings as being positive (or not indicate a change is necessary?)

B. Literature Searching Strategy and Results

Goals

The general project goal of literature searching is to systematically identify and acquire available literature addressing each working priority.

The objective of this report is to:

1. determine the facilitators and barriers to successfully implementing a national preceptor development program (PDP)
2. provide evidence-based guidance for the design and implementation of a high-quality, cutting-edge PDP

Algorithm

19. Define the specific research question with each working priority.
20. Identify and develop search terms to use
21. Determine databases that might contain relevant literature
22. Refine search terms and strategies based on information found
23. Supplement the search with key journals thought to be important (dependent on particular priority)
 - a. **American Journal of Pharmaceutical Education**
 - b. **Currents in Pharmacy Teaching and Learning**
 - c. **Pharmacy Education**
 - d. Medical education

- e. Advances in health sciences education
 - f. Teaching and learning in medicine
 - g. Medical education quartet
 - h. Higher education academy
 - i. Medical teacher
24. Supplement search with articles provided by interviewees
 25. Review Abstracts for relevancy
 26. Complete ancestry searches for useful citations
 27. Complete summaries for relevant citations
 28. Summarize and key findings from evidence

Databases for Priority #3

CINAHL, Scopus, Medline, ERIC, EMBASE, IPA

Suggested Terms and Combined Searches for Priority #3

Preceptor Development

OR

Preceptor Training

OR

Preceptor Education

Exclusion criteria

Non-English articles

Older than 10 years

Database	Search Terms	Limitations	Citations Identified (#)	Relevant Citations (#)
CINAHL	Preceptorship administration OR Preceptorship education AND student AND supervision AND education	2006- current English Language	148	46
Scopus	Preceptor development OR Preceptorship OR Preceptor training AND Education	2006-2015	176	10
Medline	1 st search: Education, Medical exp & mp AND Faculty, medical exp [standards] AND Teaching exp 2 nd search: Education, Professional exp & mp AND Faculty exp [standards] AND Teaching exp	English language 2006- current	108 193	13 16
ERIC	Development OR Program Development OR Career Development OR Professional Development AND Clinical teaching (health professions) Preceptor* AND Training OR Training Methods OR Professional Development	English language 2006- current	29 26	None
Embase	1 st search Development AND Preceptor* AND Professional development AND Program Development 2 nd search Health education AND Preceptor	English & 2005- current	147 91	17
IPA	Preceptor OR Teacher OR Educator OR Supervisor AND Education program OR Training program OR Development program	English language 2006- Current	19	4
Hand/Anc estral searching			16	15 (1 proceeding not available)
Interview referrals			77	50
	Total:		1030	170

C. Structured Literature Extraction Guide

What was the focus? • Content • Medium • Organisation • Administration	Citation: First author last name, Initial; Title; Journal; year: page	Research Goals and Objectives (Purpose)	Protocol or method used to determine value (narrative vs. intervention and control groups)	Setting/ Perspective	Population	Results	Conclusion, Implication to this Priority AND Judgment on quality P/F/G/E

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IV. Priority #4 Appendices

A. Literature Searching Strategy and Results

Goals

The general project goal of literature searching is to systematically identify and acquire available literature addressing each working priority.

The goal of the literature search is to systematically identify and acquire available literature addressing each working priority. Priority #4 is: **Description and promotion of the value students add to host organisations and their mandate**

- | |
|---|
| 1. Describe the evidence (published and project-identified) indicating students provide value to organisations and those they serve. Consider organisational type: community/clinic/institutions and Setting: urban/rural and Dimensions: health outcomes/economic/professional/psychological. SEARCH A |
| 2. What evidence is there to suggest that students are a source of risk or detract from the mandate of host organisations? How can these detractors be eliminated or minimized? SEARCH B |
| 3. What quality outcome measures could be used to establish, track and quantify benefits of hosting students? |

Algorithm

29. Define the specific research question with each working priority.
30. Identify and develop search terms to use
31. Determine databases that might contain relevant literature
32. Refine search terms and strategies based on information found
33. Supplement the search with key journals thought to be important (dependent on particular priority)
 - a. American Journal of Pharmaceutical Education
 - b. Currents in Pharmacy Teaching and Learning
 - c. Pharmacy Education
 - d. Medical education
 - e. Advances in health sciences education
 - f. Teaching and learning in medicine
 - g. Medical education quartet
 - h. Higher education academy
 - i. Medical teacher
34. Supplement search with articles provided by interviewees
35. Review Abstracts for relevancy
36. Complete ancestry searches for useful citations
37. Complete summaries for relevant citations
38. Identify key findings from evidence

Databases for Priority #4

SEARCH A: CINAHL, Scopus, Medline, ERIC, EMBASE, IPA

SEARCH B: Medline, IPA

Search Terms and Combined Searches for Priority #4

SEARCH A:

Value/Benefit

Student

Experiential/Clinical/Field Placement/Rotation/Practic*/field experience/clinical rotation

SEARCH B:

Risk/Liability/Negative

Student

Experiential/Clinical/Field Placement/Rotation/Practic*/field experience/clinical rotation

Exclusion criteria

Non-English articles

Older than 10 years

SEARCH A:

Database	Search Terms	Limitations	Citations Identified (#)	Relevant Citations (#)
CINAHL	<p>student* AND (experiential) AND (benefit OR value) NOT (clinical competence)</p> <p>http://myaccess.library.utoronto.ca/login?url=http://search.ebscohost.com/myaccess.library.utoronto.ca/login.aspx?direct=true&db=cin20&bquery=student*+AND+(experiential)+AND+(benefit+OR+value)+NOT+(clinical+competence)&cli0=DT1&clv0=200501-201512&type=1&site=ehost-live</p> <p>student* AND (placement OR experiential OR clerkship OR preceptorship) AND (cost benefit analysis OR patient satisfaction or job satisfaction OR Outcomes (Health Care))</p> <p>http://myaccess.library.utoronto.ca/login?url=http://search.ebscohost.com/myaccess.library.utoronto.ca/login.aspx?direct=true&db=cin20&bquery=%26quot%3bstudent%26quot%3b+AND+(%26quot%3bexperiential%26quot%3b+OR+%26quot%3bplacement%26quot%3b+OR+%26quot%3bclerkship%26quot%3b+OR+%26quot%3bpreceptorship%26quot%3b)+AND+(%26quot%3bcost+benefit+analysis%26quot%3b)+OR+(%26quot%3bpatient+satisfaction%26quot%3b)+OR+(%26quot%3bOutcomes+(Health+Care)%26quot%3b)+OR+(%26quot%3bjob+satisfaction%26quot%3b))&cli0=DT1&clv0=200501-201412&type=1&site=ehost-live</p>	2005-2015	94 68	5
Scopus	<p>pharmacy student AND (placement OR experiential OR clerkship OR preceptorship) AND (cost benefit analysis OR patient satisfaction OR job satisfaction OR outcome) AND (LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012) OR LIMIT-TO (PUBYEAR , 2011) OR LIMIT-TO (PUBYEAR , 2010) OR LIMIT-TO (PUBYEAR , 2009) OR LIMIT-TO (PUBYEAR , 2008) OR LIMIT-TO (PUBYEAR , 2007) OR LIMIT-TO (PUBYEAR , 2006) OR LIMIT-TO (PUBYEAR , 2005))</p>		62	6
Medline	<p>#1: Focus on health outcomes associated with pharmacy students (benefits of having other HCP students will not be applicable) MeSH terms: Students, pharmacy AND MeSH terms: Cost savings/cost-benefit analysis/health care costs/costs and cost analysis/patient satisfaction</p>	2005-2015 English Language	34	18
ERIC	<p>Search 1: student* AND (rotation OR placement) AND (Cost benefit analysis OR cost saving OR health care cost)</p> <p>Search 2: student* AND (rotation OR placement) AND (job satisfaction</p>	1995-2015 Scholarly journals Higher education	61 78	0 0

	OR patient satisfaction OR preceptor satisfaction)	Post secondary education		
Embase	Search 1: Student AND Rotation/placement/experiential AND Cost benefit analysis/cost saving/health care cost Search 2: Student AND Rotation/placement/experiential AND job satisfaction/patient satisfaction/preceptor satisfaction		58 96	3
IPA	Student AND Rotation/placement/experiential AND Benefit/Value/health outcomes		70	7
Hand-searching/ Ancestral searching			14	14
Referrals from Interviews			0	0
	Total:		635	53

Search B:

Database	Search Terms	Limitations	Citations Identified (#)	Relevant Citations (#)
Medline	Barriers mp/ risk management/ liability mp/ detriment* mp AND Preceptorship/ experiential education mp/ Internship and Residency/ clinical placement mp AND Students, health occupations	2005-2015 English Language	87	8
IPA	Barriers mp/ risk management mp/ liability mp/ detriment* mp AND Precept*/ experiential education mp/ Internship mp/ residency mp/ clinical placement mp AND Student		41	1 (conference abstract unavailable)
Hand-searching/ Ancestral searching			3	3
Referrals from Interviews			0	0
	Total:		131	11 (1 not reviewed)
	GRAND TOTAL		766	64

B. Interview Guide

Research Questions	Associated Interview Items
<p>1. Describe the evidence (published and project-identified) indicating students provide value to organisations and those they serve. Consider organisational type: community/clinic/institutions and Setting: urban/rural and Dimensions: health outcomes/economic/professional/psychological.</p>	<p>1. What evidence are you aware of in the literature that indicates students provide value to organisations and those they serve? Could you share these citations? 2. What evidence are you aware of (anecdotally or experientially from your work) that students provide value to organisations and those they serve? Could you refer us to any sources of this evidence? 2. What dimensions have been considered (health outcomes, economic, professional-psychological) 3. Do benefits differ between organisational type (community/clinic/institution/non-clinical)? 4. Do benefits differ between rural and urban settings?</p>
<p>2. Are there other potential benefits not described in the literature or by stakeholders?</p>	<p>1. Can you think of any other POTENTIAL benefits not described by the literature or stakeholders?-Unconscious or inexplicit.</p>
<p>3. What evidence is there to suggest that students are a source of risk or detract from the mandate of host organisations? How can these detractors be eliminated or minimized?</p>	<p>1. Are you aware of any evidence suggesting students may be a source of risk or detract from the mandate of host organisations? 2. What strategies are you using/could be used to eliminate or minimise these risks?</p>
<p>4. What quality outcome measures could be used to establish, track and quantify benefits of hosting students?</p>	<p>1. What quality outcome measures would you suggest be used to establish, track and quantify the benefits of hosting students. Note: probably only 2-3 indicators would be used annually with maybe 1 changing each year. 2. Do you think it worthwhile to track detractors to hosting students?</p>
<p>5. Describe a comprehensive plan for promoting quality outcome measure results of students adding value to organisations/organisational mandates.</p>	<p>1. What would be the benefit to ExEd in this quality assurance exercise? 2. How could the results be used? 3. Is there a place for a concerted national effort to establish these quality indicators? 4. If a national plan was to be developed to implement this quality initiative, what criteria are important for its success? (Consider HR staffing, \$, collaboration, time, interest level) 5. Would your Faculty be interested in collaborating on this type of initiative?</p>

