Organizational Student Placement Practices and Recruitment

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Acknowledgement

The authors of this paper wish to acknowledge members of the student placement rapid review reference group. This group included representatives from all public health divisions. Members of the reference group provided insight into the development of the conceptual model and applicability and transferability of the review findings at Peel Public Health.
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Key Messages

1. Quality student placements require actions at the organizational and practice levels and are associated with:
   - Enhanced recruitment
   - Increased ability to offset student placement costs
   - Decreased student attrition from the profession

2. Practices designed at management or senior management level create the organizational infrastructure necessary for the work of the preceptors and supervisors at the practice level. Senior management influences the quality of student placements through strategy, process and measurement.

3. At the practice level, the role of the preceptor is to facilitate learning and develop professionalism in students.
Executive Summary

Peel Public Health (PPH) supports student placements across the organization. These placements use organizational processes to recruit and place the student, time spent defining the student experience and mentoring the student, physical space and access to technology, and in some cases remuneration. These efforts and costs can be offset by benefits to the organization if students are subsequently recruited to staff positions. Student placements provide staff an opportunity to observe students in the workplace before they are hired and provide the student an orientation to the practice of the organization.

PPH’s approach to student placements is not centralized and varies across divisions and discipline groups. This leads to inefficiencies and provides little opportunity for economies of scale, overall organizational strategy or processes. The purpose of this rapid review is to understand how organizational practices for student placements can increase student recruitment into the workforce. The literature review question is: Which organizational student placement practices lead to successful recruitment?

A focused literature search was conducted. Search results were assessed for relevance based on pre-established criteria. Three articles were critically appraised and found to be of moderate quality. These three articles, one systematic review and two literature reviews, form the basis of the findings of this review.

Successful student placements are mutually beneficial to the student and the organization. The literature identifies practices that build quality in student placements at the organizational level (program and senior management) and at the practice level (preceptor-student). Quality placements are associated with decreased attrition from the profession, enhanced recruitment, and the increased ability of the organization to offset the costs associated with student placements.
Quality at the organizational level

Student placement planning should be integrated into the workforce needs of the organization. Senior management influences the recruitment of students and the quality of placement that students receive through:

a) Directing strategic engagement with select educational institutions
b) Ensuring that adequate processes are in place for students and preceptors
c) Evaluating outcomes through indicator selection and measurement
d) Ensuring policies and procedures at the organizational level support the work of the preceptor at the practice level.

Quality at the practice level

The practice level is where the student is directly supported by a preceptor or supervisor. The role of the preceptor is to facilitate learning and develop professionalism. Student learning is facilitated when individual students’ needs are considered in the learning plan and the workplace environment is optimized to meet their learning needs. To develop professionalism, the preceptor supports the student to advance their competencies and professional identity associated with their discipline.

The findings of the rapid review were brought to an applicability and transferability meeting that included front line staff, managers and supervisors involved in student placements across divisions. The discussion revealed that there was a desire for a mixed model of centralized and decentralized support for student placements and welcomed the recommendations. The group also felt that an interdivisional working group would be beneficial. The findings of the rapid review and the applicability and transferability outcomes were used to develop recommendations. The recommendations identify next steps for ensuring that student placement practices at PPH are grounded in evidence.
1 Problem Statement

Student placements are supported at Peel Public Health (PPH) for a variety of professional disciplines and roles. Support for student placements entails organizational processes to recruit and place the student, staff mentoring time, physical space and in some cases remuneration. If students who have had a placement are eventually hired as staff, this investment can benefit the organization. These benefits include a partially completed orientation to Peel Public Health, and an increased likelihood of a ‘good fit’ with the organization. In addition, hiring supervisors will have had the opportunity to assess the student over the term of the placement. The purpose of this rapid review is to understand how organizational practices and processes for student placements can be utilized to increase their recruitment into the workforce.

Anecdote

In a typical month:

- The student placement coordinator receives eight to ten requests for student placements
- The Manager of Education and Research has at least four conversations with staff pursuing further education who are wondering about their options for a student placement
- Requests sent to managers/supervisors to place a student are met with concerns about capacity

The Manager of Education and Research wonders: How do we ensure that the hours we spend on building new student skills are used to develop new employees?

2 Context

The opportunity for students from a variety of disciplines to have experience with public health practice is key to shaping the public health workforce of the future. Partnerships between academic institutions and local boards of health are a successful mechanism for preparing and
recruiting professionals into the public health workforce. Increased demand for public health student placements has been reported in Ontario.

The role of public health units in developing workforce capacity is outlined in the Ontario Public Health Standards. They state “boards of health shall foster an interest in public health practice for future health professionals by supporting student placements.” At PPH, the next steps for the workforce development strategic priority are identified in the 2014 strategic plan update ‘Setting the Pace’. They include the targeted use of student placements to recruit staff in key areas throughout the workforce.

In addition to potential recruitment opportunities for the organization, staff support student placements as part of their professional and organizational role, or as related to academic cross-appointments and existing linkages with academic institutions. An internal survey involving 42 supervisors reveals that staff report a sense of rejuvenation from the enthusiasm and new knowledge students bring to the workplace. Between 2009 and 2013 PPH hosted 194 student placements across all divisions. These placements were both paid and unpaid; and varied in duration, discipline, and by academic expectations and educational institution. Academic institutions and students currently use multiple methods to contact PPH to request a student placement. These include connecting with program staff, calling divisional contact centres, or making requests online.

PPH holds academic affiliation agreements with 13 academic and health institutions across Ontario and beyond. These agreements were established based on individual student or team needs. They were established without a long term plan or a clear understanding of each academic institution’s approach to the practice of public health.

Subsequent recruitment data for students placed at PPH is not formally collected. Phone calls to individual supervisors reveal that nearly 20% of students who had a placement at PPH in
2013 were subsequently hired. This positions student placements as a potentially viable approach to recruitment, and merits further exploration.

3 Conceptual Framework

The model (Appendix A) begins with organizational workforce needs and three recruitment methods. The emphasis here is on student recruitment. Academic and student drivers that are outside of PPH’s control (e.g. duration of placement, or learning objectives) are noted. The blue arrow depicting *Organizational student placement practices* is the information that is sought through the rapid review. This model may be viewed as a pre-cursor to PPH’s orientation conceptual model.²

4 Literature Review Question

The literature review question is: Which organizational student placement practices lead to successful recruitment?

In PICO format, this research question is:

<table>
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5 Literature Search

A literature search was conducted from July 2, 2014 to July 18, 2014 (refer to Appendix B for detailed search information). The following bibliographic databases were searched through the Ovid interface: Medline, Medline In-Process & Other Non-Indexed Citations, Global Health, the Cochrane Library, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Health Business Elite through the EBSCO platform. A textbook search was conducted using Wordcat and grey literature was identified by searching guideline sites and other topic specific
sites. Hand-searching of reference lists was conducted on three relevant articles. The search was limited to papers published in English from 2004 to 2014.

6 Relevance Assessment

Two independent reviewers assessed relevance based on title and abstract. Discrepancies were resolved by discussion.

