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For a complete list of contributors to this and other CanExEd reports please refer to the “CanExEd Foundational Information” available at: <http://afpc.info/system/files/public/CanExEd%20Priorities%20Foundational%20Information.pdf>

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
CPhA-Canadian Pharmacists Association
CSHP-Canadian Society of Hospital Pharmacists
ExEd – Experiential Education
NAPRA-National Association of Pharmacy Regulatory Authorities
OEE – Office of Experiential Education
PEP-C – Pharmacy Experiential Programs of Canada
PRA – Provincial Regulatory Authority
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 Faculty of Pharmacy
U of W – University of Waterloo School of Pharmacy
U of M – University of Manitoba Faculty of Pharmacy
U of S – University of Saskatchewan College of Pharmacy
U of A – University of Alberta Faculty of Pharmacy
UBC – University of British Columbia Faculty of Pharmaceutical Sciences

Executive Summary

INTRODUCTION:

Experiential Education (ExEd) Programs within Schools and Faculties of Pharmacy are mandated to provide optimal student and preceptor experiences. The quality of student rotations is predicated by a confluence of factors at the practice site. ExEd programs can impact these factors to varying degrees. This report focuses on two of the factors necessary for high-quality ExEd rotations:

1. **Student-Environment relationship**
2. **Preceptor-Environment relationship**

The purpose of this 6th Priority of the Canadian Experiential Education (CanExEd) Project for Pharmacy is to:

Characterise exceptional Ex Ed sites' best practices

To direct lines of inquiry, 5 research questions were developed:

1. What makes a quality experiential education practice site?
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?

METHODS:

Interviews with Canadian ExEd Faculty responsible for identifying ExEd sites, fostering their development and measuring their quality in conjunction with a systematic literature (international and multiprofessional) review and appraisal were used to elucidate the current environment and potential better practices as they relate to the 5 research questions. In addition, select grey literature was examined for its relevance and utility.

RESULTS:

Canadian ExEd Faculty indicated ExEd settings that provided direct patient access, appropriate physical infrastructure and a culture of student engagement were important in being an effective site for experiential learning. They generally recognised that a site should be in good standing with the provincial regulatory authority (PRA). They identified a few items that could or are being used to further enhance the quality of their ExEd sites as well.

Subsequent group discussions highlighted a vision of a changing landscape for community pharmacy experiential sites. Some academics envisioned a point where they would have a limited cadre of community practice sites that would host most student rotations. These sites would be the focus of quality improvement (QI) efforts and should provide an enriched learning environment for students through consistent and continual participation in experiential training and rotations. The literature pertaining to the factors or conditions necessary for optimal student learning in the field was primarily concentrated in nursing where attention is paid to the social environment in which learning occurs. Pharmacy was well represented in terms of position statements but primary research was less evident. There has been a major transition over the last 10-20 years from a teaching-centric to a learner-centric perspective in educational theory. It follows that researchers have shifted from describing behaviours in preceptors that elicit learning outcomes and instead are describing the environmental or cultural factors that must be present in order for a learner to thrive. Different authors/experts present the factors using variable categories and nomenclature but essentially, **learning happens in environments that:**

1. Embrace a culture of learning
2. Provide opportunities for students to care for patients (in clinical rotations) or contribute to meaningful non-clinical work (in other rotations).
3. Physical infrastructure
4. Provide inspired and excellent patient care

The barriers to all sites being exemplary was not described in the literature although there are glimpses of it in descriptions of sites having an agenda of work rather than learning (student expected to take on duties to a degree that precludes learning) and a work oriented culture where the preceptor role (orientation, feedback, assessment and reflection) was not possible given the demands of their employment.

Tools have been developed and tested to measure student satisfaction with their sites as well as used to link satisfaction levels with learning outcomes, future performance in courses and to exit examinations. The tools can also be used in research to determine if an educational intervention is superior to the control. **Student satisfaction surveys are but one prong of a larger QI strategy.** Other tools in use include preceptor survey, site visits by faculty, site self-evaluations of quality and student focus groups.

DISCUSSION: ExEd programs are mandated to develop/guide/support sites, communicate and promote best practice and conduct continuous QI initiatives in an effort to bring exemplary status to educational sites. There is applicable guiding literature to achieving these goals. Sites must commit to educating and implement best practices.

CONCLUSION:

The impact of the rotation environment cannot be overlooked, as it is in this social environment that learning occurs. Sites that embrace a culture of learning, provide opportunities for students to contribute meaningful work, offer appropriate physical infrastructure and provide excellent patient care provide an environment where students thrive. Continuous quality improvement should be achieved through the use of a suite of tools including student and preceptor survey, focus groups, site visits and site self-evaluation report.

Detailed Summary

INTRODUCTION:

Experiential Education (ExEd) Programs within Schools and Faculties of Pharmacy are ensuring excellent learning opportunities for students. Indeed, the Canadian Council for Accreditation of Pharmacy Programs (CCAPP) Standards explicitly mandates it. The quality of student rotations is predicated by a confluence of factors at the practice site. ExEd programs can impact these factors to varying degrees. This report focuses on two of the factors necessary for high-quality ExEd rotations:

1. **Student-Environment relationship**
2. **Preceptor-Environment relationship**

A third vital factor is the quality of Student-Preceptor relationship. This is addressed within Priority #3 of the Project: "Best Practice in Preceptor Development to Establish/Augment Best Qualities/Abilities in Preceptors".

This report is written with the overarching purpose of addressing the 6th Priority in the Canadian Experiential Education (CanExEd) Project for Pharmacy:

Characterise exceptional Ex Ed sites' best practices

A series of research questions was collaboratively developed with PEP-C and the CanExEd Steering Committee to direct lines of investigation. These questions included:

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?

METHODS:

A three-pronged approach was used to gain a current perspective on the Canadian context, establish best practices and ways to achieve them.

1. Interviews with Canadian ExEd Faculty responsible for identifying and maintaining ExEd sites and measuring their quality
2. Systematic literature (international and multiprofessional) review and appraisal
3. Grey literature was examined for its relevance and utility from various professions and jurisdictions

RESULTS:

Canadian ExEd Faculty indicated ExEd settings that provided direct patient access, appropriate physical infrastructure and a culture of student engagement results in effective sites for experiential learning. They consistently recognised that a site should be in good standing with the provincial regulatory authority (PRA). They identified a few concrete activities that could or are being used to further enhance the quality of their ExEd sites such as:

1. **Checklist:** development of a checklist of attributes expected in ExEd sites, including the above characteristics as well as a range of programs or activities reflecting the full scope of pharmacy practice for students
 2. **Advance site screening:** as an ideal way of evaluating sites in terms of the checklist (discussed above)
 3. **Group ExEd site orientations:** institutions might offer/require student participation in group orientation sessions
 4. **Manual:** creation of practical, how-to manual for excellence in ExEd sites; could be provided to all sites, but particularly offered to new sites, at orientation sessions
 5. **University evaluation and outreach:** on the basis of student and preceptor feedback, university ExEd offices might communicate directly with particular ExEd sites to discuss any needed improvements
 6. **Ongoing stakeholder consultation:** seen as a critical component in implementing each of the above strategies.
- Subsequent group discussions highlighted a vision of a changing landscape for community pharmacy experiential sites. Some academics expected that over the next 5-10 years a limited cadre of community practice sites would host most student rotations. These sites would be the focus of quality improvement (QI) efforts and provide an enriched learning environment for students. Academic participants saw stratification of **'exemplary/excellent' sites from 'sites as being inconsistently desirable**. Some thought highlighting excellent sites would illustrate to other sites some creative approaches to teaching while others thought all sites should be 'exemplary'.

The literature identifying factors or conditions necessary for optimal student learning in the field was primarily concentrated in nursing where much attention is paid to the social environment in which learning occurs. Medicine also contained literature of interest. Pharmacy was well represented in terms of position statements but primary research was

less evident. There has been a major transition over the last 10-20 years from a teaching-centric to a learner-centric perspective in educational theory. It follows that researchers have shifted from describing behaviours in preceptors that elicit learning outcomes and instead are describing the environmental or cultural factors that must be present in order for a learner to thrive. Different authors/experts present the factors using variable categories and nomenclature but essentially, learning happens in environments that:

1. Embrace a culture of learning: cultures conducive to learning contain factors as complex as belief systems and ethical frameworks resulting in commitment, reflective educational practice, educational mission statements, respect for the learner and their learning needs, equalizing power imbalances, a team approach to educating, strong liaisons with academic institutions, forming meaningful educational relationships, self-esteem and well-being of staff and learners and effective communication. Simple manifestations from these cultures include; student orientation manuals and procedure, students being made welcome and called by name by everyone in the environment, patients expecting their presence, protected teaching time for preceptors through scheduling allowances, an organised student schedule
2. Provide opportunities for students to care for patients (in clinical rotations) or contribute to meaningful non-clinical work (in other rotations) with appropriate independence: Students can participate to some level in patient care at every level of their education. While direct observation of the practitioner is instructive, students should be actively engaging and caring for patients. Sufficient volume of patients is necessary for particular learning objectives to be met.
3. Physical infrastructure: the Infrastructure (documentation software, web-enabled computer terminals, office space, pharmacy technicians, etc.) for achieving high level of care and supporting learning.
4. Provide inspired and excellent patient care: Practices that facilitate using the full scope of pharmacist/other professional practice allow students to see and contribute to the greatest extent possible to ensure positive patient outcomes. To provide high level of care, the organisation must have a commitment to their staff's continuing professional development and to providing comprehensive pharmaceutical care/medication therapy management to meet patient needs. An interprofessional team approach to patient care is paramount.

The barriers to all sites being exemplary was not systematically observed although there are glimpses of it in the literature where sites had an agenda of work rather than learning (student expected to take on duties to a degree that precludes learning) for the student and a work oriented culture where the preceptor role (orientation, feedback, assessment and reflection) was not possible.

Some PRA regulations as insisting on 'direct' observation for some or all professional acts however, being supported in caring for patients independently appears to be important for students in their learning. PRA supervision statements vary across the country and it is difficult to suggest a national approach to addressing supervision with this heterogeneity in regulation.

Some stakeholders and pharmacists (or potential preceptors) cite 3rd party payors' insistence that cognitive service documentation originate with the pharmacist as precluding student involvement in cognitive services. These barriers must be discussed with the respective PRAs and 3rd party payors with an aim to allow more student autonomy. Another perceptual barrier exists in practices not seeing a benefit to providing a culture of learning. Two previous reports, Priority #4 and #5 have addressed this misperception.