C. Structured Literature Extraction Guide

Citation: First author last name, Initial; Title; Journal; year	Research Goals and Objectives (Purpose)	Protocol or method used to determine value (narrative vs. intervention and control groups)	Setting/ Perspective of the benefit/ value Community (clinic vs. retail) / Inst	Population	Results	Conclusion & Implication to this Priority & Judgment (P/FG/E)

D. Relevant Citations

Database Searches

Search A (Benefit of student rotations):

1. Benson J. Incorporating pharmacy student activities into an antimicrobial stewardship program in a long-term acute care hospital. *Am J Health-Syst Pharm*. 2014; 71: 227-230.
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Search B (Detractors to student rotations):

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E. Grey Literature

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7. PRA Statements of Supervision
 - o BC: http://library.bcpharmacists.org/D-Legislation_Standards/D-2_Provincial_Legislation/5008-Bylaws_of_CPBC.pdf
 - o AB: <https://pharmacists.ab.ca/provincial-legislation>
 - o SK
 - o MB: <http://mpha.in1touch.org/uploaded/web/Legislation/PD%20Supervision%20FINAL%202014%2006%2023.pdf>
 - o ON: <http://www.ocpinfo.com/practice-education/practice-tools/fact-sheets/supervision/>
 - o PQ
 - o NB
 - o NS:
 - o PEI
 - o NL: <http://www.assembly.nl.ca/Legislation/sr/statutes/p12-2.htm#16> Registration of a student confers upon the student the right to perform tasks within the scope of practice of a pharmacist, but only under the direct supervision of a pharmacist.

8. ExEd Programs Statements of Supervision

- BC
- AB:
- SK
- MB:
- ON
- PQ
- NB
- NS: <http://www.dal.ca/faculty/healthprofessions/pharmacy/programs/related-resources.html> (see page nine of 4080 manual)
- PEI
- NL

F. Schematic for Quality Measurement of Students on Rotation



V. Priority #5 Appendices

A. Interview Guide

Research Questions	Associated Interview Items
1. What work is being done on recruitment and retention of ExEd preceptors across the country? (Rx and non-Rx)	1. What recruitment strategies are you currently employing? 2. What retention strategies are you currently employing? 3. Have you knowledge of particularly good approaches to recruitment and retention are you aware of either in other Rx or non-Rx faculties?
2. Can Faculties quantify how much of an issue this is?	1. Do you know how much of an issue retention is for your program? 2. Would you place your emphasis on recruitment or retention?
3. Describe the best approach for maintaining existing preceptors in the academy.	1. Do you have a vision for how a program might best retain existing preceptors? 2. What is this based on? (literature-if so, share or personal knowledge or expertise?)
4. Identify the most effective and discerning initiatives for recruiting new preceptors.	1. Do you have a vision for the best practice in recruiting new preceptors (consider effective and discerning approaches)? 2. What is this vision based on? (literature-if so share or personal knowledge or expertise)
5. Identify barriers and facilitators to achieving these initiatives.	1. Do you have some sense of what it would take to achieve best practice in recruitment and retention? Facilitators-i.e. interest, commitment, time, HR, \$,national collaboration Barriers-\$, interest 2. Do you have a sense that your Faculty would be interested in committing to a national approach on recruitment and retention? 3. What would a reasonable implementation goal be?
6. What indicators will show these initiatives to be successful?	1. If a national effort were mounted, what outcome indicators would you expect to show a net benefit?

B. Literature Searching Strategy and Results

Goal

The goal of the literature search is to systematically identify and acquire available literature addressing each working priority.

Priority #5 research questions Include (green indicates those pertinent to the literature search):

1. What work is being done on recruitment and retention of ExEd preceptors across the country? (Rx and non-Rx)
2. Can Faculties quantify how much of an issue this is?
3. Describe the best approach for maintaining existing preceptors in the academy.
4. Identify the most effective and discerning initiatives for recruiting new preceptors.
5. Identify barriers and facilitators to achieving these initiatives.
6. What indicators will show these initiatives to be successful?

Algorithm

39. Define the specific research question with each working priority.
40. Identify and develop search terms
41. Determine databases that might contain relevant literature
42. Refine search terms and strategies based on information found
43. Supplement the search with key journals thought to be important (dependent on particular priority)
 - a. **American Journal of Pharmaceutical Education**
 - b. **Currents in Pharmacy Teaching and Learning**
 - c. **Pharmacy Education**
 - d. Medical education
 - e. Advances in health sciences education
 - f. Teaching and learning in medicine
 - g. Medical education quartet
 - h. Higher education academy
 - i. Medical teacher
44. Supplement search with articles provided by interviewees
45. Review Abstracts for relevancy
46. Complete ancestry searches for useful citations
47. Complete summaries and appraisals for relevant citations
48. Identify key findings from evidence

Databases for Priority #5

CINAHL, Scopus, Medline, ERIC, EMBASE, IPA, Proquest (HR), EBSCOhost (HR)

Suggested Terms and Combined Searches for Priority #5

SEARCH #1:

Recruitment AND Preceptors/Clinical Supervisors

SEARCH #2:

Retention AND Preceptors/Clinical Supervisors

Inclusion criteria

English articles

Human

Database	Search Terms	Limitations	Citations Identified	Relevant Citations (# duplicates)
CINAHL	SEARCH #1 and #2 combined: Personnel Recruitment / Personnel Retention / Recruitment/Retention AND Preceptor	2005-2015	47	7 (-4)=3 but 1 NA =2
Scopus	SEARCH #1: Recruitment AND Preceptors/Clinical Supervisors	2005-2015	80	17 (-13)=4
	SEARCH #2: Retention AND Preceptors/Clinical Supervisors		113	22 (-20)=2 but 1 NA=1
Medline	SEARCH #1: Recruitment AND Precept*/Clinical Supervisors	2005-2015	107	14
	SEARCH #2: Retention/Satisfaction AND Precept*/Clinical Supervisors		129	22 (-8)=13
ERIC	SEARCH #1: Recruitment AND Preceptors/Clinical Supervisors	2005-2015	0	0
	SEARCH #2: Retention AND Preceptors/Clinical Supervisors		0	0
Embase	SEARCH #1: Recruitment AND Precept*/Clinical Supervisors	2005-2015	77	17 (-16)=1
	SEARCH #2: Retention AND Precept*/Clinical Supervisors		100	20 (-18)=2
IPA	SEARCH #1: Recruitment AND Precept*/Clinical Supervisors	2005-2015	17	4 (-3)=1
	SEARCH #2: Retention AND Preceptors/Clinical Supervisors		5	1
Hand- searching/An cestral searching			24	24
Referrals from Interviews			1	1
Total:			700	65

C. Structured Literature Extraction Guide

Citation: First author last name, Initial; Title; Journal; year	What was the focus? Recruitment Promotion/ screening/ enrolment Retention Appreciation/ development/ support/ remuneration	Research Goals and Objectives (Purpose) vs. Description vs. Review/ Op Ed	Protocol or method used to determine value (narrative vs. intervention and control groups)	Setting/ Perspective	Population	Results	Conclusion, Implication to this Priority AND Judgment on quality High/Med/Low

D. Relevant Citations

1. Ackman Developing Preceptors Through Virtual Communities and Networks CJHP 2011
2. Anthony Do We pay our community preceptors Family Med 2014
3. Astle Identification of desirable pharmacy preceptor charac behav Duquesne Dissertation 2012
4. Biggs L. 2012. Recognition and Support for Todays Preceptor
5. Billings Devel Career as Nurs Ed Importance of J Cont Ed Nurs 2008
6. Bloom M. 2005. Teaching Geriatrics to student
7. Boucher Comprehensive Approach Faculty Development AJPE 2006
8. Bowen Preceptorship making a difference JNSD 2012
9. Brackett Barriers to expand APPE AJPE 2009
10. Brunt Impact of Learning Styles JNSD 2007
11. Danielson Capacity ratio as measure of solvency AJPE 2011
12. Dewolfe Preceptors perspectives on recruitment support and retention J Nurs Ed 2010
13. Dillon Logic model for preceptor recognition program JNSD 2012
14. Dunham What goes around comes around J Prof Nurs 2008
15. Fitzgerald Precepting a student job description Home Health 2007
16. Foley Generational clash in Nurs Preceptorship J Nurs Ed 2012
17. Fuller Value of pharmacy residency tr AJHP 2012
18. Glavaz PA Directors; Attitude, Pract, Plan re financial comp J Physician Assist Ed 2014
19. Gonzalez To teach or not to teach J phys assist ed 2013
20. Gonzalvo Redesign of a statewide teaching cert AJPE 2013
21. Goss Systematic Review building preceptor support J Nurs Prof Dev 2015
22. Haggerty Entry to nurs practice preceptor ed can we do it better? Nurs Prax in NZ 2012
23. Hall ExEdTraining for Pharm Students- time for new approach CJHP 2012
24. Hammer Recognition Teaching Excellence AJPE 2010
25. Hanson Perspectives of Fieldwork Educators Occ Ther 2011
26. Harris Report re- Addressing Teaching excellence of volunteer pharmacy preceptors AJPE 2012
27. Hautala Nurses Perceptions of Stress and support in preceptor role J Nurs Staff Dev 2007
28. Havrda AACP White Paper Guidelines for Resident Teaching Experiences Pharmaco 2013
29. Hudak Tales from the trenches J Phys Ass 2014
30. Hudson Engaging rural preceptors in new comm clerkship BMC fam pract 2011
31. Hudson Med students on rural placements- financial cost Rural and remote health2012
32. Johansen Preceptor Recruitment, Training and Retention- A nation-wid survey of colleges of pharmacy (dissertation) 2013
33. Kalis Faculty awawrds at US colleges of pharmacy AJPE 2008
34. Kemper Win-Win strategies to help relieve preceptor burden Nurs management 2007
35. Kowalski Evaluation of a model to teach nursing students J cont ed nurs
36. Latessa R et al. 2007. Satisfaction Movitvation Community Preceptor Acad Med
37. Lee Preceptor Program effect on turnover J clin Nurs 2008
38. May Survey to Assess family MD's motivation to teach PLoS One 2012
39. McGuinness Live register of mentors and practice teachers Nurs Management 2013
40. Moran Investigation of preceptors perceptions of Rewards Supports and commitment Loyola Dissertation 200
41. Morgeson Science of Talent Selection Health Manag Tech 2010
42. Omanksy G. Staff Nurses expierencies as preceptors J Nurs Man 2010
43. Pasek ROI of Residency Program AJHP 2010
44. Patterson Systematic review HRM Health Tech Ass 2010