Inclusion Criteria:

- Papers that linked student placements with recruitment
- Papers that described specific student placement practices, approaches, methods, programs, tactics or processes for organizations
- Synthesized literature including grey literature and textbooks

Exclusion Criteria:

- Papers that focused on the student experience or attributes of the student placement
- Secondary school student placements, ‘Nurse Residency’ programs or ‘rural’ clinical placements
- Papers that acknowledged student placements as a part of an overall strategy but did not discuss specific elements of student placements
- Discussion papers, interviews, student practicum handbooks, manuals, or guides

7 Search Results

The search yielded 1076 articles; seven were duplicates. Following relevance screening, six articles were retrieved for full text assessment; three were excluded, leaving three for critical appraisal. Three articles including one systematic review and two literature reviews were assessed for quality. Refer to Appendix C for the detailed Search Flowchart.
8 Critical Appraisal

Two reviewers critically appraised the three articles independently using the Critical Appraisal Skills Program (CASP) Systematic Review Checklist\(^1\). Discrepancies were resolved by discussion. Three articles of moderate quality are included.

9 Description of Included Studies


The purpose of this review is to describe quality mentoring of student nurses. In their introduction the authors link adequate support of students and positive student placements with increased student enthusiasm and retention in the profession of nursing. Following a broad search of the literature (7 databases searched including CINAHL, Medici, PubMed, ERIC, EBSCO Host, Web of Science, and Cochrane Library) and the application of established inclusion and exclusion criteria the authors critically appraised included studies using a validated tool. The twenty-three included studies used quantitative, qualitative and mixed methodologies. Studies were limited to the term *mentoring* in nursing and were primarily from the United Kingdom. Sample sizes ranged from 3 to 48 participants. Details on individual studies were not provided. Analysis of the included studies was completed using inductive content analysis.

*Maertz CP, Stoebel PA, Marks J. (2014). Building successful internships: Lessons from the research for interns, schools and employers*\(^6\)

The objectives of this narrative literature review were to determine types of internships, outline considerations surrounding the use of internships and describe how to ensure they are leading to benefits for employers, educators and interns. In their introduction the authors
describe that there is sufficient cumulative evidence from the literature to identify a potential recruitment and orientation benefit to employers and to facilitate the success of internships. Details of the review methods are limited. The author’s reference 62 publications, which include book chapters and peer-reviewed journal articles. The method of data synthesis is not described, but findings are categorized by three key stakeholder groups; interns, employers and schools. For the purposes of this review, only findings related to employers are included in data synthesis.


The aim of this review was to identify the structures, processes and resources required and to describe indicators of quality student placements in health care organizations. This review was conducted by a Canadian health authority that includes public health. A search was conducted using the Medline, CINAHL, Google and Google Scholar databases from 1997-2007 and specific search terms are provided. A snowballing technique was used to identify additional studies. The authors screened publication titles and abstracts of search results for relevancy. Results include single studies and grey literature. Critical appraisal of included studies was not conducted. A framework is proposed as a way to build quality in practice education. The synthesized findings of the review are used to develop indicators that can be used to evaluate practice education processes in organizations. Refer to appendix D for detailed data extraction tables of all included studies.

10 **Synthesis of Findings**

These findings contribute to our understanding of organizational practices and processes that facilitate quality student placements. Quality student placements are associated with:

- Enhanced recruitment
- Increased ability to offset student placement costs
- Decreased student attrition from the profession

Quality in student placements is achieved with actions at both the organizational level and the practice level.

**Organizational Level**

The student placement practices that are designed at the management or senior management level create the organizational infrastructure necessary for the work of the preceptors and supervisors at the practice level. Senior management influences the quality of placement that students in the organization receive through strategy, process and measurement.

**Strategy**

The role of the organization in student placements is established and supported by senior leaders through strategic planning and policy development. Responsibility for student placements lies with senior leaders. The utilization of student placements as a recruitment strategy is reflected in planning documents. Senior leaders set an expectation that all program areas support and participate in student placements and this is evident in job descriptions and performance appraisals. Senior leaders advocate for academic institutions to recognize staff who supervise students through: academic cross-appointments, access to facilities and services and subsidies for academic courses.

Senior leaders regularly review student placement data and engage in planning activities such as: allocate resources, collaborate with academic institutions and speak publicly about the importance of the organization’s role in student placements. The organization and academic institution work together on joint initiatives including research, supporting preceptors and political advocacy. Student placement data are provided to relevant educational ministries of government and efforts are made by the organization to support student placements in disciplines experiencing recruitment challenges.
Adequate space, access to technology and resources for students are considered in student placement planning. Planning for student placements considers capacity of the organization and the needs of the workforce. Organizational budgets reflect resources required for student placements.

**Process**

Process refers to the organizational methods used to coordinate and support student placements internally and interact with academic institutions externally.

A collaborative partnership between academic institutions and the organization is mutually beneficial and fosters the flow of relevant workplace information to the academic institution. Established processes between academic institutions and workplaces are necessary to:

- Inform the academic institution of organizational updates that may impact student placement capacity
- Negotiate numbers and types of student placements
- Receive and confirm placements
- Establish academic affiliation agreements

When entering a new affiliation agreement, standard processes are established and followed. These include standard templates, consultation and systems to flag affiliation agreements to be updated. Relevant information contained in affiliation agreements is communicated to staff throughout the organization as appropriate.

Managing student placements in an organization requires a defined structure and is further supported by role clarity and clear expectations of staff. Responsibility for coordinating, planning and liaising with external stakeholders is assigned to specific staff. An interprofessional student placement committee regularly reviews student placement data and emerging issues and
recommends future actions to staff. Established processes guide whether, when and how post-placement employment opportunities are communicated with the student.

Middle managers are responsible for allocating staff and facilities for student placements. If middle managers have a positive attitude towards the organization’s role in student placements this positively influences the workplace learning environment. Students are given an opportunity to participate in new and emerging practice areas within the workplace, including among interprofessional teams. To support their learning while in the workplace students require adequate space, appropriate equipment, access to internet, library services, study areas, desk/office space, e-learning and videoconferencing.

Staff who achieve high trust and motivation of students, can explain the rationale behind assignments and can cultivate recruitment benefits for the organization and the student are identified as preceptors. There is an established process for identifying and recruiting preceptors and for providing support and education to all staff supervising students. Sufficient staff should be trained and willing to mentor students to meet anticipated student demand. Flexibility with workload and additional support for staff mentoring a student is provided. Preceptoring models that allocate more than one student per staff member (including groups of students) are considered. All staff who precept students are given recognition and thanks from the organization.

If problems arise during a student placement there are established policies, processes and systems in place to guide staff, faculty and students. This includes a mechanism for reporting, monitoring and tracking complaints, and processes for resolving broader conflicts, problems or dissatisfaction.
Measurement(6,8)

Organizations engaging in student placements determine what student placement data will be gathered, how they will be collected and how these data will inform student placement practices. Student placement data are used to:

- Estimate organizational capacity
  - where, when and how many students can be supported
  - available and potential preceptors
- Track utilization (where students have been placed)
- Evaluate performance
  - linkage of student placements with identified areas of workforce need
  - quality of placement learning (educational outcomes)
  - recruitment as an outcome indicator

Electronic systems are used to capture and analyze student placement data. Data are regularly reviewed, and trends monitored over time. Relevant data are communicated with stakeholders (internally and externally) as appropriate.

Practice Level(5,6)

The practice level is at the interface between the student and the preceptor. The preceptor role is to facilitate learning and develop professionalism.