Survey tools have been developed and tested to measure student satisfaction levels with their sites as well as used to link satisfaction levels with learning outcomes, future performance in courses as well as to exit examinations. The tools can also be used for research purposes to determine whether an educational intervention / change results in different results from a control group. Particularly interesting is medicine's MCPI and DREEM tools and nursing's CLES-T and SECEE inventories. Nursing also developed the SINFLO that measures the support for nurses who educate in the field. A survey instrument should be a component in a larger suite of QA tools that includes regular audits with PRA to ensure a site's good standing, regular QA visits every 3-5 years, renewal of site agreements on a regular basis and annual self-evaluations of criteria necessary for exemplary sites.

DISCUSSION: Evidence-Informed Recommendations and Prototypes

Recommendation	Prototype	Contributory Quality Characteristic
BACK END		
1. Strengthen and formalize Faculty-Site relationships	Faculty-site agreement template that includes faculty commitment to perpetual placement of students in the site as well as grounds for discontinuing student assignment (QA review results)	Culture of Learning
2. Identify practice sites that meet baseline criteria for	Triangulation strategy comprised of: <ul style="list-style-type: none"> • National online site self-assessment report* 	Culture of Learning Meaningful Work,

onboarding	<ul style="list-style-type: none"> • Good standing with the PRA • Accredited by appropriate body • Standard national site visit check list 	Physical Infrastructure Excellent Patient Care
3. Promote ExEd vision of excellent practice sites and achieve site progression within various domains of educational site criteria	Site quality domains Detailed plans for QI in each domain Housed within National Preceptor Development Platform	Culture of learning
4. Collaboratively develop an educationally-focused site mission statement	Faculty facilitator onboarding kit with presentation and activities for site-based workshop. Other content introduces: <ul style="list-style-type: none"> • Description of quality improvement dimensions and guidance for achieving excellence • Best practice of sites. (E.g. Continuing Professional Preceptor Development, preceptor and student workload reductions, protected time, desirable staffing levels etc. 	Culture of learning
5. Develop/implement plan for achieving sites' mission statements (protected time and staffing levels/mix, workload reductions, Continuing Professional Preceptor Development (CPPD), QI/research and staff recognition strategy)	Faculty facilitator CQI kit content: <ul style="list-style-type: none"> • Description of quality improvement dimensions and guidance for achieving excellence • Best practice of sites. (E.g. Continuing Professional Preceptor Development, preceptor and student workload reductions, protected time, desirable staffing levels etc. 	Culture of Learning
6. Protect annual allotment of time for CPPD and for staff-development sessions on education	Included in self-assessment criteria, standard site visit checklist, ongoing CQI materials	Culture of Learning
7. Student support in isolated/rural/ underserved areas	Guidance for potential organisations/communities interested in establishing continual student presence. Guidance includes usual recruitment materials PLUS suggestions for establishing expectations re: timelines, funding, supporting agencies, literature, champions, housing, transportation, living stipends, security and social contacts. Memorandum of understanding formalising interprofessional collaborations in clinical education.	Physical Infrastructure, Culture of Learning, Meaningful Work, Excellent Patient Care
8. Co-Fund cross-appointed clinical faculty to assist with educating students, guiding preceptors, maintaining site educational standards, executing research and measuring quality outcomes.	Collaboratively develop a national template job description for clinical faculty liaisons in the field	Culture of Learning, Excellent patient care, Physical Infrastructure, Meaningful work
9. Conduct or participate in educational research and/or continual quality improvement initiatives	Research/QI proposal template for academic and preceptor use. Establish national advisory group for research /QI in ExEd (terms of reference, meeting schedule, priorities). Prepare presentation on topic for delivery to sites	Culture of Learning
10. Prepare sites without an onsite pharmacist preceptor for hosting students	Location preceptor preparation kit Location preceptor presentation	Culture of Learning, Physical Infrastructure, Meaningful Work
11. Optimise the degree of student independence by harmonising jurisdictional (PRA and ExEd Programs') regulations, policies and guidance	Collaborate with NAPRA to draft proposal for PRA regulation wording on supervision of pre-registrants. Develop educational tools to translate regulations into practical scenarios	Meaningful Work

pertaining to supervision		
FRONT END		
1. Standard onboarding process for students	Student onboarding schedule and materials package templates. Suggested inclusions: Patient and staff notification Student introduction (name & basic information) in advance Organisation and practice –level policies & guidelines (infection control very important) (1) Therapeutic area modules	Culture of Learning, Meaningful work
2. Computer and internet access, assigned storage space	n/a	Physical Infrastructure
3. Student support in isolated/rural/ underserved areas	Student onboarding schedule and materials PLUS extra information and preparation for unique location of rotation (survival skills, social sensitivity etc.)	Physical infrastructure, Meaningful Work, Culture of Learning
4. Intelligently implement novel models of preceptor-student configurations	Preceptor and student guidebooks, other prototypes as per Priority #2	Culture of Learning
5. Provide interprofessional collaboration opportunities for students	n/a	Meaningful Work

CONCLUSION:

While the impact of the preceptor on the quality of student rotations is paramount, the impact of the rotation environment cannot be overlooked, as it is in this social environment that learning flourishes. Focusing ExEd resources on:

- rotation sites fostering exemplary educationally-focused characteristics
- maintaining a ExEd presence in educational sites
- applying consistent recruiting criteria and site onboarding process
- augmenting sites' quality
- undertaking educational research into ExEd site practices
- quality assurance triangulation using student and preceptor survey, focus groups, site visits and site self-evaluation report

Establishing sites that act to fulfill these recommendations will result in practice learning environments that embrace a culture of learning, facilitate reasonable student independence, provide adequate physical infrastructure to maximise learning and ensure students learn in environments where excellent patient care/professional standards are upheld.

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I. Introduction

A. Preamble

The CanExEd Project Context and Scope, Objectives, Intended Audience and Use are available in a separate document entitled, "CanExEd Foundational Information". It is available at:

<http://afpc.info/system/files/public/CanExEd%20Priorities%20Foundational%20Information.pdf>

B. Previous and Upcoming Reports

This is the sixth in a series of reports to be delivered between 2014 and March 2016. Each completed report is available at: <http://afpc.info/content/canexed-reports>.

C. Background

It is incumbent upon Experiential Education (ExEd) Programs within Schools and Faculties of Pharmacy to provide optimal student and preceptor experiences by ensuring sites prepare for and subsequently provide excellent opportunities for students. The quality of student rotations is predicated by a confluence of factors at the practice site. ExEd programs can influence these factors to varying degrees. Factors include:

3. ExEd course learning objectives, structure and assessment
4. Preceptor teaching knowledge/skill/attitude (KSA)
5. Student-Preceptor relationship
- 6. Student-Environment relationship**
- 7. Preceptor-Environment relationship**

While the Student-Environment relationship and Preceptor-Environment relationship (#4 and 5 above) are challenging to isolate from the student-preceptor relationship (#3 above) and preceptor teaching KSA (#2 above), this report focuses on the fourth and fifth factors influencing rotation quality in order to:

Characterise exceptional Ex Ed sites' best practices

Note: Priority #3 of the CanExEd Project discusses the capabilities and competencies of new and experienced preceptors that result in optimisation of preceptors' effectiveness (#2 and #3 above). ExEd course learning objectives, structure and assessment (#1 above) is addressed in Priority #1 of the Project.

International health professions literature suggests the impact of the preceptor-student supervisory relationship is sometimes greater and sometimes less than that of the pedagogical atmosphere of the practice environment (2-7) depending on the measurement tool and domestic origin of the learners. Regardless of the relative ranking of the factors, the environment in which students learn and work is inarguably vital for a positive experience for all participants. (8) Indeed, a conducive environment cannot compensate for failed supervisory relationship (3). Enriched environments for students are also enriched environments for patients and staff. Patients experience better care and staff enjoy better working conditions in enriched environments. Clinical learning environments are complex and include everything that surrounds the student. (9) Pratt et al writes, "*Context involves the physical locus and its temporal requirements, but it is not just 'out there'; context is not an outer container of physical shell inside of which people behave in certain ways (Nardi 1996). Context is social as well as physical, involving a community of people working within norms and cultural conditions they have adopted as their own. Context involves agreed upon intentions and goals, tools and language, rules and sanctions, division of labour and power and hierarchies of authority.*"

Atmosphere, environment and practice setting, are interchangeable terms denoting the amalgam of:

- Culture
- Attitude
- Philosophy
- Energy

- Activities
- Patients
- Care team
- Physical attributes (geography, organisation, physical space)

in which a student practices with support and supervision. This report generally refers to clinical practice settings however a large portion of the information will equally apply (although evidence has not been published to support) learning environments that do not directly include patients such as pharmaceutical industry, governmental, professional advocacy, research and academic placements. Indeed the findings will apply to any professional ExEd environment.

An environment conducive to learning is the basis for a sense of ease and safety a prerequisite to efficiently and comprehensively intake information, construct knowledge, reflect and appropriately act or react to stimuli. Wenger (1998) purports that humans' social nature makes the social environment a central aspect of learning. Learning happens when participating in valued activities with other human beings. Ultimately, the learning should result in active engagement with the environment. (10) A preoccupation with interpersonal relationships and trying to fit in is incongruent with focusing on learning. (11) There is a current shift away from the description of teacher model to a broader learning community that includes all staff involved in the student's placement (12). This shift in perspective is consistent with interprofessional education (IPE) (13).

Context: As faculties transition across Canada to an Entry Level Doctor of Pharmacy degree (ELPD), student rotations will be in higher-demand in the limited **institutional sites**. As a result, it is expected 2 students per preceptor will be the default configuration for each final year advanced practice rotation and that preceptors will have students present on site for most of the calendar year. In the more ubiquitous **community sites**, there is a definite possibility of individual or small groups of pharmacies being designated centers of practice education and that multiple students will be present simultaneously consistently throughout the calendar year. All rotation sites must meet minimum standards as set by provincial regulatory authorities (PRA) but as a result of ELPD-related developments, particular attention will be paid to the establishment of criteria that attribute 'excellence' to a site.