45. Payakachat Job and Career Satisfaction among pharmacy preceptors AJPE 2011
46. Peters How important is money Acad Med 2009
47. Piascik Rewarding excellence in pharmacy teaching Curr Pharm Teach & Learn 2011
48. Reamy Who will be the faculty of future Med Teach 2012
49. Rebholtz Discovering Preceptor Persp Essential Development education for the role of nurse preceptor Dissertation 2013
50. Ryan Benefits and Barriers among volunteer preceptors Med Ed 2013
51. Ryan-Nicholls Preceptor Recruitment and Retention Can Nurs 2004
52. Scott I. Why Community physicians teach students Met Teach 2006
53. Shinnors J. Preceptor Skills and Characteristics J Cont Ed Nurs 2015
54. Skrabal US Preceptor National Survey AJPE 2008
55. Smedts Supervisors and Non-supervisors Rural and Remote Health 2013
56. Smith Relationships between colleges and med AJHP 2008
57. Springer Idaho DEU Nurs Ed 2012
58. Stone Remote library access for preceptor AJPE 2010
59. Thomson What motivates GPs to teach Clin Teach 2014
60. Wilson Supporting and retaining preceptors in NNP program J perinatal nurs 2009
61. Young Factors associated with students' perspectives of excellence AJPE 2014 (1)
62. Younge Time to truly acknowledge what nursing preceptors do for students JNSD 2009
63. Zilembo Conceptual Framework Preceptorship Undergrad Nurs Contemp Nurs 2008
64. Zilembo Nurs student perception of desirable leathership qualities Contem Nurs 2008
65. Zimmerman PreceptorsValuingOurPartners Consor Nurs ed 2010

E. Grey Literature

1. Statement of Preceptor Requirements from ExEd Programs

a) University of Toronto - Leslie Dan Faculty of Pharmacy Advanced Pharmacy Practice Experience Preceptor Guidelines

In order to serve as a preceptor for advanced pharmacy practice experiences, the applicant must:

1. Possess a Pharmacy degree or other advanced degree. Applicants will be considered based upon practice and experience.
2. Have a minimum of two years of experience in their profession. Pharmacists who have completed post-graduate training require only one year of experience.
3. Maintain the appropriate licensure to practice.
4. Be in good standing with the applicable professional board.
5. Be willing to participate in Leslie Dan Faculty of Pharmacy Preceptor Development workshops.
6. Provide adequate time to regularly meet with the student. Contact time should be a minimum of 1-2 hours at least three times per week and may include a variety of clinical and non-clinical activities.
7. Show a commitment to professional development and life-long learning.

Individuals who would like to serve as an Advanced Pharmacy Practice Experience preceptor may complete an application form available at <http://www.pharmacy.utoronto.ca/oe/preceptors>.

b.) Université de Montreal

Quelles sont les exigences?

Pour devenir clinicien associé, le pharmacien doit satisfaire aux conditions suivantes:

- Être inscrit au tableau de l'ordre professionnel de sa province, n'avoir aucune restriction à son permis d'exercice, avoir un dossier exempt de toute condamnation disciplinaire depuis au moins trois ans et n'avoir fait l'objet d'aucune recommandation défavorable du comité d'inspection professionnelle de l'ordre professionnel de la province à l'égard de la supervision d'étudiant;
- Détenir une expérience de travail avec permis d'exercice (à titre de pharmacien) pratiquant auprès des patients depuis au moins un an et une expérience d'au moins quatre mois dans son milieu comme pharmacien;
- Avoir accumulé une moyenne de 10 unités de formation continue par année officiellement répertoriées par l'ordre professionnel de sa province;
- Réussir une formation de base visant à permettre un bon encadrement des étudiants. Cette formation est offerte gratuitement et est constituée des cours suivants (ou de leurs équivalents) : PHM 6420W – Processus de soins pharmaceutiques, PHM 6602W – Communication et PHM 6604W – Encadrement des étudiants en pharmacie (cours offert à distance, qui devrait être reconnu à l'intérieur du programme passerelle pour le Pharm. D., sous réserve que le candidat satisfasse aux conditions d'admissibilité du programme).

Toute personne qui ne répond pas aux conditions précédentes et qui désire devenir clinicien associé peut soumettre une demande écrite d'équivalences au responsable facultaire.

Le clinicien associé s'engage à adhérer aux modalités d'encadrement qui lui ont été transmises. Le milieu de pratique du clinicien associé doit également s'engager à respecter les modalités établies par la Faculté quant à l'encadrement des étudiants. Le titre de clinicien associé est octroyé pour une période de quatre ans.

c.) University of Alberta

<http://pharm.ualberta.ca/-/media/pharm/preceptors/documents/preceptor-site-requirements-updated-dec2015-final-1.pdf>

2. Statements of PRA's Requirements for Preceptors

a.) Newfoundland and Labrador Pharmacy Board

http://www.nlpb.ca/media/Interpretation_Guide-Preceptor_Criteria-Dec2014.pdf

<http://www.nlpb.ca/media/Application-Authorization-Preceptor-May2015.pdf>

b.) New Brunswick College of Pharmacists

<http://www.nbpharmacists.ca/site/pharmacist-student>

c.) Nova Scotia College of Pharmacists

<http://www.nspharmacists.ca/wp-content/uploads/2015/07/Preceptor-and-Site-Approval-Form-Sites-in-NS.pdf>

d.) Prince Edward Island College of Pharmacists

<http://www.pepharmacists.ca/site/licensing?nav=04>

e.) Quebec

f.) Ontario College of Pharmacists

<http://www.ocpinfo.com/registration/res-polices/spt-preceptor-criteria/#>

<http://practiceeducation.org/docs/Preceptor/Preceptor%20Criteria.pdf>

g.) College of Pharmacists of Manitoba

Links:

<http://mpha.in1touch.org/site/preceptors?nav=registration>

3. Statements of PRA's Permitting non-Pharmacist Preceptors (courtesy M Priddle Registrar, NLPB)

	What provinces allow non-pharmacists to precept pharmacy students?	Are you aware of which provinces insist on a 1:1 student: preceptor ratios while on rotation?
Ont	In Ontario we allow other regulated health professionals to precept pharmacy students in a non-pharmacy practice site provided the preceptor has been approved by the faculty at the University the student attends. There is however a requirement/restriction that states a pharmacist must supervise the activity of dispensing, compounding or selling a drug.	OCP does have a ratio requirement of 1:1 student: preceptor. There is a provision to allow for exceptions to the rule however, if approved by a panel of the Registration Committee.
SK	We don't in our internship requirement bylaws, but it is possible under the College of Pharmacy and Nutrition's Structured Practice Experiences program where pharmacy students are supervised by non-pharmacists in a specialty site rotation (i.e. government).	Not here
NL	Yes – as approved by the MUN School of Pharmacy/NLPB Joint Committee on Structured Practice Experience (JCSPE).	Yes – as approved by the MUN School of Pharmacy/NLPB Joint Committee on Structured Practice Experience (JCSPE)
PEI	PEI does not permit non-pharmacists to precept pharmacy students and	Regulations limit the number of students that can be under the supervision of a preceptor to one.
AL	We allow pharmacy students to gain experience in medical clinics during their practicum; under the supervision of a physician.	Currently we do not have a ratio for supervision; however, as a result of a recent incident, one is being considered.
NB	We do not allow non-members to act as preceptors. A pharmacy technician could, however, act as a preceptor to a pharmacist student, at least for part of the time service—we also allow students to have 2 preceptors.	We do not specify a ratio.
BC	I'm not aware of any such restrictions in BC. This would be up to the University though.	
NS	Non-pharmacists cannot be preceptors for pharmacy students	We have no formal 1:1 student/preceptor restriction however we do encourage it if possible.

4. University of British Columbia- AGILE Poster Presentations



Institutional Pharmacists' Perspectives on Precepting: A Comprehensive Province-Wide Study



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Background

- The goal of the Faculty of Pharmaceutical Sciences' AGILE project is to identify new approaches to institutional experiential pharmacy education in BC that will address rotation capacity concerns and associated challenges
- The project was designed to characterize the perspectives of pharmacists from each of BC's 5 health authorities
- These perspectives will help the project team address perceived barriers and incorporate viable solutions into the final project recommendations

Objectives

- To characterize perceived barriers and benefits related to precepting pharmacy learners (students, residents) on health authority placements
- To identify the solutions and supports most favoured by pharmacists
- To characterize pharmacists' views pertaining to non-traditional learning models and precepting strategies
- To identify any other approaches to enhance health authority based pharmacy experiential education

Methods

Design:

- A comprehensive, multi-stakeholder engagement project using a mixed-methods research approach was employed

Qualitative methods:

- Based on "grounded theory"
- Used to ensure that the stakeholder feedback itself generated the hypotheses (rather than approaching the project with pre-existing hypotheses to prove or disprove)
- Site visits, one-on-one interviews, and focus groups were conducted across the province by the project lead
- Session field notes and transcripts of audio recordings constituted the raw dataset and were analyzed using iterative coding to identify major themes

Online survey:

- Used a combination of Likert, ranking, multiple-answer, and open-field responses
- Deployed to all health authority pharmacists within BC
- A project website was created to provide pharmacists with information and resources related to the project

Inclusion Criteria:

- Pharmacists employed in a BC health authority institution

Exclusion Criteria:

- Pharmacists who declined to participate

Acknowledgements and Affiliations

- The authors would like to acknowledge the support received through the UBC Teaching and Learning Enhancement Fund
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Qualitative Analysis Results

Top Preceptor Challenges

- Existing workload, unpaid work, and lack of time to teach (mentioned 46 times)
- Understaffing issues interfering with precepting (40)
- Unprepared and/or unmotivated students (30)
- Lack of space for teaching and learning (28)
- Students do not have basic ready-to-practice clinical skills (21)

Table 1. Top Preceptor Recommendations

Category	Recommendation
Student Preparation	Additional rotations earlier in the program to increase exposure and/or prior exposure to direct patient care (39)
	Orientation to site procedures and/or resources (31)
	Earlier instruction on how to access and interpret charts and hospital computer systems (25)
Models	Basic ready-to-practice clinical skills (20)
	Students should provide "labour" to relieve workload from preceptors (22)
Preceptor Workload and Teaching Support	Tiered model of learning (18)
	Experiential Education Facilitator (EEF) to reduce workload by assisting with administrative burden added by learners and/or by backfilling (59)*
Expectations	EEF to guide initial on-site exposure and/or first patient reports (21)
	Expectations of students' roles and performance should be clearly stated and should be tailored to individual rotation types (22)
Faculty-Preceptor Relationship	Greater support and more substantial relationship with Faculty needed (25)*
	Preceptors should earn conference, CE time and/or money for teaching (24)
Preceptor Incentives, Rewards and Education	Faculty-sponsored online preceptor resources and training opportunities (23)
Program Design and Placement Process	"Stream" students based on interest in clinical work (21)
	Increase length of rotation (from the current 4 to 4-8 weeks) (20)

*Mentioned by all 5 Health Authorities

Recommendations Mentioned by All 5 Health Authorities

- Workload support and a stronger relationship with the Faculty were two themes with universal support across health authorities
- Pharmacists from all health authorities also agreed that learners' schedules need to be centrally coordinated and scheduled one year ahead of time to plan for adequate backfill

Top Challenges for Preceptors in Smaller or Rural Sites

- Inadequate clinical staffing, vacancies or inconsistent staffing (13)
- Unprepared students and/or students unfamiliar with hospital setting (10)
- Preceptor's lack of comfort or skills to precept (e.g. lack of residency training) (8)

Top Challenges for Preceptors in Ambulatory Care

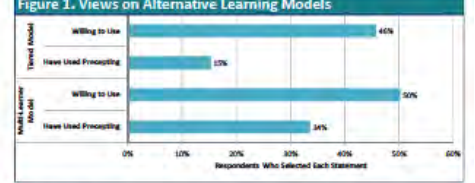
- Physical space (7)
- Lack of learner independence, maturity or professionalism (5)
- Limited time with patient (4)

Table 2. Characteristics of Survey Respondents

Survey Response	23% (N = 233)	Pharmacy Education	B.Sc. Pharm Pharmacy Practice Residency Post-graduate Pharm.D.	94% 52% 15%
Previously Precepted	84%	Primary Site	Tertiary Care Institution Regional Hospital Community Hospital Ambulatory Care Clinic Community-Based	36% 25% 18% 12% 2%

Table 3. Precepting Benefits

Pharmacist Responses	Ranked Within Top Six Benefits (%)	
Personal Benefits	Increases my knowledge	90
	Makes me a better practitioner	89
	Precepting is my professional responsibility	88
Department Benefits	Increased education opportunities for staff	64
	Helps with recruitment	58
	Improves patient care	50
Extrinsic Benefits	Receiving awards and/or recognition	4.5
	Receiving remuneration and/or incentives	3.7



Limitations

- Responder bias, recall bias, survey was not designed to assess differences in perspectives of respondents across health authorities

Conclusions

- Pharmacists ranked intrinsic benefits among their top motivators for precepting pharmacy learners more often than extrinsic ones
- Workload, inadequate staffing and unprepared learners were major barriers to precepting
- Human resource support was the most desirable solution for workload issues, and pharmacists expressed a need for a more robust relationship with the Faculty
- Although few preceptors have utilized alternative learning models, many are willing to begin using them, especially if their implementation were accompanied by support
- The detailed perspectives provided by pharmacists in the AGILE study will be invaluable in identifying effective solutions to the challenges facing institutional experiential pharmacy education in BC



Designing an Innovative Practice Educator Rewards and Recognition Program

Yeon Joo Roh¹; Michael Legal¹; Peter S. Loewen¹; Patricia Gerber¹; Angela Kim-Sing¹; Peter J. Zed¹

Background

- In 2013 our faculty conducted a major stakeholder engagement project (AGILE) which involved over 200 hospital pharmacists and pharmacy learners
- AGILE highlighted several limitations associated with the existing rewards and recognition provided to practice educators (see Box 1 below)
- The goal of this follow-up project was to identify optimal strategies to recognize and reward practice educators for their valuable contributions to experiential education

Objectives

- To develop a rewards and recognition program for practice educators that is fair, flexible, and easy to access for practice educators across all academic pharmacy programs

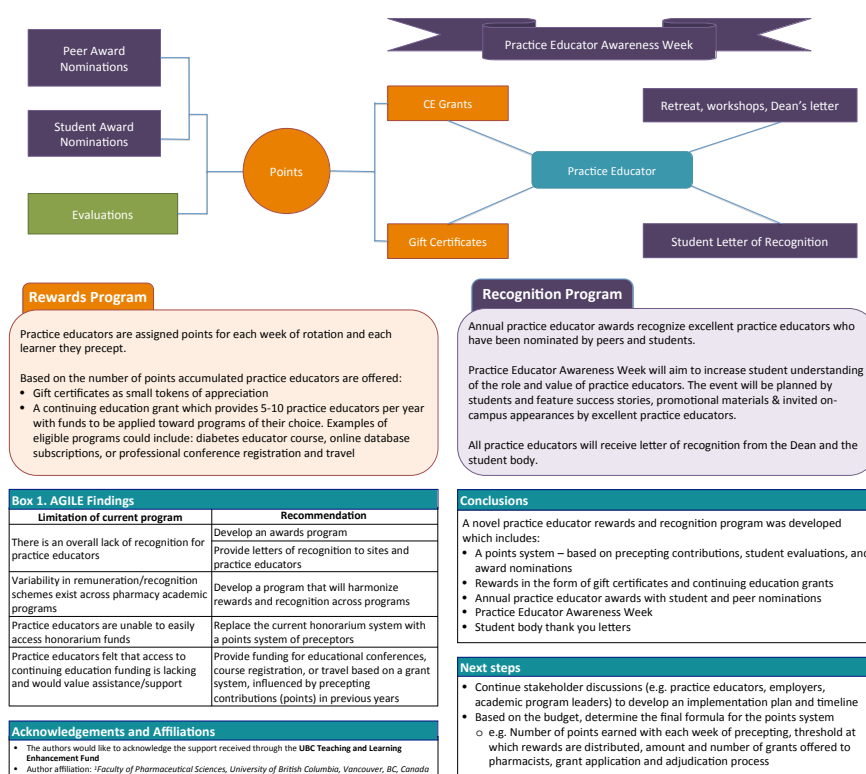
Methods

- Literature review to identify successful rewards and recognition programs used by health disciplines
- Environmental scan to identify successful existing pharmacy and non-pharmacy programs
- One on one interviews with stakeholders to gather their perspectives on key components of an optimal rewards and recognition program
- Key findings were used to formulate the new program

Results

- 4 faculty members, 7 clinical practice educators, and 5 pharmacy learners participated in stakeholder interviews
- Literature review and stakeholder feedback highlighted two perceptions that were consistent with the AGILE findings:
 - Different preceptors have different preferences for rewards and recognition. The program must be flexible to pharmacists' individual interests
 - Practice educators desire opportunities for professional development. Rewards should focus on meeting continuing education needs of pharmacists
- The importance of increasing the recognition of the work done by practice educators was reiterated. It was felt that students are a critical part of this process
 - Practice educators felt that student thank you letters were the most valuable form of recognition they could receive
- The environmental scan identified an intriguing approach utilized by the UBC Alumni Organization
 - An internal points program to track of alumni engagement
 - A similar system could be used to track recruitment, retention, and engagement of practice educators
- A new rewards and recognition program was designed to incorporate the features outlined above

Figure 1. Overview of Practice Educator Rewards and Recognition Program



5. ACPE Preceptor Competencies

Preceptor Competency	Development of Competency	Competency Attributes
Possess Leadership and Management Skills	Adapted from APPI Preceptor-Specific Criteria of Excellence area #1 ²⁷	<ul style="list-style-type: none"> Demonstrates effective managerial and leadership relationships with colleagues and student pharmacists Demonstrates humility and is self-reflective related to own limitations Monitors quality of own professional practice, practice at the site, and teaching activities Demonstrates non-discriminatory behavior
Embodies Practice Philosophy	Original APPI Preceptor-Specific Criteria of Excellence area #2 ²⁷	<ul style="list-style-type: none"> Motivates and inspires pharmacists and student pharmacists to develop patient-centered care services Has a mission and/or vision for pharmacy illustrated by a strategic plan that encourages planning, implementation, and evaluation of programs, initiatives, and standards at their practice site Insists that administration or ownership supports pharmaceutical care services
Role Model Practitioner	Original APPI Preceptor-Specific Criteria of Excellence area #3 ²⁷	<ul style="list-style-type: none"> Provides or supports high-quality patient-centered care or pharmacy-related services Practices ethically Practice patterned after accepted guidelines or model practices Solves problems effectively using sound critical thinking and problem solving skills Educates and integrates patients, family members, and caregivers in decision making Interacts professionally with patients, health care providers, and team members
Commitment to Excellence in Scholarly Teaching	Adapted from APPI Preceptor-Specific Criteria of Excellence area #4 ²⁷ and teaching excellence criteria #1 and #6 ²⁸	<ul style="list-style-type: none"> Demonstrates a caring attitude toward student pharmacists (e.g., gets to know them, inquires about previous experiences and future career goals) Provides prompt assessment and constructive feedback Promotes cooperation between student pharmacists and other members of the health care team (e.g., physicians, nurses, social workers, lab technicians, etc.) Is accessible to student pharmacists Aids student pharmacist learning beyond the normal/regular practice experience Teaches by example (e.g., demonstrates patient assessment skills, discusses the clinical reasoning process, practices ethically) Inspires and motivates student pharmacists Engages in activities to continually develop teaching skills Invites and accepts constructive feedback to improve teaching skills Incorporates new techniques to promote learning
Effective Communication Skills	Adapted from APPI Preceptor-Specific Criteria of Excellence area #6 ²⁷ and teaching excellence criterion #5 ²⁸	<ul style="list-style-type: none"> Demonstrates enthusiasm and passion for his or her practice Displays compassion and is caring toward patients Commands student pharmacist attention and maintains it Provides substantive information and clarifies when necessary Raises thought-provoking and significant questions instead of just providing answers Demonstrates awareness and understanding of how cultural elements (e.g., beliefs, values, practices) can impact patient behaviors, health communication and patient outcomes Exhibits excellent interpersonal skills within an interprofessional healthcare team and/or environment