Facilitate Learning

Student learning is facilitated in a supportive workplace learning environment and through establishing an individual learning plan.
**Supportive Learning Environment** (5,6)

A supportive learning environment is established in advance of the student’s arrival and maintained for the duration of the placement. To prepare the workplace prior to the placement:

- Communications take place between the academic institution and the organization to determine appropriateness of the placement based on the student’s learning needs
- A preceptor and substitute preceptor are identified
- The preceptor familiarizes themselves with relevant information from the student’s academic institution
- Learning opportunities for the student are arranged in advance including educational events and workshops
- Regular meetings with the preceptor and student are planned and time allotted

Once the student has arrived, the preceptor:

- Acquaints the student with the working environment
- Supports the student’s equal participation in the work team by familiarizing the student with staff
- Collaborates with others involved in the students learning experience including clients, colleagues and regular meetings with the preceptor, student and representative of the academic institution

**The Individual Learning Plan** (5,6)

Together with the preceptor, the student develops a personal learning plan that reflects student skill level and anticipated learning outcomes. The learning plan includes:

- Clear expectations with consideration for student’s areas of development
- Student participation in the workplace (attending team meetings, interacting with other staff or clients)
- Assignment of work that is significant to the organization and allows the student to use a variety of skills
- Increasing student responsibility to work independently
- Objective, timely and constructive feedback based on learning outcomes and student performance
- Career planning support from the preceptor

**Develop Professionalism\(^5\)**

The student is supported to develop the competencies, professional identity and attributes associated with their discipline. The preceptor supports student development using a variety of actions while working with them in a professional relationship.

**Competence\(^5\)**

The development of professional competence includes fostering the student’s clinical skills, theoretical knowledge and critical thinking skills. The preceptor supports the student to improve communication and clinical skills through hands-on teaching, interpersonal interactions and advising the student on how to use nursing methods in the clinical environment. The preceptor teaches, guides, advises and councils the student to enhance the student’s understanding of, linking theory to practice and how to search for and apply knowledge.

Mentoring actions by the preceptor create opportunities for the student to develop and deepen their critical thinking skills, to reflect on their practice and develop problem-solving and decision-making skills in difficult clinical situations. These mentoring actions are:

- Active listening, discussion and sharing of experiences
- Encouraging students to reflect, ask questions, and debate issues
• Supporting students to express their opinions and ideas, understand rationale and evaluate their practice systematically

Identity

The preceptor treats the student as a person and a professional. The preceptor empowers the student to develop professional attributes and identity by engaging in a professional relationship and taking actions to promote the student’s growth in the profession. In a professional relationship the preceptor treats the student as an equal individual and a colleague, this includes respecting and honouring the student, taking care of and showing empathy for the student. The preceptor and student work as cooperative partners and share mutual, trusted communication.

The preceptor promotes the student’s professional growth and commitment to their profession by:

• Acquainting the student with the work of the role
• Role-modeling
• Showing various aspects and functions of the role
• Demonstrating the demands of the profession

The preceptor shows the student what it is like to work in the professional role. They provide an image to the student of the different aspects and functions of the profession as an occupation. The student is motivated to continue to study in the profession in working with the preceptor. The student’s commitment to their profession is fostered through this relationship.

11 Applicability and Transferability

The student placement reference group met to discuss the literature review and the applicability and transferability of the findings. Findings from the literature review that were
derived from the nursing literature were discussed and felt to be transferrable to other discipline groups. The applicability and transferability worksheet was completed by all participants; responses and notes from the discussion were compiled (Appendix E). The following is a summary of the discussion.

In the current political climate of fiscal restraint, the strategic and purposeful use of resources related to student placements would be well supported. Previous support for student placements by Regional Council and their fit with the workforce development strategic priority are promising indicators of political acceptability of the review findings. Increased clarity and consistency in student placement practices are desired by PPH staff. This could increase the profile of PPH among educational institutions, students and other health units.

Funding for public health student placements is variable. Public Health employers, unlike their acute care counterparts, often do not consistently receive funding for student placements. While academic institutions receive tuition funds from students for courses including placements this funding is not passed along to partnering public health organizations. Leveraging resources currently being invested in student placements to offset recruitment and orientation costs enhances the sustainability of employer supported student placements. Potential costs include staff time, preceptor training, and space/technology requirements.

There is a clear willingness of staff to participate in student placements in each of the divisions. Along with this willingness is a desire for more centralized support in the form of organization, data collection and communications. Limited centralized capacity and the current well-developed initiatives in some discipline groups such as dietetics and public health inspectors lend support to using a blended centralized/decentralized approach. Use of such an approach would harness current capacity and expertise in the divisions (decentralized) while supporting and organizing efforts across the organization (centralized).
A cross-departmental committee focused on student placements would be well supported as it would help streamline student placement communications. Existing infrastructure such as LEAP online registration system could be used for scheduling student training. The current efforts related to orientation also offer potential opportunity for collaboration and costs savings.

The student placement reference group was in favour of proceeding with recommendations. Program development should include careful consideration of the needs of internal staff looking for placements, hosting students where there is very little potential of future employment, willingness of preceptors, competing priorities, the circumstances under which students are paid and the potential disinterest of academic institutions in this type of intentional approach.
Recommendations

1. Workforce needs should drive student placement strategy, organizational processes and interactions at the practice level.

2. An interprofessional, cross-divisional committee should be created with a mandate to develop clear, consistent, organization-wide policies and procedures including but not limited to:
   - assessment of workforce recruitment needs
   - assessment and placement of students and internal staff seeking placements
   - preparation of the workplace, including physical and technical requirements
   - payment for students
   - the appropriate introduction of post-placement employment opportunities

3. The organization requires a knowledge translation strategy that supports middle managers, preceptors and staff to use the student experience to develop professionalism in public health practice and facilitate learning through a supportive environment and individual planning for students.

4. Collaboration and communications with academic institutions should be part of the strategy development and take place at a senior level.

5. The preceptor role should be supported with training, adequate time, recognition and guiding policies.

6. Student placement data should be collected and used to plan operational processes and evaluate effectiveness. Recruitment outcomes will serve as an indicator for student placement processes and practices.
References


(3) Hilliard, Tracy M., Boulton, Matthew L. Public health workforce research in review. American Journal of Preventive Medicine 2012;42(5S1).


Appendices

Appendix A: Concept Model
Appendix B: Search Strategy
Appendix C: Literature Search Flowchart
Appendix D: Data Extraction Tables
Appendix E: Applicability & Transferability Worksheet
Appendix A: Concept Model

Enhancing Recruitment through Student Placements

Recruitment Methods

Organizational Workforce Needs

Posting

Competitive Recruitment

Student Recruitment

Academic and Student drivers

Organizational Student Placement Practices

Application Process

Selection

Hiring Process

New Employee
Appendix B: Search Strategy

ABI Inform

Ran on July 2, 2014.

(((ab(work OR student* OR practise) OR ti(work OR student* OR practise)) AND (ti(placement*) OR ab(placement*))))) OR subject("Placement") OR (ti(experiential I learning) OR ab(experiential learning)) OR (ti(work experience*) OR ab(work experience*))))) AND SU.EXACT("Students") AND PEER(Yes)

ERIC Database

“Practicum” or “Placement” limited to peer reviewed only

Medline


Search Strategy:

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2  exp Clinical Clerkship/ (7449)
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5  ((student* or clinical or field or practice or work) adj2 placement*).ti,ab. (4461)
6  ("supervised work experience" or clerkship or practicum*).ti,ab. (8444)
7  (fieldwork or internship* or residency or residencies).ti,ab. (47161)
8  (work* adj2 learning).ti,ab. (3917)
9  "experiential education".ti,ab. (268)
10 recruitment*.ti,ab. (130308)
11 exp Personnel Selection/ (23986)
12 10 and 11 (4366)
13 10 or 12 (130308)
14 3 or 4 or 5 or 6 or 7 or 8 or 9 (116221)
15 13 and 14 (1657)
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17 remove duplicates from 16 (560)
18 limit 17 to yr="2010 -Current" [Limit not valid in DARE; records were retained] (284)
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**CINAHL/Health Business Elite**