Pharmacy programs are obliged to meet standards of Canadian Council for Accreditation of Pharmacy Programs (CCAPP). This organisation provides guidance for ExEd Programs on the selection or inclusion of rotation sites within **Standard 29** of the "Accreditation Standards for the First Professional Degree in Pharmacy Programs (2014)"

29: The Faculty must ensure that there are adequate personnel, resources, practices, and systems in place to support student learning and skills development at the practice sites selected for student practice experiences and those practice experience sites must meet relevant regulatory requirements. (14)

Examples of Evidence:

- Policies related to selection of sites and preceptors
- Appropriate licenses
- Practice credentials
- Description of educational programs or development
- Models of supervision
- Outcome measures
- Practice activities
- Schedules
- Measurement of assessment consistency across preceptors and practice sites

Criterion 29.1:

The Faculty must provide evidence of working collaboratively with other health sciences programs of the University, as well as practice experience sites, to ensure that pharmacy students are provided access to patients and facilities, support and work tools at the level necessary to achieve intended educational outcomes and expected patient care service deliverables.

Criterion 29.2:

Practice sites must be able to provide interprofessional collaborative learning environments.

Criterion 29.4:

The Faculty must have established criteria for selection of practice sites.

Criterion 29.6:

The practice site must have appropriate amenities to support student learning.

Standard 30 and 31 of the “Accreditation Standards for the First Professional Degree in Pharmacy Programs (2014)” (14,15) is also relevant to this priority:

30: An adequately resourced administrative office or system must be in place to manage the experiential program including practice sites and preceptors, and the quality assurance program for the practice experiences.

Examples of Evidence:

- Staffing for this office or system
- Preceptor orientation and training program (for both new and experienced preceptors)
- Standards or criteria for selection and evaluation of preceptors and practice sites

Criterion 30.1:

The administrative office or system must be led by an individual or individuals with appropriate qualifications or expertise in selection, development and evaluation of practice sites, and assessment of student performance

Criterion 30.2:

The Faculty must establish a quality assurance program for the practice experiences component of the curriculum.

Examples of Evidence:

- Practice experiences materials such as manuals, on-line materials, assessment methods
- Results of student evaluations of practice experiences
- Outline of quality assurance and improvement processes

31: Appropriate formalized affiliation or contractual agreements must be in place between the University and the experiential site to outline the authority, privileges, obligations and responsibilities of the Faculty and the Site.

Examples of evidence

- Examples of the legal support available

Criterion 31.1:

Agreements should address student-related matters such as access to health services at the site, liability, insurance coverage, criminal record background checks, student disclosures, immunization policies, patient confidentiality and privacy of records, and professional conduct expectations.

Criterion 31.3:

Agreements should provide for sufficient advance notice of termination by either party to permit the development of alternate arrangements, should these become necessary.

Examples of Evidence:

- Examples of agreements

Also of interest, standard #22 of American Accreditation Council for Pharmacy Education “Standards 2016” states (16),

Practice Facilities

The college or school has the appropriate number and mix of facilities in which required and elective practice experiences are conducted to accommodate all students. Practice sites are appropriately licensed and selected based on quality criteria to ensure the effective and timely delivery of the experiential component of the curriculum.

Key Elements:

22.1. Quality criteria – The college or school employs quality criteria for practice facility recruitment and selection, as well as setting forth expectations and evaluation based on student opportunity to achieve the required Educational Outcomes as articulated in Standards 1–4.

22.2. Affiliation agreements – The college or school secures and maintains signed affiliation agreements with the practice facilities it utilizes for the experiential component of the curriculum. At a minimum, each affiliation agreement ensures that all experiences are conducted in accordance with state and federal laws.

22.3. Evaluation – Practice sites are regularly evaluated. Quality enhancement initiatives and processes are established, as needed, to improve student-learning outcomes.

ExEd programs recognise that all sites must meet minimum standards for experiential sites but also sites should develop into exemplary learning environments. ExEd programs are mandated to describe excellence, facilitate the achievement of excellence and monitor ongoing indicators of excellence.

II. Priority #6: Characterisation of exceptional experiential education sites' best practices

A. Research Questions

A series of questions was collaboratively developed with PEP-C and the CanExEd Steering Committee to direct lines of investigation. These questions included:

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?

B. Methods

A detailed description of the methods including data sources, data collection and appraisal system used in the Project are contained in, "CanExEd Foundational Information". It is available at: <http://afpc.info/system/files/public/CanExEd%20Priorities%20Foundational%20Information.pdf>. The methods section here provides the particular approach unique to this Priority.

Semi-structured interviews

An interview protocol was developed to explore Priority #6 research questions. The interview used semi-structured questions to guide discussion and was iterative in nature. [Appendix A](#) provides the complete interview guide.

Peer-reviewed literature

[Appendix B](#) provides specific search strategies employed to identify relevant citations. [Appendix C](#) details the structured data extraction guide used to extract and appraise literature.

C. Results

1. Process

Semi-structured interviews

Sixteen interviews were conducted between July and January 2015. Interviews were predominantly one-on-one with two exceptions where the interviewer interviewed 2 participants simultaneously.

- 13/16 interviews were with Canadian Academics (Dean =1, Experiential Educators =11, assessment expert =1) within Pharmacy Faculties. All Faculties were included with the exception of two.
- 1/16 was with a US ExEd expert (Texas Tech)
- 1/16 was a member of NAPRA
- 1/16 was with a learner

Interview duration ranged from 45 to 180 minutes. Long interviews were completed over 2-3 sessions. All interviews were conducted by the Project Manager and captured via audio and when possible, video.

Interviewees were very forthcoming in their conversations regarding ExEd and were keen to participate. None expressed concern or questions regarding informed consent for recording.

Peer-Reviewed Literature

496 abstracts were initially identified as potentially informational on the topic. [Appendix D](#) lists the 69 citations found to be relevant and subsequently reviewed in detail.

Grey Literature

Through consultations with members of the SC and PEP-C group and general web-searching 6 important documents were identified. [Appendix E](#) contains these documents.

Stakeholder feedback

Included within the Findings section

2. Findings

Semi-structured interviews

Over the course of key informant interviews, respondents commented on what attributes might characterize a good experiential education site. These comments were distinct from perspectives shared on quality preceptorship *per se*; focusing instead, on what characteristics might be sought when recruiting new or continuing with established ExEd sites.

Respondents generally agreed that the following traits were important in an ExEd setting:

1. **Direct Patient access:** ready access to an adequate number of, and diverse range of patients so that students might gain sufficient clinical experience.
2. **Appropriate physical infrastructure:** adequate space in which the student could participate in practice duties; access to appropriate technologies (e.g. computer, internet); private counseling area.
3. **Culture of student engagement:** existing staff onsite should demonstrate a commitment to education and interest in working with students.
4. **Absence of existing disciplinary actions:** a site in good standing with the PRA.

Some respondents commented on potential barriers to augmenting ExEd site quality; these were generally framed in terms of an absence of the preceding four traits (e.g. not enough or too many patients).

Some PRA regulations insist on 'direct' observation for some or all professional acts. The requirement was mentioned by stakeholders as precluding higher degrees of student autonomy (once they are capable of more independence). Being supported in caring for patients independently appears to be important for students in their learning. PRA supervision statements vary across the country and it is difficult to suggest a national approach to addressing supervision with this heterogeneity in regulation.

Some stakeholders and pharmacists (or potential preceptors) cite 3rd party payors' insistence that cognitive service documentation originate with the pharmacist as precluding student involvement in cognitive services. These barriers must be discussed with the respective PRAs and 3rd party payors with an aim to allow more student autonomy. Developing a policy statement around student supervision may assist PRAs to nationally level the field when it comes to pre-registrant supervision statements. In addition to the statement, practical guidance for participants as a companion document will assist in ensuring the spirit of the policy is translated into practice education. . Another perceptual barrier exists in practices not seeing a benefit to providing a culture of learning. Priority #4 and #5 has addressed this misperception.

In discussing ways to develop and enhance quality in ExEd sites, respondents proposed the following:

1. **Site Recruitment Checklist:** development of a checklist of attributes expected in ExEd sites, including the above characteristics as well as a range of expected programs or activities reflecting the full scope of pharmacy practice for students in the rotation province (scopes of practice vary between jurisdictions)
2. **Pre-onboarding site screening:** as an ideal way of evaluating sites in terms of the checklist (discussed above)
3. **Group ExEd site orientations:** institutions might offer/require student participation in group orientation sessions at the rotation site
4. **Manual:** creation of a practical, how-to manual for excellence in ExEd sites; could be provided to all sites, but particularly offered to new sites, at orientation sessions
5. **University evaluation and outreach:** on the basis of student and preceptor feedback, university ExEd offices might communicate directly with particular ExEd sites to support development of their academically affiliated site.
6. **Ongoing stakeholder consultation and feedback:** seen as a critical component in implementing each of the above strategies.

Subsequent meetings with ExEd Academics raised the concern about regular evaluation of sites for good standing and it was noted that not every Faculty had their list of pharmacies vetted by their respective PRA. It was strongly suggested that even if disciplinary proceedings against sites were not available publicly, that there should be a mechanism (possibly

a self-declaration vs. communication with a PRA) to confirm sites were not being investigated for any infractions. Also, there was some discussion about how to divest sites that were not found to be up to standard. The group agreed that generally, some remediation would be tried in most circumstances however if it became apparent that there continued to be poor levels of student satisfaction that they simply would remove the preceptor and site from the annual/semiannual request for rotation availability communication.

Another theme that arose in subsequent group meetings was long-term transition in community ExEd sites to using fewer sites and those sites being exemplary practices where many students would be placed throughout the calendar year. Likely 2 or more students would be present concomitantly for each rotation period. This could equate to 20 students/year/site (assuming a 5 week rotation). Naturally, these sites will require more support in terms of culture/environment, preparation, fostering and monitoring.

When asked about identification of exemplary sites, respondents thought that identification was important for promotional purposes to other sites. These sites could be profiled for their particular strengths to induce other sites' enthusiasm and adoption of practices that improve their educational environment. At least one respondent indicated all sites should be 'exemplary'.

Peer-Reviewed Literature

Relevant articles were critically appraised for quality (Table 1), analysed for origin (Table 2) and practice setting (Table 3 and 4).