Encourages Self-Directed Learning	Adapted from APPI Preceptor-Specific Criteria of Excellence area #5 ²⁷ and teaching excellence criteria #2, 3, and 4 ²⁸	<ul style="list-style-type: none"> Assesses the student pharmacist's baseline knowledge, skills, and abilities Defines objectives and expectations for the practice experience Develops plan to meet objectives for practice experience (activities, experiences, assignments, reading, reflections) Teaches to the level of the student pharmacist Models appropriate skills and behavior for practice setting (e.g., efficiency) Coaches student pharmacist behavior through effective, constructive, and timely feedback Creates a safe yet challenging learning environment Treats student pharmacists as colleagues-in-training Encourages student pharmacists to be independent, lifelong learners Respects student pharmacists' individuality with fairness and balance Recognizes and teaches to different learning styles Integrates and includes student pharmacists into practice experience Stimulates and engages the student pharmacist in critical thinking skills Encourages student pharmacist's self-reflection on quality of tasks and efficiency of tasks
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F. Quality Measurement Schematic for ExEd



VI. Priority #6 Appendices

A. Interview Guide

Research Questions	Associated Interview Items
1. What makes a quality experiential education practice site? (Physical space, culture, attitude, reputation, preceptors, patients, jurisdiction)	1. What evidence is there that identifies the constituents of a "quality" ExEd site? Can you provide me with citations? 2. In your experience, what are the constituents of a "quality" ExEd site? -Consider physical space, culture, attitude, reputation, preceptor characteristics, patients, jurisdiction, urban/rural)
2. Why aren't all sites "quality"? (Barriers)	1. Why aren't all sites quality?
3. How do/can sites develop into being "quality"? (Facilitators)	1. Can all sites develop into 'quality' sites? 2. What is the process for becoming a "quality" site? 3. Do you try to develop sites into "Quality" at your Faculty? 4. Can you share your process for this improvement? 5. Is it your place to improve education sites?
4. Is there such a thing as or benefit to describing an "exceptional" practice site?	1. Is there such a thing as an "exceptional" practice site? 2. What sets these apart from "quality"? 3. Is there benefit to describing "exceptional" practice sites?
5. How should practice sites be evaluated for quality?	1. How do you evaluate sites for quality? 2. Upon what is this evaluation based (evidence)? 3. Is there a best practice for evaluating the quality achieved by a practice site? What is it? Share? 4. What do you/would you do with this information? 5. Would your ExEd/faculty be interested in collaborating on a national effort to develop quality indicators and programs to improve the quality of practice sites for ExEd purposes?

B. Literature Searching Strategy and Results

Goal

The goal of the literature search is to systematically identify and acquire available literature addressing each working priority.

Priority #6 research questions Include (green indicates those pertinent to the literature search):

1. What makes a quality experiential education practice site? (Physical space, culture, attitude, reputation, preceptors, patients, jurisdiction)
2. Why aren't all sites "quality"? (Barriers)
3. How do/can sites develop into being "quality"? (Facilitators)
4. Is there such a thing as or benefit to describing an "exceptional" practice site?

5. How should practice sites be evaluated for quality?

Algorithm

49. Define the specific research question with each working priority.
50. Identify and develop search terms
51. Determine databases that might contain relevant literature
52. Refine search terms and strategies based on information found
53. Supplement the search with key journals thought to be important (dependent on particular priority)
 - a. **American Journal of Pharmaceutical Education**
 - b. **Currents in Pharmacy Teaching and Learning**
 - c. **Pharmacy Education**
 - d. Medical education
 - e. Advances in health sciences education
 - f. Teaching and learning in medicine
 - g. Medical education quartet
 - h. Higher education academy
 - i. Medical teacher
54. Supplement search with articles provided by interviewees
55. Review Abstracts for relevancy
56. Complete ancestry searches for useful citations
57. Complete summaries and appraisals for relevant citations
58. Identify key findings from evidence

Databases for Priority #5

CINAHL, Scopus, Medline, ERIC, EMBASE, IPA

Suggested Terms and Combined Searches for Priority #6

Experiential Education/Rotation

AND

Practice site/Clinical Environment

AND

Criteria/best practice/excellence/development

Inclusion criteria

English articles

Human

Database	Search Terms	Limitations	Citations Identified	Relevant Citations (# duplicates) [inaccessible]
CINAHL	Learning Environment, Clinical MM AND Quality	2005-2015	47	30 (7) [4]= 19
Scopus	Search 1: Experiential Education And Practice Site/Clinical Environment Limit: experiential learning Search 2: Centers of Excellence/Practice Site AND Clinical AND Experiential Education	2005-2015	108 50	7 [2] =5 8 (2) [1] = 5
ERIC	environment or practice site or infrastructure AND rotation or clerkship or placement AND quality or best practice or excellence AND education AND clinical	2006-2015 and post secondary	37	1 (1) = 0
Embase	Education AND Environment/Practice Site/Infrastructure AND Rotations/Clerkship/Placement AND Quality/Best Practice/Excellen*	2005-2015	179	42 (19) [5] =18
IPA	Education AND Environment/Practice Site/Infrastructure AND Rotations/Clerkship/Placement AND Quality/Best Practice/Excellen*	2005-2015	5	2 (2) =0
Referrals from Interviews/prior Priorities			6	5
	Total:		496	69

C. Structured Literature Extraction Guide

Citation: First author last name, Initial; Title; Journal; year	What was the focus? Infrastructure (physical environment, computer terminals, internet access) Culture (collegial support, educational commitment) Patient Population (quantity & quality) Reputation Practice Jurisdiction QI	Research Goals and Objectives (Purpose) vs. Description Vs. Review/Op Ed	Protocol or method used to determine value (narrative vs. intervention and control groups)	Setting/ Perspective	Population	Results	Conclusion, Implication to this Priority	Judgement on quality H/M/L

D. Relevant Citations

1. Andalib Evaluation of EdEnvironment for Med students in Tehran DREEM Iran J PEdiatr 2015
2. Barnett Building capacity for clinical placement of nursing students Collegian 2008

3. Bennett Are the bigger hospitals better DREEM on Ir J med Sci 2010
4. Bjork Nurse student perceptions of cLe outside trad hospital J clin Nurs 2014
5. Brewer Aus hospital-based student training ward delivering care while developing IPE J Int Care 2013
6. Brown Practice education learning environments mismatch between perceived and preferred expectations of undergrad students Nurs Ed Tod 2011
7. Brown Transforming students'views of geontological nursing Int J Nurs Stud 2008
8. Brynildsen Improving quality of nursing students clin place in nursing homes Nurs Ed Prac 2014
9. Burgett Pharmacy Preceptors Views on QA visits to APPE sites AJPE 2012
10. Callaghan Student nurse perceptions of learning in periop environment J adv Nursing 2010
11. Chan Nurse learning in workplace comparison of attributes in Aus and Singapore Int Nurs Rev 2014
12. Chou A safe space for learning and reflection Acad Med 2011
13. Craddock Eval of student patient and practitioner experience of practice placements Brit Dent J 2011
14. Craddock outreach teaching-the Leeds experience Brit Dent J 2008
15. Danielson Capacity ratio as measure of solvency AJPE 2011
16. Danielson Qualitative Analysis of common concerns for ExEd AJPE 2015
17. Dean Implementing a DEU Practice Partnership Oncology Clin J Onc Nurs 2013
18. Deketelaere Disentangling clinical learning experiences in internship Med Ed 2006
19. DeWitte Clinical learning environment and supervision instrument in NL CLES Int J Nurs 2011
20. Dolmans Factors adversely affecting student learning in the clinical environment Edu for health 2008
21. Dornan Manchester Index Conditions for med students learning Adv Health Sci Ed 2012
22. Farahmand Evaluating Quality of Ed Environment for med interns DREEM Emerg Med 2014
23. Freundl DEU VA med center nursing prog partnership J Prof Nurs 2012
24. Gallagher Simple truths from med students-quality of learning environments Med Teach 2015
25. Haase Quality ExEd Pharmacotherapy 2008
26. Hall What makes a positive placement experience student and educator perspectives Physiotherapy Conference Proceedings S447 2011
27. Hatton Complete block scheduling AJHP
28. Henderson Creating supportive clinical learning environments J Clin Nurs 2009
29. Hodges Clinical Placement Consortium J Nurs Staff Dev 2005
30. Kassam Promoting DPC at community pharmacies through APPE IJPP 2013
31. Kassam Role Emergent vs Role Established BMC MedEd 2014
32. Kelly DREEM attachment comparing environment hospital to GP placements Ed Prim Carde 2012
33. Killam Challenges to the student nurse on clinical placement rural Rural Rem Health 2010
34. Killam Unsafe clin pract Q method BMC nurs 2012
35. Levett-Jones Belongingness montage of nursing students stories of clinical placement experiences Contemp Nurs 2007
36. Lyle Value adding through regional coordination of rural placements fro all health Broken Hill Aust J rur health 2006
37. Mahendran What are undergrad med students perceptions of learning Academ Psych S73 2014
38. Mersfelder T, Bouthillier M. Value of the Student Pharmacist to Experiential Practice Sites: A Review of the Literature. The Annals of Pharmacotherapy. 2012; 46: 541-548.
39. Milne Enhancing Critical Reflection in SW Soc Work Ed 2015
40. Moridi Clinical training stress-inducing factors Nurs Ed Prac 2014
41. Mulholland Influence of environment on fieldwork experience Work 2013
42. Mulready-Shick Evaluating DEU for Quality J Nurs Ed 2013
43. Mulready-Shick Building Evidence for DEU sustainability and partnership success Nurs Ed Pers 2014
44. Murray Evaluation of academic service partnership using alliance Nurs Outlook 2011
45. Nishioka DEU Nurs Persp on Teaching role Nurs Ed Pers 2014