Monday, July 21, 2014 10:01:35 AM

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<td>1,516</td>
<td></td>
</tr>
<tr>
<td>S7</td>
<td>TI placement* OR AB placement*</td>
<td>Search modes - Boolean/Phrase</td>
<td>2,560</td>
<td></td>
</tr>
<tr>
<td>S6</td>
<td>TI ( student* or clinical or field or</td>
<td>Search modes -</td>
<td>944,933</td>
<td></td>
</tr>
<tr>
<td>S5</td>
<td>TI (&quot;practise education&quot; or &quot;practice education&quot; or &quot;intraprofessional learning opportunit*&quot; or &quot;interprofessional learning opportunit*&quot;&quot;) OR AB (&quot;practise education&quot; or &quot;practice education&quot; or &quot;intraprofessional learning opportunit*&quot; or &quot;interprofessional learning opportunit*&quot;)</td>
<td>Boolean/Phrase</td>
<td>EBSCOhost Research Databases Search Screen - Advanced Search Database - Health Business Elite;CINAHL Plus with Full Text</td>
<td>1,095</td>
</tr>
<tr>
<td>S4</td>
<td>(((((DE &quot;INTERNSHIP programs&quot; OR DE &quot;BUSINESS internships&quot; OR DE &quot;SCIENCE -- Study &amp; teaching (Internship)&quot;) OR DE &quot;FIELDWORK (Educational method)&quot;) OR (DE &quot;PRACTICUMS&quot; OR DE &quot;INTERNSHIP programs&quot; OR DE &quot;STUDENT teaching&quot;) OR (DE &quot;EXPERIENTIAL learning&quot;) OR (DE &quot;COOPERATIVE education&quot;) OR (DE &quot;CLINICAL clerkship&quot;))</td>
<td>Boolean/Phrase</td>
<td>EBSCOhost Research Databases Search Screen - Advanced Search Database - Health Business Elite;CINAHL Plus with Full Text</td>
<td>3,164</td>
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<tr>
<td>S3</td>
<td>(MM &quot;Fieldwork&quot;)</td>
<td>Boolean/Phrase</td>
<td>EBSCOhost Research Databases Search Screen - Advanced Search Database - Health Business Elite;CINAHL Plus with Full Text</td>
<td>537</td>
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<td></td>
<td>Text</td>
<td>Search modes - Boolean/Phrase</td>
<td>Database</td>
<td>Search Screen - Advanced Search</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>S2</td>
<td>(MM &quot;Student Placement&quot;)</td>
<td>Search modes - Boolean/Phrase</td>
<td>Interface - EBSCOhost Research Databases</td>
<td>Health Business Elite; CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S1</td>
<td>(MM &quot;Internship and Residency&quot;)</td>
<td>Search modes - Boolean/Phrase</td>
<td>Interface - EBSCOhost Research Databases</td>
<td>Health Business Elite; CINAHL Plus with Full Text</td>
</tr>
</tbody>
</table>
Appendix C: Literature Search Flowchart

Overview of Search Process
(July 2014)

- Medline (560)
- CINAHL/EBASE (190)
- ABI (315)
- Grey (3)
- Hand searching (8)

Total identified articles (1076)

Removal of duplicates

Duplicates (7)

Primary relevance assessment

Non-relevant (based on title and abstract screening) (1069)

Potentially relevant articles (6)

Relevance assessment of full document versions (6)

Non-relevant articles (3)

Total relevant articles (3)

Quality assessment of relevant articles (3)

Weak articles (0)

Moderate Articles (3)
## Appendix D: Data Extraction Tables

<table>
<thead>
<tr>
<th>Items Reviewed</th>
<th>Review #1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information &amp; Quality Rating for Review</strong></td>
<td></td>
</tr>
<tr>
<td>Author(s) and Date</td>
<td>Jokelainen, M., Turunen, H., Tossavainen, K., Jamookeeal, D. &amp; Coco, K. (2010)</td>
</tr>
<tr>
<td>Country</td>
<td>Finland</td>
</tr>
<tr>
<td>Title</td>
<td>A Systematic Review of Mentoring Nursing Students in Clinical Placements</td>
</tr>
<tr>
<td>Quality Rating</td>
<td>Moderate (CASP)</td>
</tr>
<tr>
<td>Objectives of Review</td>
<td>To provide a unified description of student mentoring to ensure quality placements. The authors link the outcome of recruitment with quality mentoring.</td>
</tr>
</tbody>
</table>

### Details of Review

<table>
<thead>
<tr>
<th>Number and Quality of Studies Included</th>
<th>23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studies critically appraised using the following criteria (background; aim of the research and research question; design and method; study group/sample; material and data collection; data analysis; and results). Articles scoring 15-30/30 using a validated tool were included in the review.</td>
<td></td>
</tr>
<tr>
<td>Types of Studies</td>
<td>Quantitative (4) Qualitative (13) Mixed methods (6)</td>
</tr>
<tr>
<td>Description of Included Studies</td>
<td>Included studies are primarily from the UK and had sample sizes of 3-48 participants. No detail on individual studies is provided</td>
</tr>
<tr>
<td>Search Period</td>
<td>January 1986-December 2006 (timeframe selected because mentorship first became a subject heading in CINAHL in 1986)</td>
</tr>
<tr>
<td>Number of databases searched</td>
<td>7 (CINHAL, Medci, PubMed, ERIC, EBSCO Host, Web of Science, Cochrane Library)</td>
</tr>
</tbody>
</table>

### Inclusion and Exclusion Criteria

**Inclusion Criteria**

1. Publications from 1986-2006
2. All languages
3. Terms/concepts/search terms used: ‘Mentoring’ (mentor*) OR Preceptoring (Precept*) OR ‘Supervision’ (supervis*) AND ‘Clinical’ (Clinic*) AND ‘practice’/‘training’ (pract*, train*) AND ‘student’ (stud*)
4. Undergraduate/pre-registration student mentoring in clinical practice or training (in placement), which is included in their professional education (bachelor level)
5. Different fields of science concerning the human content: health Sciences (Nursing Science, Medical Science, Pharmacy, Nutrition, Physical Education), Social Sciences, Pedagogy, Science of Economic and Business law
6. Published articles in valid peer-reviewed scientific journals (referee evaluation used, at least two reviewers)
7. Possibility to obtain and handle with reasonable resources and time

**Exclusion Criteria**

Articles which were non-English, from a discipline other than nursing or used a term other than mentorship (such as preceptoring or supervising) were eliminated.

23 publications were selected for review.
Type of Analysis | The content of all studies (both quantitative and qualitative) were analyzed using inductive content analysis. The method of content analysis was described using a systematic method and included identifying similar/dissimilar word/phrases which were then categorized.
---|---
* | A Unit of Analysis (one combination of words or the meaning of a sentence or phrases) was identified
| Data were reduced
| Similarities/dissimilarities were sought from the reduced impressions
| Impressions with the same meaning were gathered into one classification
| After undergoing categorization, classes with similar content were combined into subcategories and these were labelled
| Subcategories with similar contents were combined into upper categories
| Themes are derived from:

Results of Review | Mentoring of Nursing Students was presented as two overarching themes which were derived from both upper and sub-categories.