Grade	Number of Citations
High	32
Medium	13
Poor	24
Total	69

Country	Number of Citations
US	23
Australia	12
Canada	8
UK	7
Netherlands	4
Iran	3
Norway	2
Ireland	2
New Zealand	2
Spain	1
Finland	1
Italy	1
Cyprus	1
Singapore	1
Kenya	1
Belgium	1
Total	70 (but 1 article UK/AUS)

Discipline	Number of Citations
Pharmacy	10
Medicine	17
Nursing	32
OT/PT	4
Dentistry	2
Social Work	1

IPE	3
Total	69

Pharmacy Literature

The American Association of Colleges of Pharmacy's (AACP) Academic Practice Partnership Initiative (APPI) formed in 2004 with a mandate to:

1. Identify strategies and develop resources to improve quality of ExEd sites
2. Expand capacity for these exemplary sites
3. Provide resources for preceptor training and development
4. Streamline processes within and across pharmacy programs

To this end, two excellent projects ensued. The first was a set of quality criteria to profile exemplary practice models for patient care and student learning. (17) Obviously, the site-specific criteria of excellence pertain in this case to clinical care and non-direct patient care rotations would have different requirements. Appendix F contains adapted criteria for the Canadian context. Out of these criteria, a 'Practice Site Data Collection Worksheet' was developed (available at: <http://www.aacp.org/resources/education/APPI/Documents/DataCollectPPEs.pdf>)

The second was a Summit to Advance ExEd in Pharmacy in 2005. At that time there was a concern about the volume of rotations and competition between various Pharmacy programs to attain sufficient rotations for programs that were within geographical proximity of one another. Despite the Canadian context not including the competition that US schools did or do experience, there is certainly a volume concern as the various programs move to the ELPD. Interest in some of the US recommendations stems primarily from an efficiency of operations and ensuring best practice across the country and secondarily from a potential benefit to a few high-volume sites that might take students from multiple programs. The Summit came to a few site-related recommendations (18) that have been included in Appendix F. The recommendations were not evidence-based but rather emerged from the Summit as stakeholder resolutions and existing guidance documents from American Pharmacy governing/standard setting agencies such as the CAPE outcomes from AACP.

The American College of Clinical Pharmacy (ACCP) published a 2008 White Paper entitled 'Quality Experiential Education' in which a section is devoted to Practice Site Requirements and Practice Site Assessment (19). Appendix F contains the Site Requirements

An AACP Commentary by Rathbun et al. stresses how important it is for students to conduct direct patient care while on pharmacy rotations and itemises the benefits to all participants. In addition the commentary calls for equitable workload allotment for preceptors and using peer learning models (20).

Primary pharmacy literature includes a few high-quality experimental designs providing evidence for particular site practices.

- Kassam found that **preceptor training was not the sole reason for a rotation being of high quality**. She used a comparator group of final year rotation students in community sites and an intervention group. Having an orientation (the intervention) prior to the rotation resulted in the number of patient consultations doubling. Twice as many drug related issues were identified and interventions completed with follow-up over the 8-week rotation period. The intervention also improved the students' experience (greater confidence, better familiarity with the environment). The intervention was to spend 5 days at the site at some point in the 3 months prior to the rotation starting. The orientation employed a structured set of activities (21)
- The second high-quality article also by Kassam (2009) (22) conducted a search of the literature and failed to locate validated, reliable tools to measure student satisfaction ratings of rotations. This would corroborate this report's finding of a lack of instruments within the pharmacy field. The focus of the article was to **develop and validate an instrument to distinguish quality** on final year placements. Survey items related to learning outcomes and preceptor facilitation more so than the environment or culture of the learning site.
- The final high-quality study determined Oklahoma **preceptors' views on QA visits to final year rotation sites**. (23) According to a 2007 AACP survey, only 1/3 of preceptors indicated they received routine visits from ExEd faculty. In this program, practice sites had one visit/month from an ExEd faculty member and the program was interested in the perceived value of visits for preceptors and the preferred interval. The visits were by appointment in the 1st half of the rotation and ideally timed around the midpoint assessment. The focus of the visit was not to evaluate the environment but rather to communicate directly with the participants to review structure and process and provide guidance. Any issues could be dealt with at that point and communication of college updates would occur. The authors had surveys from 235 preceptors in the analysis. Preceptors definitely wanted the visits to continue (76%

agreed, 24% neutral, 0% disagreed) and that 51% wanted monthly visits when students were present. A single visit during the year was sufficient for 22%.

There is some suggestion (although perhaps not enough to call it a superior practice) that complete block scheduling of institutional rotations in a single organisation may reduce student housing expenses and conveniences along with providing efficient use of resources, increased collaboration among preceptors, greater continuity of educational experiences and standardisation of experiences, enhanced opportunities for students to engage in research projects and enable extension of clinical services. (24) The detractors may include less opportunity to experience alternative philosophies and processes and a propensity for a site to see a student as 'free labour'. It also may limit student access to highly desirable sites since all placements will be with a given set of students.

A systematic literature review to determine the value of students on rotation suggests that sites would be well served by; integrating students into providing clinical services (specifically medication history taking, medication reconciliation, initial pharmaceutical care assessments and anticoagulation management), optimising student scheduling and standardising orientation of students. (25)

Just how many rotations (and by extension, sites) to maintain in the ExEd pool is a reasonable question given the resources that are needed to onboard, maintain excellence and measure quality. Danielson (2011) (26) suggests that 15% overage in rotation availability may be a reasonable measure of solvency in an ExEd program. This is a general number and each program will need to look at individual community, institutional and primary care as well as non-clinical rotations to ensure the 15% is not skewed to any one sector of practice. Keeping in mind the best practice of having constant student presence at sites, a higher overage may result in sites experiencing challenges by NOT having sufficient student presence.

Medical Literature

A qualitative study using a novel interview methodology enrolled 22 British Columbia medical students and 41 clinical faculty members. Students believed that exceptional teachers could quite easily be responsible for higher grades on a standardised exam (NBME) and although alluded to contextual factors in their interviews, did not comment on the possibility that the purported power of the preceptor might actually be partially the power of the context in which the preceptor is teaching. In contrast, clinical faculty were sceptical of the sole influence of the preceptor. Faculty identified that contextual factors would play a large part in the success of clinical teaching. Factors such as other physicians, residents, nurses, other students and patients are important and as such should be evaluated in addition to the clinical teaching itself. Questions that could be asked of the experience at the site include: Who else is involved in the health care team during the rotation? What was the census/volume of patients during that time? What was the distribution of time among teaching, learning and patient care? Did staff members have multiple or conflicting commitments in addition to teaching? What were the spoken or unspoken 'rules of engagement' that students had to decipher as they found their place in the community? The study also indicated that all participants believed engagement in authentic tasks of patient care is a critical factor in student learning. (27)

A second high-quality qualitative investigation into the learning process in Belgian undergraduate medical ExEd looked at what characteristics the training environment, interns and how these characteristics interacted meaningfully. Five components were identified as requiring constant adjustment or repositioning from the learner:

- Agenda of the internship (working vs. learning): Overload of work duties does not allow for learning although the learner seems to rationalize being overworked' if there is sufficient time invested in their development at other times. There has to be an acceptable balance between their perception of learning and being used for work.
- Culture of the training setting (work oriented vs. training oriented): There seems to be two different cultural dispositions to education. Some units have a training-oriented culture that can be embodied in developing an orientation folder for the learner that includes departmental statements of commitment and the learners' rights and duties or embodied by having most clinicians on the unit trained to be educators in the field. Work-oriented settings are almost exclusively concerned with providing medical services to patients and the learner is expected to blend into that culture.
- Nature of the learning process (informal vs. formal): The formal is what is required by the program and the informal takes place independently of the medical school and includes complex medical issues, interns' socialization into the profession. The environment must facilitate both the fulfillment of the program's mandate but also the incidental learning.
- Interns' learning attitude

- Supervisors' learning attitude

The first 3 pertain to this Priority. The article did not make explicit recommendations as to how to achieve the desired balance but only to describe the tensions present in the educational site. (28)

A third qualitative study from New Zealand used a series of 4 focus groups and found a high-degree of agreement among students as to what factors medical students most valued on rotation:

- Organisation of the placement
- Support from staff and peers
- Their own preparedness
- Opportunities for patient care
- Teaching. (29)

A Dutch study reported on factors that impacted negatively on student learning according to students:

- Too few opportunities to examine patients independently
- Insufficient supervision/feedback
- Lack of motivated staff or staff with negative attitudes toward students
- Too many students
- Lack of organisation

were all reported (30). Interestingly, the findings here to some degree match those categories in the Manchester Clinical Placement Index (below).

The few attempts in the Medical literature to establish a validated reliable student satisfaction QA tool included:

1. Dundee Ready Educational Environment Measure (DREEM) tool was developed for use in Faculty-based learning environments. It has been used in some ExEd environments sometimes using adapted formats (31-35). In reviewing the tool, it was found to be an arbitrary agglomeration of teacher and student-centered items ill-matched to ExEd environments and the terminology used in Pharmacy ExEd programs. As an aside, Bennett (32) used it to compare student experiences at large and small hospitals and found that smaller hospitals evoked higher satisfaction ratings from 3rd year students on subscales of learning, atmosphere and teachers.
2. Postgraduate Hospital Educational Environment Measure (PHEEM) tool was developed out of the DREEM tool and has been validated in the Netherlands (36). The tool's items were somewhat oriented to 'work' rather than 'education' however the environmental or cultural items may be useful as the CanExEd Project embarks on establishing a similar tool in pharmacy. Appendix F contains the PHEEM items. The PHEEM was used in a study that correlated student scores with time spent in direct patient care activities. Specifically, directly observing physicians and carrying out self-directed patient care activities. The results were mixed (directly observed patient care did not relate to higher ratings) and it is debatable whether ratings were as a result of direct patient care opportunities or if their existing positive perceptions caused them to spend more time on these tasks. (37)

It is notable that neither these instruments have been linked to performance levels on exit exams or subsequent courses. In addition neither instrument includes free text fields that are important for gaining nuance and detail of a student's experience and for the tools to be considered to employ mixed-methods.