46. Nishioka DEU Student perspective Nurs Ed Persp 2014
47. Page Twelve Tips on rural medical placements Med Teach 2008
48. Papastavrou Student nurses experience of learning in the clinical environment Nurs Ed Prac 2010
49. Perli Italian nursing stud perception of CLE as measured with cLEI Nurs Ed Tod 2009
50. Pratt The power of one: looking beyond the teacher in clinical instruction Med Teach 2009
51. Prunuske Impact of Clerkship location on quality Fam Med 2013
52. Rathbun Importance of direct patient care in advanced pharmacy practice experiences AACP Commentary Pharmacotherapy 2012
53. Rhodes Eval outcomes of DEU in Nursing J Prof Nurs 2012
54. Rindflesch Students description of factors to meaningful experience in PT education Work 2011
55. Rodger What makes a quality OT practice placement Aus OT J 2011
56. Saarikoski Nurse teacher in clinical practice subdimension to CLES scale Int J Nurs Stud 2008
57. Salamonson Psychometric testing of the abbreviate CLE Inventori J Adv Nurs 2011
58. Salamonson Unravelling complexities of nurs stud feedback in CLE Nurs EdTod 2015
59. Sand-Jecklin Assessing nurs stud perception of CLE the SECEE Inventory J Nurs Meas 2009
60. Schonrock-Adma Necessary steps in factor analysis-enhancing validation studies of educational instruments PHEEM Med Teach 2009
61. Smith Development of a Profile System to display exemplary Pharmacy Practice experiential sites
62. Smyer Academic outcome measures of DEU Nurs Ed 2015
63. Springer Idaho DEU Nurs Ed 2012
64. Stein Students competing a pediatric clin clerk perform as well as in university teaching hospital Teach Learn Med 2009
65. Sturge Need for placement evaluations for specialist practice students Comm Pract 2014
66. Tarpley Early Experience in Establishing and evaluating ACGME Int Gen Surg Rot J Surg Ed 2013
67. VanHell Time spent on clerkship activities in relation to perceptions of learning environment Med Ed 2009
68. Vizcaya-Moreno Development and psychometric testing of CLES+T Spanish Int J Nurs Stud
69. Watson Exploratory Factor Analysis of CLES+T J Nurs Meas 2014

E. Grey Literature

1. ExEd Programs' Criteria

a) *Republic of Ireland's Medical Council Criteria for Training Sites*



Comhairle na nDochtúirí Leighis
Medical Council

**Medical Council criteria for the evaluation of training sites
which support the delivery of specialist training**

A	Clarity of educational governance arrangements
(i)	✓ There will be clear organisational structures and lines of accountability for the learning environment at training sites
(ii)	✓ Management / board level reporting arrangements will be in place e.g. via an oversight committee including trainees, to maintain institutional
(iii)	✓ There will be transparent arrangements with postgraduate training bodies to clarify the relevant responsibilities and expectations of

B	Clarity of clinical governance arrangements
(i)	✓ Trainees will be made aware of their responsibilities as doctors in training, their level of authority and lines of accountability
(ii)	✓ Trainees will be made aware of local procedures for reporting clinical incidents
(iii)	✓ Local clinical practice will reinforce with trainees the importance of communicating critical information to ensure continuity of care e.g. at

C	Accountability
	There will be a named individual (or individuals) on each site with identified responsibility and accountability for ensuring the
(i)	· that the site meets the Medical Council's requirements for training sites
(ii)	· that the site meets any requirements agreed locally with postgraduate
(iii)	· that there is effective communication and collaboration with the HSE's
(iv)	· that education and training on-site is supported through any organisational changes

D	Induction arrangements for trainees
(i)	✓ Each site will have a policy for induction
(ii)	✓ There will be arrangements in place to monitor implementation of the policy
(iii)	✓ There will be a site-specific health and safety induction for all trainees at the beginning of their first rotation at individual training sites. This induction will be common to all trainees regardless of programme
(iv)	✓ There will be an appropriate programme-specific / specialty-specific induction for all trainees to prepare them for the particulars of their
(v)	✓ Trainees will be made aware of all relevant local and national policies which
(vi)	✓ Training sites will make every effort to <i>minimise</i> the duplication of employment-related documentation as and when trainees transition

E	Clear supervisory arrangements for trainees
(i)	✓ Trainees will be supervised appropriately
(ii)	✓ Trainees will be made aware of their clinical supervisors
(iii)	✓ The level of supervision of individual trainees will take account of individual trainee capabilities and limitations
(iv)	✓ The level of supervision of individual trainees will take account of each trainee's stage of training

F	Opportunities for training through clinical practice for trainees
(i)	✓ Participation in clinical practice will be at a level appropriate to the trainee's
(ii)	✓ Day-to-day activities will maximise opportunities for learning through

G	Access to formal and informal education and training for trainees
(i)	✓ The work schedules of trainees will take account of specific training programme
(ii)	✓ Trainees will be facilitated and encouraged at a local level to attend formal scheduled education and training opportunities
(iii)	✓ Trainees will be facilitated and encouraged at a local level to avail of informal education and training opportunities
H	Opportunities for trainers to train through protected training time
(i)	✓ The role of trainers will be reflected in individual trainer work schedules and through protected training time
(ii)	✓ Trainers will be supported and encouraged at a local level in recognition of their significant role in specialist training
(iii)	✓ Trainers will be facilitated at a local level to participate in activities intended to support and develop them in their role as trainers
I	Access to resources which support directed and self-directed learning
(i)	✓ There will be sufficient study space and I.T. facilities in order for trainees to maximise opportunities for self-directed learning
(ii)	✓ There will be access to relevant and up-to-date medical literature, to include
J	Access to pastoral and health supports for trainees
(i)	✓ Trainees will be made aware of, and have access to, local occupational health
(ii)	✓ Trainees will be made aware of, and have access to, appropriate mental health
(iii)	✓ Reasonable adjustment will be made to support the particular training needs of
K	Access to resources to maintain close contact with parent training bodies
(i)	✓ Trainees will be facilitated to maintain close contact with their parent training body, to include I.T. access
(ii)	✓ Trainees will be made aware of their primary point of contact with their training
L	Promotion of Medical Council guidance on professionalism, including promotion of current ethical guidance
(i)	✓ There will be an explicit commitment to promoting professional attitudes and behaviour among trainers and trainees, including promotion of the current <i>Guide to Professional Conduct and Ethics for Registered Medical Practitioners</i>
(ii)	✓ The site will promote good professional practice by all staff which is centred on patient safety and quality of care
(iii)	✓ There will be an explicit commitment, and accompanying policies and procedures, to address any instances of unprofessionalism at a local

(iv)	✓ Where local resolution is not possible, there will be clear pathways for the referral of concerns to the Medical Council
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M	Safe working environment
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(i)	✓ There will be ongoing monitoring to ensure that training sites remain a safe physical environment for trainees
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(ii)	✓ Working hours will be rostered with reference to the provisions of the European Working Time Directive, and other applicable employment
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N	Specialty-specific supports
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(i)	✓ There will be sufficient resources to meet the specialty-specific requirements of all training programmes which are supported at the training site
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(ii)	✓ There will be ongoing dialogue with postgraduate training bodies to ensure that specialty-specific resources remain fit-for-purpose
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O	Participation in on-call duty rota
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(i)	✓ There will be an appropriate on-call ratio which takes account of the capabilities of trainees and which reflects the volume of on-call activity
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(ii)	✓ There will be appropriate supervision of all trainees during the on-call period
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(iii)	✓ There will be appropriate post-call leave arrangements for trainees
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(iv)	✓ There will be safe and secure on-call accommodation
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P	Support for assessment of trainees
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(i)	✓ There will be local support for the assessment of trainees, in line with explicit learning outcomes, and as per the assessment methodology of the relevant
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(ii)	✓ Trainees will be facilitated at a local level to participate in all assessments required by their parent training body
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Q	Opportunities for multi-disciplinary teamwork
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(i)	✓ There will be local encouragement and promotion of multi-disciplinary
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(ii)	✓ There will be opportunities for trainees to benefit from interaction and collaboration with clinical colleagues across the healthcare
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R	Opportunities for trainees to provide feedback to employing authority
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(i)	✓ There will be opportunities for trainees to provide feedback on their training experience to the management of their training site
-----	--

(ii)	✓ Trainee feedback will be actively sought and encouraged with a view to maintaining and improving general standards for trainees of all
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b) University of Waterloo PHARM 497 Clinical Rotation Site Criteria

Can PHARM 497 be completed at your current workplace?

Self-Assessment: PHARM 497 Site Criteria		Yes	No
1	Is your pharmacy site, i.e., your workplace, in good standing with the Ontario College of Pharmacists (if applicable)? (If you are practicing outside of Ontario, substitute the "Ontario College of Pharmacists" with the name of the registering and regulating body for the profession of pharmacy for your region.)	<input type="checkbox"/>	<input type="checkbox"/>
2	Has your workplace passed accreditation (if applicable)?	<input type="checkbox"/>	<input type="checkbox"/>
3	Is direct patient care, as defined by the Ontario College of Pharmacists, provided at your workplace? (Please see page 2 for the Ontario College of Pharmacists' definition of patient care.)	<input type="checkbox"/>	<input type="checkbox"/>
4	Does your workplace facilitate medication management within the Blueprint for Pharmacy definition and have access to relevant patient laboratory data? (Please see page 2 for the Blueprint for Pharmacy definition of medication management.)	<input type="checkbox"/>	<input type="checkbox"/>
5	Does your workplace provide the necessary patient interactions and have a sufficiently diverse patient population for you to accomplish the goals/objectives of PHARM 497?	<input type="checkbox"/>	<input type="checkbox"/>
6	Are you able to provide care to complex patients while at your workplace and generate a minimum of 10 patient case submissions from this population? (Please see page 2 for more information on complex patients.)	<input type="checkbox"/>	<input type="checkbox"/>
7	Are opportunities for interprofessional collaboration available at your workplace?	<input type="checkbox"/>	<input type="checkbox"/>
8	Do you have support from your organization's management to gather data for patient case submissions on patients under your care, if completing PHARM 497 in your own workplace? (You are expected to respect patient confidentiality and not use working hours to complete coursework.)	<input type="checkbox"/>	<input type="checkbox"/>

Note: you do not need to return this checklist back to the School of Pharmacy.