* **Theme 1: FACILITATING STUDENTS’ LEARNING IN CLINICAL PLACEMENTS**
  * **Upper Category A: Creating a Supportive Clinical Learning Environment:** included all the arrangements that prepare students’ practice and organize their support system. This category was derived from the following sub-categories:
    o **Preparing Clinical Placement Fitness for Learning** (subcategory) Advanced planning for students practice in the workplace includes:
      a) applicability of the placement
      b) planning and organizing learning opportunities
      c) being aware of details of students and their training documents (like nursing curriculum)
      d) ensuring fluent implementation of training and placement learning
      e) identifying a mentor and substitute mentor
      f) enabling a personal relationship with that mentor
      g) organizing the students first day
      h) organizing practices for student guidance (sufficient time and regular meetings with a mentor)
    o **Organizing Training in an Interpersonal Learning Environment** (subcategory) included actions that support students in learning nursing issues in placements. These actions were:
      a) Familiarizing the student with the placement as a working environment, including adjusting to the hospital and ward.
      b) Enabling students equal participation in teamwork including familiarizing students with staff (allows students to become committed to the placement and the working society and for the staff to accept the student as members of the team).
      c) Cooperating with other stakeholders who were participants in students’ clinical training (regular meetings between the mentor and the educators from the university, and the mentor working collaboratively with patients and colleagues).
  * **Upper Category B: Enabling an Individual Learning Process:** described mentoring as ensuring the possibility for nursing
students to study based on personal learning plans and to develop by evaluating learning. This category was derived from the following sub-categories:

- **Making Possible a Personal, Goal-Oriented Learning Path**: was derived from actions that help nursing students advance, based on current personal skills and learning goals. Actions of mentoring nursing students include:
  a) Clarifying the basic level of students’ skills
  b) Observing students’ personal learning needs and goals
  c) Taking into account students’ individual zones of development
  d) Advancements according to the phases and demands of studies

  Mentoring was focused on increasing students’ responsibility to work independently by steps and helping students to grow from observers to independent workers (which increased student’s skill in coping with nursing actions independently). Providing learning possibilities, taking care of students’ learning situations and helping students with career planning were viewed as essential to mentoring.

- **Assessing personal development and achievement of learning outcomes**: was derived from mentor actions that evaluate students learning and performance. The actions include:
  a) Providing real time, regular and constructive feedback on performance, mistakes and nursing skills
  b) Providing objective judgments of student development including knowing the evaluation criteria and assessing learning outcomes

**Theme 2: STRENGTHENING STUDENTS’ PROFESSIONALISM**: Included nursing students’ professional responses and behaviour

- **Upper Category A: Empowering Development of Professional Attributes and Identity of Students**: described treating nursing students as persons and nursing professionals. This was achieved by working with students in a professional relationship and implementing actions that promote students’ growth in the nursing profession. This category was derived from the following sub-categories:
  a) **Treating as an Equal Individual and a Nursing Colleague**: included aspects of positive attitudes towards the student as a human being:
    a) Respecting and honouring the student as person and a learner of nursing
    b) Taking care of students
    c) Showing empathy towards them (showing interest in, caring for, understanding and trusting students which confirm students’ capability in nursing).
  b) **Interacting as Professional Partners in a Cooperative Relationship**: presented mentoring as co-work between mentors and students in patient care situations and close interactive relationships. Acting as equal pairs in co-operation, having mutual, trusted communication and interaction and working together as collegial friends.
  c) **Promoting Growth and Commitment to the Nursing Profession**: was expressed as motivating students to study nursing with psychological support and encouragement.
    a) Familiarizing students with nursing as work and an occupation
    b) Acting as a role model for students
    c) Showing different aspects and functions in the work of nurses
d) Imaging demands of the nursing profession
*Mentoring was seen as an action that facilitates students’ emotional development and helps students in dealing with emotions in difficult nursing situations.

- **Upper Category B: Enhancing Attainment of Professional Competence**: focused on the students’ clinical, theoretical and critical thinking skills in the following sub-categories:
  a) **Facilitating Attainment of Professional Competence**: training the students to improve hands-on clinical nursing and communication skills. This included teaching and advising on how to use different nursing methods in real care situations and guiding student interpersonal interactions.
  b) **Enabling Improvement of Theoretical Skills**: by enhancing student’s understanding of relevant care processes, linking theory to practice supporting the search for and application of knowledge. This was done through direct teaching, guidance, advising and counseling.
  c) **Deepening the Development of Critical and Reflective Thinking**: included mentoring actions that create opportunities for students to develop their critical thinking skills. Actions to facilitate this included active listening, discussions and sharing of nursing experiences. Mentoring also involved encouraging reflective practice. Reflection encouraged students to ask questions and present arguments/debate nursing issues. Mentoring facilitated the development of problem-solving and decision-making skills by helping to clear up difficult nursing situations. Supporting students to express their opinions and ideas, understand reasons and evaluating nursing systematically were also identified.

Comments/Limitations
Limited to the term mentoring in the field of nursing

<table>
<thead>
<tr>
<th>Items Reviewed</th>
<th>Review #2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information &amp; Quality Rating for Review</strong></td>
<td></td>
</tr>
<tr>
<td>Author(s) and Date</td>
<td>Maertz, C.P., Stoeberl, P.A., Marks, J. (2014).</td>
</tr>
<tr>
<td>Title</td>
<td>Building Successful Internships: Lessons from the Research for Interns, Schools and Employers</td>
</tr>
<tr>
<td>Country</td>
<td>US</td>
</tr>
<tr>
<td>Quality Rating</td>
<td>Moderate (CASP)</td>
</tr>
<tr>
<td><strong>Objectives of Review</strong></td>
<td>To determine what kinds of internships are possible, how to decide to use internships, and if using internships how to ensure they are beneficial from the perspectives of management professionals, educators and interns. Authors aim to:</td>
</tr>
<tr>
<td></td>
<td>1) Provide a set of dimensions of internship so that all stakeholders speak the same language</td>
</tr>
<tr>
<td></td>
<td>2) Summarize the costs and benefits of internship</td>
</tr>
<tr>
<td></td>
<td>3) Define interests and concerns of internship for all stakeholders using a talent management decision making perspective</td>
</tr>
<tr>
<td><strong>Details of Review</strong></td>
<td></td>
</tr>
<tr>
<td>Number and Quality of Studies Included</td>
<td>Not described</td>
</tr>
<tr>
<td>Types of Studies</td>
<td>Anecdotal and empirical evidence from multiple stakeholders (disciplines)</td>
</tr>
<tr>
<td>Description of Included Studies</td>
<td>No detail on Individual studies provided</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Search Period</td>
<td>Not described (references range from 1984-2012)</td>
</tr>
<tr>
<td>Number of databases searched</td>
<td>Not described, however the bibliography list is extensive with several articles from peer reviewed journals</td>
</tr>
<tr>
<td>Inclusion and Exclusion Criteria</td>
<td>Not described – term ‘internships’ from a variety of disciplines</td>
</tr>
</tbody>
</table>

### Details of Synthesis

- The ‘scattered literature’ from the disciplines of human resources, investment banking/consulting, hotel/restaurant management, public relations, and nursing synthesized by the authors using a narrative review style
- The synthesis is organized according to the potential benefits and costs/pitfalls as well as the success factors for each of the three stakeholder groups (interns, employers, schools)
- For the purposes of this data extraction table we have only included results from the employer group

### Results of Review

#### Main Results of Review for Employers (results for Interns and Schools also identified in review)

**Individual and Contextual Success Factors**

*(How to maximize potential benefit and minimize potential costs/pitfalls of the internship for the organization)*

**Individual Factors**

1. Designate internship supervisors that explain the rationale behind goals and assignments
2. Supervisors that give frequent feedback and inspire respect and trust, and achieve high satisfaction and motivation
3. Intern supervisors that provide work content training and access to development opportunities regarding organizational culture and career learning
4. Supervisors who plan effectively for all aspects of the internship and cultivate recruitment benefits