3. The Manchester Clinical Placement Index (MCPI) (38) was developed in 2011. It espoused the shift away from teacher-centeredness to student and patient centeredness. Social phenomena can be deconstructed via psychological (individualistic) or sociocultural (community) social learning theories. The MCPI aligned with the philosophy that clinical learning is a social process. The authors suggest that the communal theory may hold more weight and in particular the community of practice (COP) model that emphasises learning rather than teaching. COP theory indicates supported participation in practice is central to learning. Instruction is just one type of support with affective and organisational aspects rounding out the mix. The MCPI's final 8 items were based on sociocultural theory of Wener, Tsui, Dornan and Patrick and used a 0-6 Likert scale. The tool has not been evaluated in conjunction with student performance level on exit exams or subsequent courses nor has it been used to compare control vs. intervention groups in educational research. Appendix F contains MCPI items. The items are categorized into 2 scales; learning environment and training.

Residency sites were found to impact on junior learners' feeling of support from the staff in an environment they perceived as being so diverse, they could not achieve a level of proficiency (39). This phenomenon has not been corroborated elsewhere but ExEd programs placing students in the same environment as residents should be aware that there could be potential challenges for junior learners in those environments.

Reflection emerges within medical ExEd in the form of peer groups that met for an hour each week during rotations. Seven groups with 42 total students completed surveys immediately after the groups wrapped up and again between 5 and 27 months later which showed the clerks highly valued the meetings and that the perception persisted. The meetings provided support through clerkship challenges, facilitated reflection and appreciation of patient experiences across the continuum of care. (40)

Remote sites considering making themselves centers of excellence might benefit from examining Australia's experience in placing medical students in their rural territory. The 12 tips in the paper by Page and Birden focus on the supports, infrastructure, interprofessionalism, collaboration and evaluation of mounting rural rotations. (41) Another consideration along the lines of unfamiliar jurisdictions would be the increasing numbers of international placements that are occurring. There is mention in the medical literature of establishing guidelines for international rotations so that not only the site is vetted but so too is the student ready for the rotation. (42)

Student outcomes were no worse for completing rotations in **small Community vs. Large Academic Sites** (32,43)

Nursing Literature

Nursing has traditionally used a model where an academic is primarily responsible for educating the student. Non-academic clinicians have/had variable levels of nursing credentials and formal preceptor training. There has been pressure to use clinicians as preceptors secondary to increased nursing enrolment. As a result, the Academic in the field became more of a resource person for multiple clinician educators (CEs) and had less direct contact with the students. **The Dedicated Education Unit (DEU)** model is heralded as a good model as compared to the traditional nurse-academic clinical instructor with 6-10 students in tow. There are a few low-quality narratives that purport better critical thinking, and more opportunities to demonstrate their skills and greater participant satisfaction (44,45) as well as excellent qualitative (46) studies and quantitative research with comparator groups (47-50). The application of this to Pharmacy is difficult as the numbers of pharmacists on a ward are not comparable to nurses. The utility of this type of model in an interprofessional unit would be possible as well as in community pharmacy where the number of pharmacists is quite high. A particularly rich dataset of 4 different DEU participants' (N=34) interviews found 7 themes (46):

1. Engaging in recurring communication to achieve shared objectives
2. Problem solving to maintain valued relationships
3. Working together to mutual outcomes
4. Recognising unfamiliarity in changing roles and responsibilities
5. Valuing interdependence, complementary competence and equalising power balance
6. Witnessing teamwork satisfaction for positive change and QI
7. Advocating for DEU future amidst low certainty and little agreement on next steps.

The highly valued indicator of the HESI (nurses exit exam) and subsequent courses was used as an endpoint to understand if placements within DEUs impacted on performance in 2 studies. There were no significant differences seen between DEU students and those in traditional practice education settings for the HESI. (51,52) Course grades seemed to be marginally higher for students on DEU rotations. (52)

Extensive research exists regarding **QA tools** measuring site and preceptor success at providing high-quality ExEd rotations.

Student tools:

- The Clinical Learning Environment Inventory (CLEI) (Chan et al, 2001) is a 42-item scale with 6 domains: personalization, student involvement, satisfaction, task orientation, innovation and individualization. It is a 2-part survey that identifies the actual experience of the student and subsequently the ideal experience the student would like. It was validated multiple times and has good face validity. Three of the domains were found to have low Cronbach's alpha though (student involvement, task orientation and individualization). In addition, some items may not be relevant to all nursing practices. (4) There is precedent for adding items to the scale that capture further information relevant to unique programs (53) as well as only using the 'actual' experience portion of the tool (54). It has been used in various languages. (55)
- The Abbreviated Clinical Learning Environment Inventory (CLEI-19) was developed as a result of the limitations described above and found to have higher reliability than the originals CLEI (231 online surveys).
- The Clinical Learning Environment, Supervision (CLES) (27 statements) has been validated in various countries (Spain, Netherlands), sometimes with additional items added. (8) It may focus more on work setting than clinical education settings. It has 5 subscales
- The Clinical Learning Environment, Supervision and Nurse Teacher (CLES-T) (36 statements) developed with 9 more items that focus more on supervision (56) whereas CLEI focuses more on student experience. The CLES-T still has 5 subscales but differently named:
 - Supervisory relationship (8 items)
 - Pedagogical atmosphere on the ward (9)
 - Role of the nurse teacher (9)
 - Leadership style of the ward manager (4)
 - Premises of nursing on the ward (4)

- Student Evaluation of Clinical Education Environment (SECEE) measures student perceptions of clinical instruction and unit learning opportunities. (47) Academics suggest that the CLES is too work-focused, the CLEI is more student perception focused (social climate) and didn't include the faculty role. They decided to look at the old SECEE and edited it to a 3rd version of 32 items using subscales of Preceptor facilitation of Learning, Learning opportunities scale and Instructor facilitation of learning scale. Evaluated for reliability (internal consistency). Validity assessment for different student levels was completed and confirmatory factor analysis for subscale item content. (57). It does not match our pharmacy model of preceptors w/o academics in the field though.

Preceptor tools (no other literature included this type of tool):

- Support Instrument for Nurses Facilitating the Learning of Others (SINFLO) is an Australian tool of 17 items measuring teamwork, communication, recognition, preparation and workload using a 1-5 Likert scale (58)
- Clinical Learning Organizational Culture Survey (CLOCS) is an Australian tool of 28 items that measures recognition, affiliation, accomplishment, influence dissatisfaction using a 1-5 Likert scale. (58)

Partnership (Academic-Service) Evaluation tools:

- Single Alliance Key Success Model (SAKSM) could be applied to partnership innovation such as academic-community pharmacy corporations to determine if it's a success. The analysis could be undertaken early-before the actual innovation would be measured. Three aspects to the model: formation, design, management. Success is reported in 4 dimensions: met objectives, enhanced each party's competitive position, partners learned critical skills from each other and level of harmony between the partners.

Studies have used these **scales to identify superiority of interventions**. These tools may now permit the objective determination of what is best or better. One high-quality Australian study showed that by having an **experienced educator/researcher on the unit conducting activities for the RN every 2 days** for 6 hours on ways to engage a student and simply to interact informally with RNs during their work resulted in significantly higher student CLEI scores. Raising of scores was related to preceptors' ability to involve them in carrying out activities. The effects were lost once the intervention was discontinued which suggests the educator/researcher presence needed to be embedded in the organisations' leadership practices, values and norms. (59) In institutions, there is irregular use of a 'coordinator' (ON) and a clinical educator facilitator (BC Agile project) in pharmacy that comes closer to the model described by Henderson. The QA outcomes of BC's project are eagerly awaited so that a more informed decision can be made as to the desirability of the integration of these positions in Pharmacy's ExEd programs. Extrapolation to community sites may be possible but whether it would be possible to employ a clinical facilitator co-ordinators (CFCs) that would work with preceptors in various independent and corporate entities requires consideration. If so, it is entirely possible that a single CFC could oversee a dozen pharmacists in 5-6 sites (=24 students) simultaneously.

American schools of nursing may be experiencing increased competition for clinical learning sites and have initiated consortiums to maximize and fairly access to these environments. It may be that by standardizing the policy and procedure relating to sites' fitness to host students and the structures for conducting a rotation that everyone benefits in terms of access. (60)

High quality care by personnel on the ward is important whether the care is for patients, students or each other. (61). Belongingness vs. alienation was described in one article where empirical and anecdotal evidence points to deprivation causing diminished self-esteem, increased stress and anxiety and decrease in general well-being and happiness (62)

A qualitative study using in-depth interviews with 3rd year nursing students highlighted that in perioperative nursing, students often did not have as much preparation to 'hit the ground running'. This is an interesting perspective as the same may be true of **specialty environments** like radiopharmacy or neonatal ICU or infectious disease services where students would provide more utility and ability in the general medicine aspect of patient care. There were a few things that these environments should strive to provide: Students must still participate in practice to the degree possible, be included on the team, see staff modeling positive roles and using teamwork effectively. Preceptors should encourage students to undertake activities that reflect the needs of the learner more so than the workflow of the unit. The ExEd Faculty may need to work with the specialist to link the generalist curriculum with the specialist practice and further, link the common components of the specialist practice to future practice. In effect, the relevancy of the work must be made explicit to the learner and supervisor.

An Australian academic group faced with asking for more rotations at hospitals discovered through their investigations that the largest impact would be from making some changes to their ExEd program but also that a **common online orientation** to each organization would allow HR/time reallocation to actually hosting students. (13)

A Northern Ontario study (63) explored undergraduate nurses views on **compromised safety** in the learning environment. The statement "In a clinical environment, it is most unsafe when..." was used to induce students to rank a set of situations. Many of the highly ranked statement referred to the preceptors or students actions but a few were more environmentally-related and serve to reinforce that there are some conditions that must be present for students to feel safe in their actions and patient care:

- Students are overwhelmed by the program's expectations/course requirements.
- Student fails to perform consistent with clinical guidelines and procedures (therefore need clearly expressed and ensure understanding)
- Lack of a positive learning environment was ranked as impacting on safety
- Clinical educator overwhelmed
- Lack of enforcement of policies

Canadian and Australian environments have some instruction for **remote sites** intent on providing high-quality ExEd for students. Remote/rural sites are keen to have visiting students as they are most often challenged to recruit and retain health professionals. An Australian review (64) of the nursing literature categorized findings as political, environmental, community, nursing/peer support, educational isolation and personal factors. Their recommendations were to prepare the participants in advance on these known challenges and try and mitigate where possible through political advocacy, financial assistance to students, use of teleconferencing for student learning sessions, formal meeting times (online) with faculty established in advance of the rotation, facilitation of a pre-rotation visit as anxiety-reducing and a follow-up to ensure preparedness and students' letters/forms that indicate how the placement supports their learning objectives.