If you answered "No" to any of the above statements, your workplace may not be suitable for PHARM 497.

If you cannot complete PHARM 497 at your workplace, please contact Stephanie Chiu (stephanie.chiu@uwaterloo.ca), Experiential Course Coordinator - Bridging to discuss alternate arrangements before you enroll in PHARM 497.

PHARM 497 Clinical Rotation Site Criteria

Frequently Asked Questions:

What is considered patient care?

The Ontario College of Pharmacists defines patient care as the following¹:

- Providing pharmacy services to the public
- Compounding, dispensing, prescribing and having custody of drugs
- Providing health care aids and devices
- Providing information and education related to the use of drugs, health care aids or devices
- Promoting health, prevention and treatment of disease, disorders and dysfunctions through monitoring and management of medication therapy

What is the definition of medication management?

The Blueprint for Pharmacy defines medication management as “patient-centred care to optimize safe, effective and appropriate drug therapy. Care is provided through collaboration with patients and their health care teams.”²

It also notes that as medication therapy experts, pharmacists²:

- Assess patients and their medication-related needs and identify actual or potential drug therapy problems
- Formulate and implement care plans to prevent and/or resolve drug therapy problems
- Recommend, adapt or initiate drug therapy where appropriate
- Monitor, evaluate and document patients' response to therapy
- Collaborate and communicate with other health care providers, in partnership with patients

What makes a patient complex? Is my patient complex enough for the case submission?

Numerous factors affect patient complexity. These factors can be socioeconomic, cultural, and medical in origin; examples of common features shared by complex patients are provided below. A complex patient often has more than one of these features translating into a case submission that has multiple drug therapy problems (DTPs), an indication for clinical follow-up, and an opportunity for you to demonstrate to the assessors a high-level of clinical skills in identifying, documenting, and solving DTPs.

Examples of Socioeconomic and Cultural Features:

- Language barrier present
- Lack of drug coverage
- Low-level of health literacy
- Patient and /or caregiver beliefs and values differ from the health care team

Examples of Medical Features³:

- Multiple, well-defined chronic illnesses with various complications
- Treatment with multiple medications
- Highly specialized treatment
- A peculiar combination of resiliency and fragility
- Unexpected responses to common medications and minor illnesses
- Longevity (living highly functional lives into the 80's and 90's)

1. Part A & Part B Register. Ontario College of Pharmacists. <http://www.ocpinfo.com/registration/register-pharmacist/two-part-register/>. Accessed November 17, 2014.
2. Blueprint for Pharmacy, Canadian Pharmacists Association. Medication Management Definition. <http://blueprintforpharmacy.ca/docs/resource-items/medication-management-definition-handout---july-30-2013.pdf>. Published July 2013. Accessed November 17, 2014.
3. International Pharmaceutical Federation. Connecting to Complex Patients Pharmacists Take the Lead. http://www.fip.org/dublin2013/files/static/press/Complex_Patients_Final.pdf. Accessed November 17, 2014.

c) Selection Criteria for Rotation Sites: Idaho State University College of Pharmacy

- Meet all state and federal laws related to the practice of pharmacy and compliance with all HIPAA requirements.*
- The site provides experiences that meet the goals, objective and educational outcomes of introductory and advanced experiential programs.*
- The site must be devoted to patient-centered care consistent with contemporary pharmacy practice and provide preceptors time for daily contact with students, to provide students feedback and the opportunity to ask questions.
- The site demonstrates a caring and compassionate environment with a commitment to educating pharmacy students.*
- Staffing should be adequate staffing (professional, technical and clerical) to provide a high standard of patient-centered care to patients and a professional staff which is involved in the education of pharmacy students.*
- Each student at the site should be supervised by a primary preceptor during the rotation. All pharmacists at the facility can participate in educating the student if they meet the minimal requirements.
- The site must have an adequate patient population to accomplish the goals, objectives and educational outcomes of the specific rotation.*
- Make available opportunities for the student to learn specific disease therapy management, provider-patient communication skills, ethical behavior and an environment that allows the student to have interaction with patients.
- Must have available technology, informatics, and learning resources needed to support the student training and provide optimal patient care.*
- Students have access to all pharmacotherapy information (patient profiles, patient history, medication history, physical examinations, disease states, laboratory data), which allows them to interpret and evaluate patient information. *
- Students should have the opportunity to communicate, where appropriate, as part of a multidisciplinary team of healthcare professionals providing patient care for a patient population with diverse cultures, medical conditions, gender, and age.
- Student should be allowed to perform pharmacist functions under the close supervision of a licensed pharmacist.*
- Provide educational programs/workshops for patients and other health care providers.

Services the student should get experience in, where applicable:

Processing and dispensing new/refill medication orders
 Taking telephone prescription orders and communication with physicians about medications
 Perform patient interviews
 Create patient profiles while following patients
 Patient consulting on all aspects of patient-centered care (i.e., disease states, medications, dosing, dosage forms, routes of administration, over the counter products, self-care products, dietary supplements, nutrition, alternative therapy, etc.
 Reply to drug information from patients and health care providers
 Ascertain patient-specific factors that influence pharmacotherapy, disease state management, medical information and compliance.
 Participate in the education of health care professionals and patients through presenting patient case, in-services, seminars and other presentations.
 Work with pharmacy technicians and other medical staff.
 Complementary therapy counseling (herbals and nutritional supplements)
 Compounding preparations from physician orders
 Communication with patients, physicians and other health care professionals
 Third party billing for pharmacy services

d) U of T's Site Visit Documents

Dear Preceptor,

As a contributor and educator for the experiential programs at the Leslie Dan Faculty of Pharmacy, you offer diverse and valuable learning experiences for our students. To gain a better understanding of our students' experience at your site, we routinely conduct site visits to gain insight on the students' learning environment. Anytime throughout the year, you may be contacted by a member of the Leslie Dan Faculty of Pharmacy (LDFP) Office of Experiential Education (OEE) faculty to schedule a date and time to visit your site. Attached to this email is a document that answers common questions pertaining to the site and preceptor visits. If you have any additional questions, do not hesitate to contact the OEE at oeephm@utoronto.ca.

We sincerely thank you for your continuous efforts in the practice education of our Early Pharmacy Experience (EPE) and Advanced Pharmacy Practice Experience (APPE) students. We look forward to the opportunity to meet with you and discuss ways to enhance the quality of the preceptor and student experience.

Leslie Dan Faculty of Pharmacy, University of Toronto Experiential Site and Preceptor Documentation Form (Dec 2015 version)

Site		Phone Number	
Address		E-mail	
Preceptor(s)		Date of Site Visit	
Faculty Member		Duration of Site Visit	

Purpose of Visit:

Practice Setting:

Institutional	Community Pharmacy	Organization (e.g. Head office)
Hospital Outpatient Pharmacy	Family Health Team	Education
Long Term Care	Compounding Pharmacy	Drug Information
Ambulatory Care Practice	Industry	Other (specify)

Types of Rotations Offered:

Direct patient Care-Community (10 week)	Direct patient Care-Institutional
Direct patient Care-Community (5 week)	Non-Direct Patient Care
EPE	Other

Types of Patient Services Provided at Site: _____

Site information	YES/NO/NA	COMMENTS
Type of site (institutional, banner, chain)		
Operating hours		
Average daily prescription volume		
Prescription Software		
Affiliation agreement status completed		
Number of active preceptors at site		
Years site has actively taken students		
Site appears to have adequate staffing for prescription volume		
Site appears to have adequate prescription/OTC volume		
Site portrays a professional image		
Staff supports student learning		
Student has adequate space for independent work		
Staff encourages student involvement		
Student has access to appropriate drug and medical information tools/resources		e.g.
Certified for administering influenza vaccinations		

Most common patient population served at this site		
Does the pharmacy have a specialized focus?		
Site examples clinical services provided (and dates) e.g. A1C clinic day		
Preceptor information	YES/NO/NA	COMMENTS
Preceptor(s) has/have completed online training modules		
Student expectations/roles have been made clear throughout entire rotation		
Learning contract is clearly outlined and meets faculty criteria		
Activities/Projects have been discussed and meet faculty criteria		e.g.
Time spent with student is appropriate		
Student care plans are reviewed regularly		
Student is given feedback regularly		
How is this feedback provided? E.g. of preceptor strategies		
Preceptor aware of deadlines for submitting evaluations		
Preceptors appears passionate/enthusiastic about being a teacher/mentor		
Preceptor possesses strong interpersonal skills/leadership qualities		
Preceptor appears confident in preceptor role		
Student information	YES/NO/NA	COMMENTS
Student is dressed professionally		
Student has LDFP name tag		
Student portrays professionalism		
Student is provided with a secure area to store their belongings		
Student is regularly providing direct patient care		
Student is regularly applying the		

full scope of pharmacist practice		
Student has opportunities to interact with other HCPs		
Student has taken part in patient rounds		
Student has had/will have an opportunity to check/co-sign prescriptions		
Student routinely educates patients on prescription medications		
Student routinely educates consumers on OTC medications		
Student has had a chance to provide effective follow-up with patients		
Student has had exposure to third party billing and/or problem solving adjudication issues		
Student has been instructed on proper documentation skills		
Student has conducted multiple BPMH/Medication Reviews/Pharmaceutical Opinions		
Student is effectively completing/documenting Medschecks		
Student is effectively documenting on prescription hardcopies when signing/checking prescriptions		

Descriptive Summary of Visit:

Outcome of Site Visit:

Where areas of concern were flagged, specify reason for follow-up site visit:

Recommended date of follow-up: _____

If there is no reason for follow up, the recommended date for next site visit is: _____

Other Comments:

e) *MUN's Student Satisfaction Form (Site section)*

The Site:

Criteria	Strongly Disagree				Strongly Agree
Was clean, organized & had a professional work environment	1	2	3	4	5
Was equipped with a pharmacy library or resources which were appropriate, adequate and easily accessible	1	2	3	4	5
Afforded adequate opportunities to interact with patients	1	2	3	4	5
Had a prescription volume such that it was busy enough, but not too busy to learn effectively	1	2	3	4	5
Provided a stimulating work environment, i.e. afforded exposure to diverse practice situations	1	2	3	4	5