**Contextual Design Factors**

1. Establish clear expectations through an agreement with some intern input
2. Assign specific mentor or supervisor who has available time and competencies to develop young talent
3. Design enriched work with high significance, identity, and skill variety
4. Establish processes to evaluate intern progress and provide feedback
5. Invite or include interns in meetings and staff activities when possible
6. Establish process as to whether, when and how to communicate if post-internship employment is a possibility
7. Provide orientation to all intern supervisors regarding EEO (US Equal opportunity legislation) compliance policies and protections from harassment and discrimination

**If unpaid:**

8. Ensure interns meet criteria for ‘trainee’ under FLSA (US Fair Labour Standards Act)
9. Cover interns with workman’s compensation and insurance

**Decision making rules/criteria for employers on choosing to initiate or add internships**

1. If employer has opportunities to design part-time jobs or projects in which interns would usefully increase employer capacity
2. If employer has enough human resources to plan mutually beneficial assignments, and then, identifies sufficient supervisors as mentors to support, evaluate, and develop additional interns
### Comments/Limitations

From the business literature
- No quality assessment of included publications
- No discussion of analysis methods

---

<table>
<thead>
<tr>
<th>Items Reviewed</th>
<th>Review #3</th>
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<td><strong>General Information &amp; Quality Rating for Review</strong></td>
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</tr>
<tr>
<td>Author(s) and Date</td>
<td>Newberry, J. (2007)</td>
</tr>
<tr>
<td>Title</td>
<td>Indicators of Practice Education Quality in Health Care: A Literature Review</td>
</tr>
<tr>
<td>Setting</td>
<td>BC Health Authority in Canada which includes Public Health. Information for health care organizations.</td>
</tr>
<tr>
<td>Quality Rating</td>
<td>Moderate (CASP)</td>
</tr>
<tr>
<td>Objectives of Review</td>
<td>To identify the structures, processes and resources that health care organizations should have in place to support quality practice education as well as indicators of the extent to which health care organizations are engaging in practices that will lead to quality practice education</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Details of Review</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number and Quality of Studies Included</td>
<td>Not described</td>
</tr>
<tr>
<td>Types of Studies</td>
<td>Single studies and grey literature</td>
</tr>
<tr>
<td>Search Period</td>
<td>1997-2007</td>
</tr>
<tr>
<td>Number of databases searched</td>
<td>4 (Medline, CINAHL, Google, Google Scholar)</td>
</tr>
<tr>
<td>Inclusion and Exclusion Criteria</td>
<td>Title and abstract screening for relevancy. Relevant articles were subjected to a snowballing process to identify further publications. Non-English publications and those published prior to 1997 excluded. Preference given to items from 2002 or later.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Details of Reference Sources included in the review</th>
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</tr>
</thead>
<tbody>
<tr>
<td>References which contributed ‘most significantly to the report’</td>
<td>Clare et al (2003). Evaluating clinical learning environments: Creating education-practice partnerships and clinical education benchmarks for Nursing. School of Nursing and Midwifery, Flinders University, Adelaide</td>
</tr>
<tr>
<td></td>
<td>- Examined partnerships between major teaching hospitals and universities in three Australian states</td>
</tr>
<tr>
<td></td>
<td>- Identified elements of these alliances that optimize clinical learning environments for student nurses</td>
</tr>
<tr>
<td></td>
<td>Australian Health Workforce Officials Committee (2005). Clinical training placements: Analysis of responses to AHWOC</td>
</tr>
<tr>
<td></td>
<td>- Survey of health departments, health and academic organizations to identify practice education issues and strategies</td>
</tr>
<tr>
<td></td>
<td>National Health Service for Scotland (2003, 2005)</td>
</tr>
<tr>
<td></td>
<td>- Developed a set of quality standards for practice placements</td>
</tr>
</tbody>
</table>
• Surveyed Scottish academic and health care institutions

• Literature review related to physician and practice education in the ambulatory setting
• Identified perceived barriers

• Developed principles and guidelines for practice education

• Study to identify factors associated with student entry to practice exam success in five different health professions and several schools

BC Academic Health Council (2004, 2007)
• Survey of Key stakeholders in BC practice education (administrators, educators and placement coordinators)
• Identified challenges to practice education

Practice Education Collaborative of BC
(working group of 6 BC health Authorities, the Health Council Practice Education Committee and the BC education sector)
• Resources developed: academic affiliation agreement template, standard guidelines to support practice education and recommended health authority management processes related to practice education

Children’s and Women’s Health Centre of BC (2004). Student and resident education at Children’s and Women’s Health Care Centre of BC: Planning for increased numbers.

Fraser Health Authority (2005) education and research in the Fraser health Authority
• Identified current numbers of student placements and resulting cost to the organization
• Identified benefits to the organizations

The Baldridge National Quality Program (2007)
• Categories for analysis of educational institutions with previous application to medical practice education
• Leadership; strategic planning; student, stakeholder and market focus; measurement, analysis and knowledge management; workforce focus; process management; results.

Details of Synthesis
| Type of Analysis | Adaptation of the Baldridge framework of 7 criteria is proposed in order to build quality in medical practice education. Synthesized findings from the narrative review are used to offer indicators that can be used to review practice education at the senior leadership |
## Results of Review

### Main Results of Review

<table>
<thead>
<tr>
<th>1. <strong>Leadership:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Senior Leadership Accountability and Commitment</strong></td>
<td>Leaders provide organizational direction/expectations through strategic planning and policy development. Active support from practice education at both the health organization and educational institution are critical to sustainability and success of the partnership.</td>
</tr>
<tr>
<td><strong>Indicators:</strong></td>
<td></td>
</tr>
<tr>
<td>- Strategic planning documents explicitly affirm the health authority’s role in providing practice education for health professions students</td>
<td></td>
</tr>
<tr>
<td>- Responsibility for student practice education is clearly assigned at the executive level</td>
<td></td>
</tr>
<tr>
<td>- Data related to student practice education are regularly reviewed by the executive committee and used to guide organizational decision making</td>
<td></td>
</tr>
<tr>
<td>- Senior leaders participate in practice education planning activities, both within the organization and with partners in education institutions and the provincial health care system</td>
<td></td>
</tr>
<tr>
<td>- The organization’s budget addresses resources required to support practice education, e.g. training and release time for preceptors</td>
<td></td>
</tr>
</tbody>
</table>

### Middle Management Commitment

Middle managers play a critical role in the operation of clinical programs, the allocation of staff and facilities to support practice education. The commitment to students in the clinical environment (if the manager feels that students bring value or is a drain on resources) highly influences the practice education context.

**Indicators**
- Managers are actively involved in practice education planning
- Managers provide a welcoming environment for students
- Managers encourage and support their staff to work with students

### 2. **Strategic Planning:**

Students moving through the health authority requires a streamlined process and approach to gathering relevant data (numbers of students, numbers of prepared staff, number of students hired)

**Structure, Planning and Resources**

Internal structures for managing student placements need to be defined while clarifying roles and responsibilities for student placements. Budgets need to reflect resources required to support practice education.

**Indicators:**
- There is an organizational structure for management of student practice education
- Responsibility is assigned to specific positions for planning, coordination, and liaison with external stakeholders
- An interprofessional committee or council regularly reviews student practice education issues and recommends future directions
- Data related to student practice education are regularly reviewed by the executive committee and used to guide organizational decision making
Formal Affiliation Agreements
In addition to individual relationships, formal affiliation agreements are needed to define the responsibilities of each partner.