In response to consistently low QA results in geriatrics placement, a site determined to be 'impoverished' became 'enriched' to improve student experiences at the site. The framework informs a remediation plan for ExEd programs where issues are evident. The authors established the SENSES framework:

1. Rapidly establishing security by being well prepared for the placement, have a named preceptor allocated early, feel staff have the K/S/A and can raise concerns and issues w/o censure.
2. Made welcome on the team, staff provide with learning opportunities, helped to form relationships with patients
3. See relationship between theory and practicum, form consistent relationships with preceptor throughout the placement, believe placement has clear, consistent philosophy of care
4. Know what goals are to be achieved, believe staff understand and value the goals and will help them to meet them. Mentor will challenge and stimulate and highlight other opportunities.
5. Inspired on placement through exposure to excellent standard of care and positive attitudes to patients. See holistic, person-centered care, own contribution to the work acknowledged by staff and meet their objectives
6. Feel they matter, are valued and that their work similarly is valued and matters

Other Health Professions Literature

REHABILITATION MEDICINE (Physiotherapy and Occupational Therapy)

Two Canadian QA articles described student report of what was important within PT and OT student field environments. One compared the 2 different professional student groups and found that OT students highly valued their physical space (desk/computer) compared to PT students. OTs also placed more value on orientation at their sites and friend/family/classmate supports. The inclusion of an item exploring external factors like social supports may be advisable in eventual surveys to gain an appreciation of whether there are outside forces impacting quality (finances, paid employment, language barriers) (65). The second paper used a survey to identify the following environmental criteria for a positive experience (66):

- Process: Interprofessional team collaboration, progressive independence, learning opportunities
- Foundation: resources, learning environment, attitudes of the individuals
- Outcomes: participant benefits, impact on future learning/practice

Another small low-quality qualitative (low sampling N=9) study of PT students at Mayo clinic (US) identified some environmental characteristics important for student satisfaction (67):

1. Positive work environment contributed to a positive overall experience. Specifically, staff willing to be educators, seeing interprofessional teamwork and a welcome environment.
2. Variety of patients: diverse demographics and diagnoses of patients was viewed positively
3. Collaborative model: allowed students to discuss ideas and patients with student peers.

As of 2011 they did not have a standardised approach to preparing clinical educators in the field and no real regulatory guidance.

A high quality Australian qualitative investigation of what OT students, practice educators and university faculty valued in terms of environmental factors echoes previous findings (68):

- A welcoming learning environment: the whole team welcomed and the student felt respected.
- Detailed orientation: include skills, processes, and expectations from the outset. It reduced anxiety.

DENTISTRY

Dentistry literature only described 2 outreach models in dentistry clinics. One novel model was implemented in Leeds, UK where a single instructor had 8 students under supervision. This has some parallels with interprofessional outreach clinics that some students have started in urban areas where students and faculty are challenged by the high level of disease or social challenges present in the patient population and the need for referral agents on-site. Also, all competencies may not be achievable in these sites. The other was a description of a pilot where clinical placements occurred in rural, suburban and inner city clinics (i.e. outside the traditional academic dental hospital). These placements were found by the students and practitioners to be of benefit and the practitioners would have liked to have students for the entire year. (69,70)

SOCIAL WORK (SW)

Critical reflection has received recent focus in British SW curricula. This 2015 study could arguably be considered a site best practice. The CanExEd Project is currently investigating how to best integrate reflection in ExEd and techniques for measure/capture of students' skill. They formed an "Experiential Learning Group" (ELG) which was an on site practice educator meeting with 12 SC students every 6 weeks. These meetings were supplemented with bi-weekly individual supervision sessions. The meetings were 2 hours in length and held in one of the Long Term Care (LTC) facilities in private. The Facilitator encouraged contributions from all members but guided them through the stages of the group methodology and timeline. Meeting topics:

1. ELG model familiarisation, process of critical reflection applied to on boarding and learning in a LTC facility
2. Nature and impact of cultural norms, practices and expertise
3. Influence of the LTC organisation and management on daily life and care
4. Relationships within the facility

Stages of each meeting:

1. Sharing of preoccupations and experiences
2. ID of major themes from stage 1
3. Analysis and hypothesis formation from above 2 stages

Evaluation found that all participants agreed the meetings were helpful in providing opportunity to explore being in the home across the staff/student boundary and jointly examine the issues that informed and structured daily life. The time and space to reflect on the work, the environment and the organisation was viewed positively. Also provided them with opportunity to systematically evaluate their practice learning with focus on critical reflection. (71)

Interprofessional ExEd (IPEExEd)

A 6-bed IPEExEd ward was developed in Australia to provide a student team (2 nursing, 2 medical, 1 PT, 1 OT, 1 dietician 1 medical imaging, 1 pharmacy and 1 SW student) 3-week placements supervised by an RN. A steering committee developed the documentation and QA procedures. They used the IPCAT and short surveys to measure early outcomes of the initiative. The majority of students had high capability ratings on the IPCAT and 80% rated the placement as good or excellent. Client outcomes were also positive.

The following two papers were more accurately described as multiprofessional rather than interprofessional but are instructive none the less.

There was a particularly interesting Australian investigation of how OT, PT, Pharmacy, Emergency Health, Midwifery Nutritionist, SW and radiography students viewed their placements (7). They used Chan's CLEI (paper based) and collected actual and ideal psychosocial characteristics of the environment. Of the 548 questionnaires returned, 39% came from Pharmacy students. They did not separate out individual profession's scores. Four subscales accounted for 45% of the variance in satisfaction levels: task orientation, student involvement, innovation and personalisation. These findings pointed to a need for better 2-way communication between the preceptor and student. Students expected much more than they received.

The Broken Hill University Department of Rural Health (BHUDRH) described 9 years of experience placing various types of HCPs in their far Western Province (72). Their narrative described guiding principles for developing the program, efficiently delivering it, improving educational opportunities and support for students on placement. The principles include: student exposure to population and therapeutics of the area, care for student interests, safety, and outside-curricular activities while on rural placements. Through their efforts, they now place 17.5 students / week (2005) from 22 different universities.

Stakeholder Feedback on Initial Report #6

- Another crucial site factor that ExEd programs identified as desirable in an educational practice environment was clinical practice excellence. Excellent high-quality patient care is made possible for professionals by the site's commitment and facilitation of high-quality patient care.
- The importance of the preceptor-student relationship should not be ignored although it is not the focus of the report. Perhaps a graphical representation would assist the reader in placing this report in context.
- PRA's regulations must be adhered to and if they include 'direct' supervision, that isn't up for debate.
- Organisations that host students are anticipating the ability to have students present perpetually. They are interested in knowing how to best ensure that students continue to flow through their environments.
- Reviewers of the report seem interested in the MCPI tool.

Summary

The literature pertaining to the factors or conditions necessary for optimal student learning in the field was primarily concentrated in nursing where much attention is paid to the social environment in which learning occurs and secondarily medicine also contained literature of interest. Pharmacy was well represented in terms of position statements but primary research was less evident. There has been a major transition over the last 10-20 years from a teaching-centric to a learner-centric perspective in educational theory. It follows that researchers have shifted from describing behaviours in preceptors that elicit learning outcomes and instead are describing the environmental or cultural factors that must be present in order for a learner to thrive. Different authors/experts present the factors using variable categories and nomenclature but essentially, learning happens in environments that:

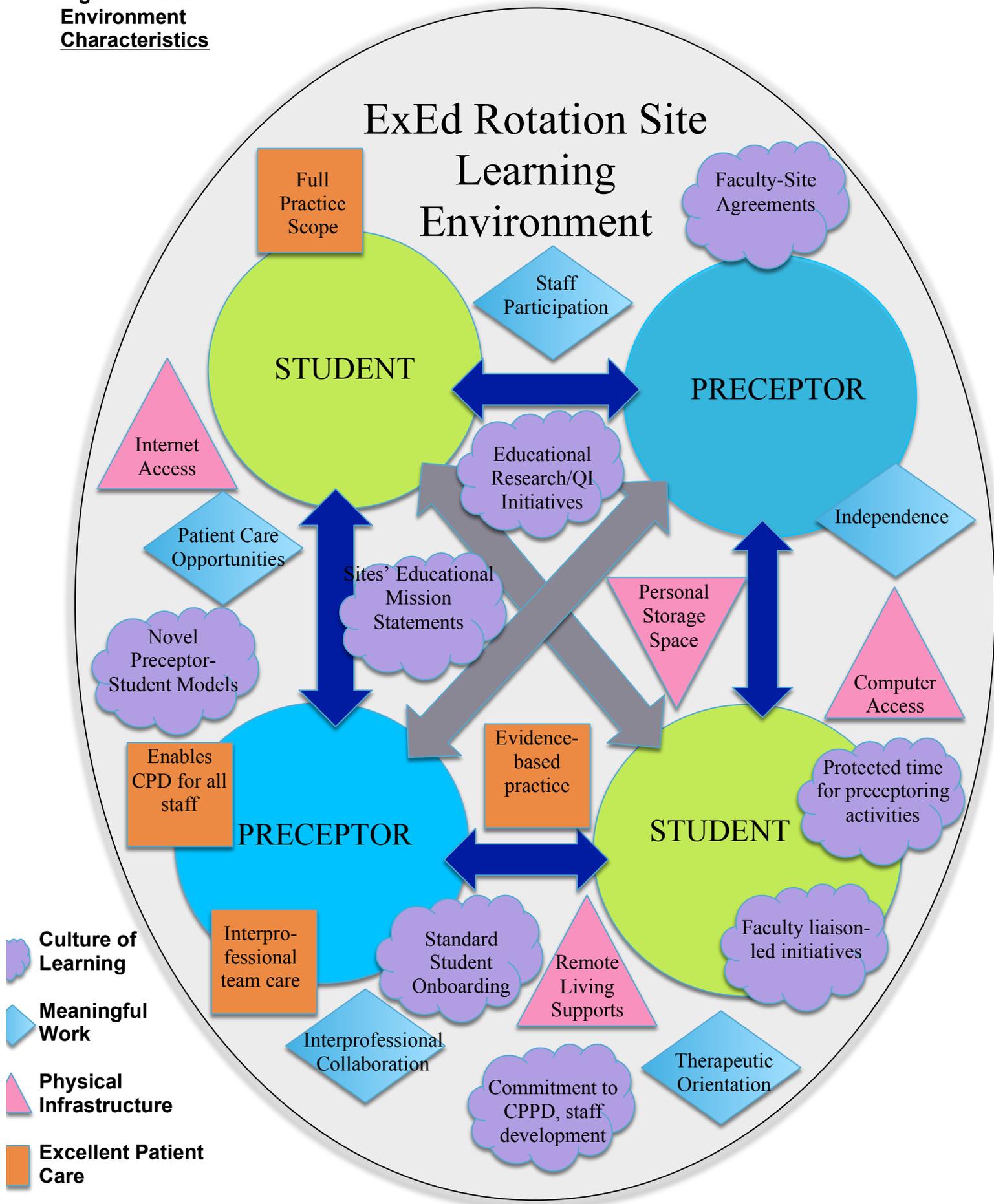
1. **Embrace a culture of learning:** cultures conducive to learning contain factors as complex as belief systems and ethical frameworks resulting in commitment, reflective educational practice, educational mission statements, respect for the learner and their learning needs, equalizing power imbalances, a team approach to educating, strong liaisons with academic institutions, forming meaningful educational relationships, self-esteem and well-being of staff and learners and effective communication. Simple manifestations from these cultures include; student orientation manuals and procedure, students being made welcome and called by name by everyone in the environment, patients expecting their presence, protected teaching time for preceptors through scheduling allowances, an organised student schedule
2. **Provide opportunities for students to care for patients** (in clinical rotations) or contribute to **meaningful non-clinical work** (in other rotations): Students can participate to some level in patient care at every level of their education. While direct observation of the practitioner is instructive, students should be actively engaging and caring for patients. Preceptors require student work increase or maintain patient capacity of pharmacy services. Sufficient volume of patients is necessary for particular learning objectives to be met.
3. **Physical infrastructure:** the Infrastructure (documentation software, web-enabled computer terminals, office space, pharmacy technicians, etc.) for achieving high level of care and supporting learning.
4. **Provide inspired and excellent patient care:** Practices that facilitate using the full scope of pharmacist/other professional practice allow students to see and contribute to the greatest extent possible to ensure positive patient outcomes. To provide high level of care, the organisation must have a commitment to their staff's continuing professional development and to providing comprehensive pharmaceutical care/medication therapy management to meet patient needs. An interprofessional team approach to patient care is paramount.