2. American Position Papers

a) *American Association of Colleges of Pharmacy (AACP) Academic Practice Partnership Initiative (APPI). Pilot Project to Profile Exemplary Advanced Practice Experience Sites. 2006: Available at: <http://www.aacp.org/resources/education/APPI/Documents/Pilot%20Project%20PPEs.pdf>.*

b) *Accreditation Council for Pharmacy Education, Chicago, Illinois. Accreditation standards and key elements for the professional program in pharmacy leading to the doctor of pharmacy degree (“standards 2016”). 2015. Available at: <https://www.acpe-accredit.org/pdf/Standards2016FINAL.pdf>*

3. Detailed Criteria/Survey Items from Literature

a) *American Association of Colleges of Pharmacy’s (AACP) Academic Practice Partnership Initiative (APPI) Criteria (adapted to Canadian context)*

The site/practice must (17):

- Have ability to provide experiences that meet AFPC’s Educational Outcomes for First Professional Degree Programs in Canada
- Be patient-centered and have pharmaceutical care as the focus of the practice
- Be adequately staffed to provide quality pharmaceutical care to patients
- Have an adequate number and sufficient variety of patients
- Provide opportunities for students to learn
 - Specific disease-therapy-management
 - Provider-patient communication skills
 - Ethical behavior related to provision of pharmaceutical care
- Demonstrate caring attitude toward patients
- Have a pharmacist as part of multidisciplinary team of healthcare providers
- Use technology (informatics) sufficiently to support the pharmaceutical care mission of pharmacy
- Have library and learning resources sufficient to support optimum patient care
- Have a professional image
- Ensure patient privacy and confidentiality is protected via design and in compliance with federal and provincial privacy requirements
- Met or exceed all provincial and federal laws related to practice of pharmacy
- Receive support from the ownership or administration for providing student learning experiences
- Have site ownership or administration that encourages quality improvement programs

b) *American College of Clinical Pharmacy (ACCP) White Paper*

‘Quality Experiential Education’ section devoted to Practice Site Requirements and Practice Site Assessment (19). In brief, the paper sets out practice sites should:

- Be licensed
- Be accredited
- Provide routine access to patient records
- Provide students opportunities for face to face patient interactions
- Routine communication with other HCPs
- Facilitate pharmaceutical care process and documenting thereof
- Diverse patient population
- Qualified preceptors who are role models in patient care
- Adequate DI resources
- Delineated communication network between ExEd program, preceptors, students and other HCPs
- Orientation for students to the entire scope of pharmacy services

- Take both intro and advanced practice students Site Assessments to evaluate quality are required no less than every 3 years.

c) American Association of Colleges of Pharmacy's (AACP) Academic Practice Partnership Initiative (APPI) 2005 Summit Recommendations

- Involve national organisations and all schools and colleges of pharmacy to develop a standard affiliation agreement format with 'interchangeable clauses' that provide consistency with some required flexibility
- Develop a global process for conducting site visits that uses teams to assess performance and provide recommendations for site improvement. Team members could include ExEd directors, admissions officers, other preceptors and students.
- Conduct a benchmark survey of schools and colleges to determine and define a minimum level of infrastructure needed to adequately manage ExEd learning programs
- Collaborate with jurisdictional regulatory authorities to share resources related to ExEd sites.
- Collaborate with pharmacy advocacy bodies to recruit potential sites and communicate best site practices
- Engage groups of representative stakeholders to decide on continual QA strategies in ExEd
- Business and marketing plans should be developed to generate new funds to support ExEd and recruit new sites/preceptors
- Develop a national database of sites to ensure training locations are used to their full potential. The database would not contain sites that are filled regularly by the nearby school. This recommendation may be pertinent for a set of selected remote sites that require multiple schools to ensure continuity of student presence

d) PHEEM Items

No.	Item	Component			
		1	2	3	h ²
27	I have enough clinical learning opportunities for my needs	0.793	-0.020	-0.065	0.63
34	The training in this post makes me feel ready to be an SpR/consultant	0.752	-0.017	0.126	0.58
35	My clinical teachers have good mentoring skills	0.721	0.142	0.198	0.58
30	I have opportunities to acquire the appropriate practical procedures for my grade	0.685	-0.057	0.009	0.47
28	My clinical teachers have good teaching skills	0.678	0.170	0.156	0.51
36	I get a lot of enjoyment out of my present job	0.661	0.169	0.111	0.48
39	The clinical teachers provide me with good feedback on my strengths and weaknesses	0.660	0.092	0.158	0.47
29	I feel part of a team working here	0.658	0.108	0.055	0.45
6	I have good clinical supervision at all times	0.646	0.206	0.077	0.47
22	I get regular feedback from my seniors	0.636	0.190	0.213	0.49
15	My clinical teachers are enthusiastic	0.621	0.305	0.131	0.50
37	My clinical teachers encourage me to be an independent learner	0.607	0.012	0.159	0.40
33	Senior staff utilise learning opportunities effectively	0.601	0.150	0.253	0.45
2	My clinical teachers set clear expectations	0.581	0.123	0.299	0.44
5	I have the appropriate level of responsibility in this post	0.579	-0.037	0.305	0.43
23	My clinical teachers are well organised	0.542	0.264	0.318	0.46
32	My workload in this job is fine	0.467	0.237	0.140	0.29
19	I have suitable access to careers advice	0.419	0.266	-0.005	0.25
14	There are clear clinical protocols in this post	0.351	0.034	0.242	0.18
18	I have the opportunity to provide continuity of care	0.345	0.173	0.077	0.16
38	There are good counselling opportunities for junior doctors who fail to complete their training satisfactorily	0.313	0.052	0.307	0.20
7	<i>There is racism in this post</i>	0.075	0.661	-0.061	0.45
13	<i>There is sex discrimination in this post</i>	0.045	0.640	-0.041	0.41
11	<i>I am bleeped inappropriately</i>	0.081	0.591	-0.088	0.36
8	<i>I have to perform inappropriate tasks</i>	0.155	0.550	-0.054	0.33
25	There is a no-blame culture in this post	0.253	0.416	0.115	0.24
17	My hours conform to the New Deal	-0.019	0.410	0.183	0.20
20	This hospital has good quality accommodation for junior doctors, especially when on call	0.056	0.386	0.255	0.22
26	There are adequate catering facilities when I am on call	0.031	0.306	0.161	0.12
24	I feel physically safe within the hospital environment	0.092	0.201	0.115	0.06
16	I have good collaboration with other doctors in my grade	0.163	0.180	0.128	0.08
3	I have protected time at this post	0.095	-0.007	0.678	0.47
9	There is an informative junior doctors handbook	0.097	0.098	0.655	0.45
1	I have a contract of employment that provides information about hours of work	0.131	0.037	0.564	0.34
4	I had an informative introduction programme	0.347	0.050	0.546	0.42
12	I am able to participate actively in educational events	0.164	0.188	0.513	0.33
	Initial eigenvalues	9.4	2.1	1.8	
	Explained variance after rotation	21.95%	7.63%	7.48%	

e) Manchester Clinical Placement Index Survey Items

Items with * denote learning environment and ** denotes training

Leadership*: There is leadership if one or more senior doctors (consultant, GP, registrar) take responsibility for your education. Please rate your agreement (0 = strongly disagree; 3 = neither agree nor disagree; 6 = strongly agree) with the statement:

There was leadership of this placement

Please add comments to either or both of the next two boxes:

Strengths of leadership were ... (Free text box)

Weaknesses or ways leadership could be improved ... (Free text box)

Reception/induction*: An appropriate reception is a welcome that includes an explanation of how the placement can contribute to your real patient learning. Please rate your agreement (0 = strongly disagree; 3 = neither agree nor disagree; 6 = strongly agree) with the statement:

There was appropriate reception to this placement

Please add comments to either or both of the next two boxes:

Strengths of the reception were ... (Free text box)

Weaknesses or ways the reception could be improved ... (Free text box)

People*: The support to your real patient learning from people (like doctors, secretaries, receptionists, nurses and others) you met on the placement. Please rate your agreement (0 = strongly disagree; 3 = neither agree nor disagree; 6 = strongly agree) with the statement:

I was supported by the people I met on this placement

Please add comments to either or both of the next two boxes:

Strengths of any or all of the groups of people listed above were ... (Free text box)

Weaknesses of any of the groups of people listed above could be improved ... (Free text box)

Instruction:** Clinical teaching may include instruction in how to perform clinical skills (like history taking, examination, practical procedures, etc.) on real patients. Please rate your agreement (0 = strongly disagree; 3 = neither agree nor disagree; 6 = strongly agree) with the statement:

I was instructed on how to perform clinical skills on real patients

Please add comments to either or both of the next two boxes:

Strengths of instruction were ... (Free text box)

Weaknesses or ways instruction could be improved ... (Free text box)

Observation:** Clinical teaching may include teachers observing you perform clinical tasks on real patients. Please rate your agreement (0 = strongly disagree; 3 = neither agree nor disagree; 6 = strongly agree) with the statement:

I was observed performing clinical tasks on real patients

Please add comments to either or both of the next two boxes:

Strengths of observation were ... (Free text box)

Weaknesses or ways observation could be improved ... (Free text box)

Feedback:** Clinical teaching may include teachers giving you feedback on how you performed clinical tasks on real patients. Please rate your agreement (0 = strongly disagree; 3 = neither agree nor disagree; 6 = strongly agree) with the statement:

I received feedback on how I performed clinical tasks on real patient

Please add comments to either or both of the next two boxes:

Strengths of feedback were ... (Free text box)

Weaknesses or ways feedback could be improved ... (Free text box)

Facilities: Your learning environment may include such things as space for students (to write notes, read and be taught) and resources (books, computers or other materials) that support real patient learning. Please rate your agreement (0 = strongly disagree; 3 = neither agree nor disagree; 6 = strongly agree) with the statement:

This placement provided appropriate facilities

Please add comments to either or both of the next two boxes:

Strengths of observation were ... (Free text box)

Weaknesses or ways observation could be improved ... (Free text box)

Organisation: An appropriately organized placement is one whose teaching and learning activities are organized in a way that supports your real patient learning. Please rate your agreement (0 = strongly disagree; 3 = neither agree nor disagree; 6 = strongly agree) with the statement:

This placement was appropriately organized

Please add comments to either or both of the next two boxes:

Strengths of organisation were ... (Free text box)

Weaknesses or ways organisation could be improved ... (Free text box)

VII. Priority #7 Appendices