Indicators:
- There is an academic affiliation agreement with each education institution placing students with the organization
- Staff involved in student practice education are informed about relevant content of the academic affiliation agreement
- There is an inventory of affiliation agreements, with systems for flagging scheduled review dates and for archiving expired or inactive agreements
- There are established processes for entering into new affiliation agreements, e.g. standard templates, consultation with clinical program managers re impacts

Collaborative approach
A collaborative approach and partnerships between the health and educational organizations is imperative. In effective partnership the parties are knowledgeable about each other, influence each other and contribute to and benefit from joint activities.

Indicators:
- There is a process in place to advise its partner education institutions of emerging clinical practice trends, so these can be incorporated in curriculum design and development
- There is a process in place to advise its partner education institutions of organizational or clinical program changes that will impact student placements
- The health authority regularly works with its education partners on joint initiatives e.g. research, support for preceptors, or lobbying government
- The health authority participates on provincial or national councils and committees working to improve practice education

Capacity
The shortage in practice education placements is experienced in many jurisdictions and disciplines. Academic programs that require student to complete ‘blocks’ of academic studies contribute to this issue in that large numbers of students require placements at once, with little time between blocks of students. This is a barrier to providing quality practice education. Many areas (including community health) do not accept student despite the fact that these areas may have the greatest need for future employees. Many organizations are exploring ways to expand their student capacity including gathering workplace data to assess capacity effectively, identifying/training staff to take students.

Indicators:
- A process is in place for estimating the student placement capacity in different locations and at different times.
- A process is in place for tracking student placement utilization in different locations and at different times.
- The health authority is working with the education institutions to improve utilization.
- A process is in place to track numbers of preceptors, and to identify potential new preceptors
- There is a model for providing student practice education opportunities in rural settings
Interprofessional Learning and Practice
Interprofessional practice is the reality in most workplaces yet education institutions continue to be organized by discipline. The health care institution must work collaboratively with the education institution to ensure that students are exposed to Interprofessional practice as this will be their reality after graduation.
Indicators:
- Students have opportunities to work in Interprofessional clinic units, i.e. those with a defined collaborative decision-making process, with Interprofessional team processes that are frequently evaluated, and in which all staff members know the roles of other professionals
- Interprofessional collaborative learning units have been established where appropriate
- Practice education committees/councils include representation from various professions

Innovation
Practice education models need to adapt to increased quality and capacity through innovative thinking. Various models of student placements as well as the role of technology will need to be investigated for both preceptors and students.
Indicators:
- Innovation in practice education is supported and encouraged by management
- New models for student supervisions and practice education are being explored
- Students are being placed within emerging service delivery models e.g. Interprofessional teams
- Learning for both students and preceptors is supported by technologies including videoconferencing, e-learning and simulation
- There is a process in place for sharing knowledge and experience regarding ‘best practice in student education

The health authority will need to determine what data should be gathered, how the data will be collected and how this data will be used to support practice education

Data Gathering
Data may be gathered for a variety of purposes (to document the level of educational activity of the health authority, to determine where and when students can be accommodated, to maximize recruitment potential and to track performance). Performance measures should be identified and tracked in electronic systems for that information can be comparable across the organization. The HSPNet system is one system that can accomplish this.
Indicators:
- Key performance indicators have been identified, e.g. related to capacity, utilization and recruitment
- Key quality indicators have been identified e.g. satisfaction, education outcomes
- An organization wide system is in place to gather and collate data on practice education indicators

Data Analysis and Reporting
Once data has been gathered a system needs to be in place for analysis.
Indicators:
- An organization wide system is in place to analyse data on practice education
- Data are regularly reviewed and trends monitored over time
• Data are used for decision making related to practice education e.g. whether and where to place additional students, annual targets for student placements, number of staff to be trained as preceptors
• Data are regularly communicated to stakeholders

### 4. Workforce Focus
Finding employees who are willing to be preceptors is a widespread challenge. Identifying preceptors and supporting them in that role is a challenge for health authorities.

**Participation in Student Practice Education**
Practice education should be a key component of a health authorities mandate and that it is an expectation that all clinical programs are involved with and support practice education.

**Indicators:**
- There is an expectation that all clinical program areas/units participate in practice education
- Job descriptions for program/department managers indicate they are expected to encourage and support practice education
- Performance appraisals of program/department managers, and of clinical staff who supervise students, address performance in supporting, providing practice education

**Preceptor/Mentor Education Programs**
Providing supports and incentives is important to encourage staff involvement in practice education. Staff should receive specific education about their support and supervision role with students. Various preceptor education programs and certification have been established in various jurisdictions.

**Indicators:**
- There are sufficient staff trained and willing to supervise students
- A process is in place to identify and “recruit” staff willing to supervise students
- All staff who supervise students have participated in an interdisciplinary education program, intended to develop their teaching and mentoring skills
- Staff who supervise students participate from time to time in additional education to enhance their teaching and mentoring skills

**Time for Student Supervision**
Lack of time to supervise student has been identified as a significant barrier to practice education resulting in some cases to preceptor burnout and reduced billing by physicians. Providing flexibility in clinicians workload or using different models including groups of students with one preceptor instead of one student/preceptor may reduce staff time spent with individual students.

**Indicators:**
- Clinical supervisors/preceptors are supported with the additional workload associated with students, through reduced patient load or dedicated time clear of clinical responsibilities.
- New models of supervision or teaching, intended to reduce staff time spent teaching and supervising individual students are being explored e.g. simulation, on-line learning, grouping of students
Recognition and Thanks
Lack of recognition and reward for preceptors has been identified. Many jurisdictions are identifying strategies to address this as a means to encourage preceptors to continue in this role.

Indicators:
- Staff who supervise students receive recognition and thanks from the health authority for their practice education work, e.g. through letters of thanks.
- Senior health authority leaders speak publicly about the importance of practice education, and participate in events recognizing staff involved in practice education
- The health authority has encouraged the education institutions to recognize and thank staff supervising students, e.g. through subsidized access to credit courses, academic cross-appointments, access to university facilities and services.

Link with Recruitment Needs
Recruitment is an identified benefit of practice education through providing access to highly trained individuals and who are partially oriented to the organization. Aligning practice education with anticipated discipline shortages may be a useful strategy. Positive experiences during practice education influence the decision by a student to accept a position of employment.

Indicators:
- The health authority regularly updates the Ministry of Advanced Education and its partner BC education institutions on health disciplines in which it is facing recruitment challenges
- The health authority makes an effort to support student placements in disciplines or specialties or locations for which it is having recruitment challenges, e.g. by ensuring students are aware of loan programs or supporting preceptors
- Students are welcome, have positive experiences during their placements, and are encouraged to consider employment after graduation
- Data are recorded on whether new employees were previous students with the health authority

5. Facilities and Equipment Support
Lack of physical space, can influence the decision to take on a student. Practice education needs should be considered when space planning.

Indicators
- Adequate space, equipped with appropriate teaching equipment, is available for student tutorials, seminars and debriefing
- Students can access the health authority’s intranet for patient clinical information on the unit where they are placed
- Students have access to a library and study areas
- Students have access to the internet for clinical learning
- Students have remote access to specialized learning opportunities, e.g. through e-learning, webcasting or videoconferencing
• Students have access to lockers and change facilities
• Students who may be exposed to blood or body fluids or who may have been in an isolation area have access to showers
• Office space is available for students doing clinical work, especially for disciplines in which there are current recruitment challenges
• Space and facilities planning groups have members familiar with practice education requirements
• New models of practice education e.g. those incorporating simulation or group supervision components, are considered when designing new space

6. **Process Management**

**Systems related to organizing practice education programs and ensuring quality and efficiency**

**Standard Operating Processes**
The health authority will need to establish overall policies and procedures to direct student practice education in accordance with affiliation agreements. Collaborative planning with educational institutions is required related to the operational details of student placements. Role of those involved should be clear and well defined. Agreement will need to be reached on the number, timing and types of student placements.