Figure 1 (next page) schematically represents specific practices that impact favourably on students' learning within the four broad categories described above. These practices allow for effective educational relationships between preceptor and student, staff and student, preceptor and preceptor as well as student and student. The preceptor's educational competency is undeniably vital to a learner's development however competence is only applied fully in an environment that is supportive of the preceptor's relationship with the student, colleagues and patients. The preceptor-site environment relationship could arguably be as important.

The barriers to all sites being exemplary was not systematically observed although there are glimpses of it in the literature where sites had an agenda of work rather than learning (student expected to take on duties to a degree that precludes learning) for the student and a work oriented culture where the preceptor role (orientation, feedback, assessment and reflection) was not possible.

Tools have been developed and tested to measure student satisfaction levels with their sites as well as used to link satisfaction levels with learning outcomes, future performance in courses as well as to exit examinations. The tools can also be used for research purposes to determine whether an educational intervention / change results in different results from a control group. Particularly interesting is medicine's MCPI and DREEM tools and nursing's CLES-T and SECEE inventories. Nursing also developed the SINFLO that measures the support for nurses who educate in the field. A survey instrument should be a component in a larger suite of QA tools that includes regular audits with PRA to ensure a site's good standing, regular QA visits every 3-5 years, renewal of site agreements on a regular basis and annual self-evaluations of criteria necessary for exemplary sites

Figure 1: ExEd Environment Characteristics



D. Discussion

1. Interpretation

The literature is replete with descriptions of professional practice sites, structures and tools used within them. Authors generally end their reports and investigations declaring their implementation/investigation a success. The definition of success is an important one. The literature predominantly examines **satisfaction levels** of students and preceptors as their endpoints. Although important, these results do not necessarily indicate that a student has been challenged or stretched to their optimal/maximal abilities. The study by Pratt (27) would indicate that students might not be able to identify the contextual factors that lead to an excellent learning experience. This could be interpreted to mean student survey items pertaining to environment are of questionable value. Further, student satisfaction survey results do not necessarily mean that placement in a particular practice site results in better **ExEd learning outcomes** achieved or students achieve higher grades on **certificative assessments** (capstones or licensing examination). Indeed, some argue that catering to every student need could result in worse outcomes. The scales used in the Nursing studies focused on the environment as a basis for learning. The characteristics students found important are not at risk of negatively impacting outcomes just that they may not improve concrete learning outcomes. The few studies that linked novel site practices with certificative exams found there to be no difference in student performance. This would be considered discouraging if new approaches/ interventions were the result of poor student outcomes however in most of the scenarios, major revisions to site practices were in response to an increased requirement for students in a site or insufficient field academics to instruct students. In these situations, non-inferiority of student outcomes would be acceptable. If interventions were implemented with an aim to increase preceptor or site satisfaction and retention satisfaction levels and this occurred, then non-inferior student outcomes should also be acceptable. Novel practices or changes to ExEd should be measured using meaningful quality indicators (i.e. performance assessments, validated, reliable surveys that compare intervention group to matched controls, focus groups and interviews).

If a national approach is to be developed to measure/triangulate the impact of the environment/ atmosphere/ culture of an educational site on students' experience, learning outcomes and preceptors' experience, there should be a suite of tools to achieve this accurately and meaningfully:

1. Survey items: A few well-worded and chosen items pertaining to the environment and culture of the site should be included on a national survey. Whether these items would be measured annually or be applied every 2-5 years could be debated depending on whether there were other higher-priority survey items. Starting with Kassam's instrument and adapting some of the excellent items from Nursing's CLEI, CLES-T and/or SECEE, Medicine's PHEEM or MCPI would be a reasonable point of departure.
2. Site visits: have been identified as a best practice in the US. In addition, some PRAs in Canada are beginning site visits to ensure practice (and practitioners) are served by their environments. Canadian pharmacists and preceptors will become accustomed to having peer reviews as a result. Again, it is impossible to conduct these site visits annually but it would be reasonable to make it to every new site as well as each site every 3-5 years. It may be reasonable to discuss the potential for ExEd programs to piggyback on their PRA to visit the site simultaneously or at a proximal time while a student is on rotation. A standard checklist and set of observations should be used to ensure objectivity during these visits. The University of Toronto is on the brink of implementing site visits and has drafted a comprehensive 11-page form ([Appendix F](#)) to guide a full community site visit. This may be a starting point for a national approach to a standard community site visit and could be adapted for primary care and institutional site visits. Self-assessment report: As sites are on-boarded and annually, a self-assessment report of the environment and its' characteristics should be updated. AACP's Practice Site Data Collection Worksheet could serve as a tool for adaptation. It is a long form, which may dissuade sites from taking on the challenge. It may be that an intelligent survey could be developed to streamline the self-report. Data can also be used as information for students deciding how to rank rotation requests and to provide initial preparation upon being matched to the site.

The results from these tools should be used to identify sites that may require remediation or delisting from ExEd Programs' roster as well as identifying sites that are on the leading edge of practice and education and might warrant special recognition, promotion and/or awards.

The evidence stacks up to support regular, intelligent, multi-method measurement of quality outcomes across the country that should be shared and used to benchmark individual practices, professional practice organisations (hospitals, community pharmacy chains, independents, research units, primary care clinics), ExEd programs) in terms of rotation sites. In the wake of the UK's Francis report, nursing academics are using strong words regarding "standardised placement evaluations across all programs" where the current scenario of "...uniqueness of each program's QI results in challenges of advocating an open and transparent culture." They use a system

where each program analyses the QA data, identify concerns or trends of risk and then present the findings to the NHS and implement action plans as needed. (73) While this is a risk-mitigation strategy, it could equally be used to maximise efficacy of programs.

The same ExEd QA measures can be used to determine the benefit of interventions in site qualities either in QA or more traditional educational research.

BEST PRACTICES

Academic partnerships with practice environments improves learning cultures, generates research, delivers evidence-based patient care and career-long professional development. Sustaining partnerships depends on recurrent processes of solid infrastructure, active participation by parties and regular data collection, evaluation and improvement. (46) The recommendations below are necessary for laying the groundwork for, communicating with, promotion of and measuring the quality of educational sites. As specific QI interventions occur, they should be done so with particular outcomes in mind and a measurement strategy built into the design and plan.

Unique rotation sites located in remote or international locations will have an extra set of considerations for ensuring they are ready to host students in the professional environment but also for preparing the external supports students will need for their prolonged stay in their communities. Medicine, nursing and now pharmacy have made some headway in determining the criteria and best practice for setting up these rotations and ensuring students have positive experiences in the environments.

2. Priority #6 Recommendations and Prototypes

Recommendations are divided into back and front end. Back end recommendations include groundwork and infrastructure necessary to support preceptors and students in their educational goals and objectives. Front-end recommendations are factors that impact students directly. ExEd sites and programs are jointly responsible for implementation of these recommendations.

Table 4: Recommendation and Prototypes

Recommendation	Prototype	Responsibility		Contributory Quality Characteristic
		Site	ExEd	
BACK END				
1. Strengthen and formalize Faculty-Site relationships	Faculty-site agreement template that includes faculty commitment to perpetual placement of students in the site as well as grounds for discontinuing student assignment (QA review results)	To review, negotiate and agree	To establish or renew agreements with individual/corporate sites using terminology from template as appropriate	Culture of Learning
2. Identify practice sites that meet baseline criteria for onboarding	Triangulation strategy comprised of: <ul style="list-style-type: none"> National online site self-assessment report* Good standing with the PRA Accredited by appropriate body Standard national site visit check list 	Utilise self-assessment Meet all PRA requirements for site licensure Undertake accreditation Schedule faculty liaison visit	Review (ideally using peer group) 4 components prior to onboarding	Culture of Learning Meaningful Work, Physical Infrastructure Excellent Patient Care
3. Promote ExEd vision of excellent practice sites and achieve site progression within various domains of educational site criteria	Site quality domains Detailed plans for QI in each domain Housed within National Preceptor Development Platform	Undertake QI plans in domains believed to be relatively weak	Provide support for sites' QI plan according to the prototype detailed plan	Culture of learning
4. Collaboratively develop an educationally-focused site mission statement	Faculty facilitator onboarding kit with presentation and activities for site-based workshop. Other content introduces: <ul style="list-style-type: none"> Description of quality improvement dimensions and guidance for achieving excellence Best practice of sites. (E.g. Continuing Professional Preceptor Development, preceptor and student workload reductions, protected time, desirable staffing levels etc. 	Schedule faculty visit and time for wide staff-base	Deliver short, live, staff-wide workshop.	Culture of learning
5. Develop/implement plan for achieving sites' mission statements (protected time and staffing levels/mix, workload reductions, Continuing Professional Preceptor Development (CPPD), QI/research and staff	Faculty facilitator CQI kit content: <ul style="list-style-type: none"> Description of quality improvement dimensions and guidance for achieving excellence Best practice of sites. (E.g. Continuing Professional 	Schedule faculty visit and time for educators and supervisors	Deliver short live workshop for educators and supervisors	Culture of Learning

recognition strategy)	Preceptor Development, preceptor and student workload reductions, protected time, desirable staffing levels etc.			
6. Protect annual allotment of time for CPPD and for staff-development sessions on education	Included in self-assessment criteria, standard site visit checklist, ongoing CQI materials	Include statements in job descriptions/benefits re: CPPD. Ensure interested staff are encouraged to attend general sessions	Deliver staff education session q 1-2 years and when requested by site.	Culture of Learning
7. Student support in isolated/rural/underserved areas	Guidance for potential organisations/communities interested in establishing continual student presence. Guidance includes usual recruitment materials PLUS suggestions for establishing expectations re: timelines, funding, supporting agencies, literature, champions, housing, transportation, living stipends, security and social contacts. Memorandum of understanding formalising interprofessional collaborations in clinical education.	Establish requisite infrastructure for rotation as well as for student living arrangements	Onboard site and conduct time-limited pilot with aim of establishing site more permanently. Liaise with other Faculties (pharmacy or otherwise) who may have established themselves or may be interested in joining and sign MOUs with them to ensure continuity. Identify remote preceptors for students (or interprofessional preceptor).	Physical Infrastructure, Culture of Learning, Meaningful Work, Excellent Patient Care
8. Co-Fund cross-appointed clinical faculty to assist with educating students, guiding preceptors, maintaining site educational standards, executing research and measuring quality outcomes.	Collaboratively develop a national template job description for clinical faculty liaisons in the field	Co-fund and provide infrastructure to support clinical faculty liaisons	Co-fund and provide infrastructure to support clinical faculty liaisons	Culture of Learning, Excellent patient care, Physical Infrastructure, Meaningful work
9. Conduct or participate in educational research and/or continual quality improvement initiatives	Research/QI proposal template for academic and preceptor use. Establish national advisory group for research /QI in ExEd (terms of reference, meeting schedule, priorities). Prepare presentation on topic for delivery to sites	Refer research concepts to advisory group. Participate in research in education	Involve researcher to present (in house or remotely) to sites interested in educational research. There may be opportunity to refer sites to other researchers if wishing to conduct	Culture of Learning

			clinical/practice research	
10. Prepare sites without an onsite pharmacist preceptor for hosting students	Location preceptor preparation kit Location preceptor presentation	Review kit and attend presentation	Provide kit and present to location preceptor/staff	Culture of Learning, Physical Infrastructure, Meaningful Work
11. Optimise the degree of student independence by harmonising jurisdictional (PRA and ExEd Programs') regulations, policies and guidance pertaining to supervision	Collaborate with NAPRA to draft proposal for PRA regulation wording on supervision of pre-registrants. Develop educational tools to translate regulations into practical scenarios	Implement strategies to ensure safe and effective student independence	Educate students and preceptors on how to evaluate a student's level of safe independence.	Meaningful Work
FRONT END				
1. Standard onboarding process for students	Student onboarding schedule and materials package templates. Suggested inclusions: Patient and staff notification Student introduction (name & basic information) in advance Organisation and practice –level policies & guidelines (infection control very important) (1) Therapeutic area modules	Develop and regularly update student onboarding package	Provide suggested template and exemplars for sites. Post package information on learning platform.	Culture of Learning, Meaningful work
2. Computer and internet access, assigned storage space	n/a	May provide laptop or dedicated desktop. Assigned space for personal articles and records	n/a	Physical Infrastructure
3. Student support in isolated/rural/underserved areas	Student onboarding schedule and materials PLUS extra information and preparation for unique location of rotation (survival skills, social sensitivity etc.)	Develop student preparation module and ensure student has reviewed/completed	Provide module via learning platform.	Physical infrastructure, Meaningful Work, Culture of Learning
4. Intelligently implement novel models of preceptor-student configurations	Preceptor and student guidebooks, other prototypes as per Priority #2	Ensure support staff (not just preceptor) aware of the model being used and support the preceptor/s	Disseminate guidebooks and educational materials as per Priority #2	Culture of Learning
5. Provide interprofessional collaboration opportunities for students	n/a	Identify new and creative ways for students to work with other patient care team members	Include as a recruitment self-assessment criteria, site visit checklist and in strategies for CQI at sites.	Meaningful Work

*The online self assessment should contain (not exclusively) breadth of patient conditions/populations, existence of student-designated space, computer/internet access, access private patient meeting room, statements of commitment to learning, research initiatives/participations, CPPD of preceptors and supporting staff, opportunities for interprofessional collaboration

QA/QI Measurement

3. Implementation Plan

The following flow chart provides an overview of the steps and timeline to implement recommendations, sustain implementation and measure outcomes. The chart works on the premise that working group (WG #6) begins work in the winter of 2016.

Table 4: Timeline of Steps for Prototypes

Date	Step	Description	Notes
Winter 2016	Introductory WG meeting	Agenda (in order of importance): 1. Determine other membership for WG #6 and invite to first meeting (institutional and community preceptor, corporate decision-maker, Program Evaluation SIG member) 2. Divide up prototypes to interested pairs/individuals:	reprioritization of the prototypes required?
Spring 2016	Initial work on First Prototypes	Each item drafted and presented to the group for feedback.	
Summer 2016	Refine	Return with final draft versions of prototypes Identify programs that have need to test the draft versions and provide working versions for their use this academic year	
Fall 2016	Test and revisit next set of prototypes of lower priority	If there are refinements/discoveries made early in the academic year, bring to the fall meeting. Divide up work on the final 7 prototypes, review order of priority and set next timeline for review	
Winter 2017	Test results	Further refinements/discoveries brought to the meeting for incorporation in next version for wider use in more ExEd programs	

4. Quality outcome measurement

The table below provides a selection of indicators and measurement tools that may be utilised for this Priority. Once selected, changes to the tools should only occur after careful deliberation as changes weaken the ability to compare over multiple years and between multiple programs. Further research and engagement of experts regarding best practice for program evaluation of ExEd is imminently required. The findings from each ExEd program should be combined in a national statistic so that each ExEd program can benchmark against the national average.

On a continual basis the following measures can be used to identify issues and highlight successes in ExEd sites' practices:

- A. Recruitment Triangulation
 - Scoring self assessment report
 - Good standing with PRA
 - Results from site visits (standardized national forms)
 - Accreditation of organization through recognized accrediting body
 - Faculty-site formal agreement signed
- B. Continual QI/Excellence Triangulation every 2-3 years
 - Scoring self-assessment report

- National Survey items results (from a validated, reliable survey) regarding the practice education site originating from students and preceptors
- Student and preceptor focus group findings (q 2-3 years)
- Results from site visits (standardized national forms)
- Annual confirmation of good standing with PRA

Table 2: Rotation Site Performance Indicators for ExEd (74)

Indicator	Measurement Tool	Possible Item / Action	Focus
A. Sites meeting minimal recruitment standards to be considered appropriate for hosting students	% of sites that meet minimum triangulation criteria	See Back End Recommendation #2	Rotation Site
B. Sites triangulated as exemplary rotation site designation	% of sites that meet minimum triangulation criteria for excellence in one or more domains	Triangulation using next 6 tools	Learner Rotation Site
	Annual student evaluation of site's conduciveness to teaching and learning	National evaluation survey will require a set of questions to discern how well a site facilitates/supports/embraces its role as an educational environment	Learner Rotation Site
	Annual preceptor evaluation of site's conduciveness to teaching and learning	National evaluation survey will require a set of questions to discern how well a site facilitates/supports/embraces its role as an educational environment	Preceptor Rotation Site
	Q 2-3 year site self-assessment report	A short online tool that collects pertinent artefacts known to be linked with cultures and environments that support learning	Rotation Site
	Q 2-3 year site visits	A comprehensive set of interview questions and observations that can be analysed to determine site excellence	Rotation Site
	Focus groups of students and preceptors	Every 3 years gather 3-5 students who rotated through the site for a conversation. Gather as many preceptors as possible for separate focus group.	Rotation Site Learner
	Good standing with PRA	PRA practice site register reviewed annually for disciplinary actions	Rotation Site
C. Progression rate of new sites to designation as exemplary rotation site within 3-5 years of onboarding	Review onboarded sites from last 3 years to determine progression	As per Q3-5 year site self-evaluation (above)	Rotation Site
D. Sufficient number of sites recruited annually (10-15% overage annually for each rotation type)	Statistic: number of established rotations / number of required rotations = 1.1 to 1.15	Although many reasons for this not being achieved, consider whether criteria are to restrictive/unrealistic.	OEE

E. Conclusion

While the impact of the preceptor on the quality of student rotations is paramount, the impact of the rotation environment cannot be overlooked, as it is in this social environment that learning flourishes. Focusing ExEd resources on:

- rotation sites fostering exemplary educationally-focused characteristics

- maintaining a ExEd presence in educational sites
- applying consistent recruiting criteria and site onboarding process
- augmenting sites' quality
- undertaking educational research into ExEd site practices
- quality assurance triangulation using student and preceptor survey, focus groups, site visits and site self-evaluation report

Establishing sites that act to fulfill these recommendations will result in practice learning environments that embrace a culture of learning, facilitate reasonable student independence, provide adequate physical infrastructure to maximise learning and ensure students learn in environments where excellent patient care/professional standards are upheld.

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