**Indicators:**
- Policies and guidelines for practice education have been established
- There is an established joint process/structure for working with the education institutions to plan operational details of student placements, with responsibility clearly assigned to specific health authority staff.
- Standard procedures are in place for negotiating numbers and types of student placements including interprofessional placements
- Standard procedures are in place for agreeing on the extent of involvement of authority staff in student supervision, instruction and evaluation
- Standard procedures are in place for receiving requests for placements and for confirming placements

**Communications**
The health authority needs to communicate its requirements (e.g. immunization, privacy) to education institution or directly to students. Preceptors must receive information coming from the academic institutions regarding students’ level of knowledge and learning objectives.

**Indicators**
- The health authority communicates to the education institutions/students its requirements for students and faculty e.g. privacy, accident reporting, liability and personal injury coverage
- The health authority provides its partner education institutions with its policies/procedures/guidelines relevant to student practice education
- Staff supporting students receive information form the education institution about students’ level of knowledge and learning objectives

**Orientation**
An orientation to the clinical environment, ideally for all disciplines should be provided to all students.
## Indicators:
- Students can access on-line information relevant to practice education in the health authority in advance of their placements
- A standard orientation to the health authority is provided to all students
- More specific orientation to individual facilities or unit/programs is provided at those levels
- There is a regular orientation program for education institution faculty to the policies and work practices of health authority clinical programs

### Addressing Problems
Agreed upon processes should be in place to deal with problems as they arise.

**Indicators:**
- There are clear processes for working with students having difficulty during the practice education placement
- There are clear processes for students, health authority staff or university faculty to report complaints, and for tracking and follow-up of such complaints
- There are clear processes for resolving broader conflicts, problems, or dissatisfaction related to practice education

### Results
Organizational systems for measuring, evaluating and improving practice education performance. As practice education involves considerable investment of financial and human resources the organization should make joint efforts with the educational institutions to monitor the quality of practice education.

**Indicators:**
- Goals are set and performance is measured for organizational performance related to practice education, e.g. capacity, utilization, satisfaction, recruitment
- The health authority seeks and uses stakeholder feedback on the quality of practice education to promote good practice and enhance the student learning experience
- The health authority works with its major education institution partners on evaluation and research projects intended to increase the quality of, or access to, student practice education.

### Comments/Limitations
- Very focused, purposive review
- No quality assessment of the included studies
- Sources are primarily grey literature
# Appendix E: Applicability & Transferability Worksheet

<table>
<thead>
<tr>
<th>Factors</th>
<th>Questions</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Applicability (feasibility)</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Political acceptability or leverage | • Will the intervention be allowed or supported in current political climate?  
• What will the public relations impact be for local government?  
• Will this program enhance the stature of the organization?  
  o For example, are there reasons to do the program that relate to increasing the profile and/or creative a positive image of public health?  
• Will the public and target groups accept and support the intervention in its current format? | • Strategic allocation of resources and planning would be supported in the current climate of fiscal conservation  
• There has been political support for students by Council in the past  
• Good fit with strategic direction and workforce development strategic priority  
• Could potentially increase the stature/profile of the organization |
| Social acceptability             | • Will the target population find the intervention socially acceptable? Is it ethical?  
  • Consider how the program would be perceived by the population.  
  • Consider the language and tone of the key messages.  
  • Consider any assumptions you might have made about the population. Are they supported by the literature?  
  • Consider the impact of your program and key messages on non-target groups. | • There has been a lack of clarity, consistency and structure to student placements – this is desired by the divisions  
• Students, preceptors and educational institutions will be receptive to clearer information/processes  
• Willingness to participate as many are currently investing time/resources and feel the current approach is disorganized  
• May be perceived as competitive/restrictive (If there is no position available will students still have placements?) |
| Available essential resources (personnel and financial) | • Who/what is available/essential for the local implementation?  
• Are they adequately trained? If not, is training available and affordable?  
• What is needed to tailor the intervention locally? | • Need to develop a committee with cross divisional representation to guide decision making and streamline communications  
• Some programs (WNV) have supports and processes already in place for students |
### What are the full costs?
- Consider: in-kind staffing, supplies, systems, space requirements for staff, training, and technology/administrative supports.

### Are the incremental health benefits worth the costs of the intervention?
- Consider any available cost-benefit analyses that could help gauge the health benefits of the intervention.
- Consider the cost of the program relative to the number of people that benefit/receive the intervention.

### Organizational expertise and capacity
- Is the intervention to be offered in line with Peel Public Health’s 10-Year Strategic Plan (i.e., 2009-2019, ‘Staying Ahead of the Curve’)?
- Does the intervention conform to existing legislation or regulations (either local or provincial)?
- Does the intervention overlap with existing programs or is it symbiotic (i.e., both internally and externally)?
- Does the intervention lend itself to cross-departmental/divisional collaboration?
- Any organizational barriers/structural issues or approval processes to be addressed?
- Is the organization motivated (learning organization)?
  - Consider organizational capacity/readiness and internal supports for staff learning.

### LEAP structure could be used for training
- Potential costs include: staff time, preceptor training, space/technology requirements
- Consider that academic institutions are paid by students for practicum placement course with no funding to the host employer in most cases unlike hospitals
- Student placement efforts will link with work underway related to orientation
- Support for both centralized and decentralized efforts – limited capacity available for centralized activities
- Benefits of blended include harnessing the capacity and expertise of what is happening in the divisions (decentralized) while supporting and organizing efforts across the organization (centralized)

### Recommendations are consistent with the strategic plan and workforce development strategic priority
- Well suited to cross-departmental collaboration (including HR)
- Supports PH standards
- Potential barriers could be willingness to precept, perceptions of preceptor/student activities by other staff, lack of interest from academic institutions to collaborate, competing priorities
## Transferability (generalizability)

<table>
<thead>
<tr>
<th>Magnitude of health issue in local setting</th>
<th>Magnitude of the “reach” and cost effectiveness of the intervention above</th>
<th>Target population characteristics</th>
</tr>
</thead>
</table>
| • What is the baseline prevalence of the health issue locally?  
  • What is the difference in prevalence of the health issue (risk status) between study and local settings?  
  • Consider the Comprehensive Health Status Report, and related epidemiological reports. | • We need to gather better data related to student placements (requests, hit rate, opportunity cost, capacity, hiring stats) | • Are they comparable to the study population?  
  • Will any difference in characteristics (e.g., ethnicity, socio-demographic variables, number of persons affected) impact intervention effectiveness locally?  
  • Consider if there are any important differences between the studies and the population in Peel (i.e., consider demographic, behavioural and other contextual factors). |
| • Will the intervention appropriately reach the priority population(s)?  
  • What will be the coverage of the priority population(s)? | • Student placement processes should also apply to internal staff seeking placements | |

### Proposed Direction (after considering the above factors):
Proceed with recommendations (continue with successful practices already in place, begin with schools that are geographically close, use a cross departmental committee with representatives from front line staff, management, workforce development staff, orientation committee representatives. Consider a process that looks at coordination of internal staff looking for placements.

Form completed by Natalie Lapos and Beverley Bryant with input from the project team and the Student Placement Reference Group