

BC Practice
Education
INITIATIVE
*Developing Quality Indicators
for Health Care Environments*

Indicators of Practice Education
Quality in Health Care
Organizations:

A literature review

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Author: Janet Newberry, PhD., for the BC Practice Education Initiative
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Project Leader: Grace Mickelson, Director, Academic Development,
Provincial Health Services Authority

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The draft report will be presented at the BC Practice Education Partners' Workshop in June 2007, with the intent of incorporating feedback from practice education stakeholders in order to further refine the indicators and develop an organizational assessment tool.

EXECUTIVE SUMMARY

Practice education – the part of a student's learning experience that takes place in the workplace – has become increasingly challenging for BC's health authorities. Reasons include more medically complex patients, fewer staff available and/or willing to support students, and increased numbers of students requiring placements.

Providing student practice education costs health authorities millions of dollars every year. However, the benefits to health authorities are significant, particularly in relation to workplace skills and recruitment. For these reasons, there is increasing interest and attention focused on how health authorities can effectively and strategically support practice education.

This literature review attempts to add to these efforts by identifying structures, processes and resources that health care organizations should have in place to support quality practice education. The review draws on reports, studies and publications from Australia, Scotland, England, USA, Canada and BC from 2001 to 2007, all related to improving or optimizing practice education for one or more health professions.

The literature describes many factors that contribute to quality practice education in health care organizations, but says very little about metrics, performance outcomes, or any numerical data that could be used to measure organizational performance in practice education. In an attempt to further this area, this report draws on the literature to identify indicators of the extent to which a health care organization is engaging in practices that will lead to quality practice education. The focus is chiefly on processes, structures and/or resources that should be in place to underpin quality practice education.

Literature findings are organized into seven sections, adapted from the Baldrige National Quality Program (2007). The Baldrige Education Criteria aim to help improve performance, capabilities and results in education. These criteria have been suggested as a framework for hospital self-study to build quality in medical practice education (Leist et al 2004). Significant conclusions from the review are as follows:

- **Leadership** – Support from health authority leaders, both within the health authority and through collaboration with post-secondary education institution leaders, is critical to ensuring quality practice education.
- **Strategic Planning** – Management of thousands of student placements annually requires a formal organizational structure with responsibility assigned to specific positions for planning, coordination,

and liaison with post-secondary education institutions. Practice education placements are a component of the health profession students' overall education, and therefore need to be managed in a collaborative partnership with the post-secondary education institutions. Practice education should prepare students for future professional work based on interprofessional collaborative practice and teamwork. Innovative thinking will be required to increase both the quality of the practice education experience and the capacity of health authorities to take on additional students.

- **Measurement, Analysis, and Knowledge Management** – Health authorities need performance and quality data on practice education, e.g. related to numbers of placements, placement locations, numbers of preceptors, satisfaction, recruitment. They also need a system for analysis of the data to support short-term planning, e.g. where to place students, and number of staff to be trained as preceptors, and to support long-term evaluation and improvement processes.
- **Workforce Focus** – Staff and physician involvement is key to providing quality practice education for health professions students. As preceptors, they require specialized education skills to supervise and coach students. It is difficult for them to find the additional time required to support students while continuing to provide quality clinical care. Formal programs providing recognition and thanks to staff and physicians who work with students are emerging in various jurisdictions. A long-term benefit to health authorities of involvement in student practice education is the opportunity to observe students and then hire with a high level of confidence in the student's potential for success.
- **Facilities and Equipment Support** – Having students on site also means providing space for teaching and learning, providing facilities such as lockers and change rooms, and providing student access to the intranet and internet for both learning and clinical purposes.
- **Process Management** – The health authority needs policies and procedures to ensure quality and efficient use of resources for practice education, consistent with formal affiliation agreements. These will include formal channels for communication between health authority and the post-secondary institutions, a standard orientation to the clinical environment for all students, and clear processes for addressing issues and problems.
- **Results** - The health authority needs to set goals for its organizational performance related to practice education, to assess its performance in relation to those goals, and to engage in activities intended to increase the quality of, or access to, student practice education.

Broader input and validation of draft indicators based on the above will be sought from participants in a provincial workshop on student practice education in June 2007. Feedback will be used to develop an organizational self-assessment resource that health authorities can use to assess their performance, to identify areas in which there is potential for improvement, to identify possible actions to improve quality and to measure changes over time.

This project was supported by the BC ministries of Advanced Education and Health Practice Education Innovation Fund (PEIF), which is administered by the BC Academic Health Council. Project leadership was provided by Grace Mickelson, of the Provincial Health Services Authority.

A. PURPOSE, METHODOLOGY AND SCOPE

1. Purpose of Project – Health Care Organization Support for Quality Practice Education

This project is intended to identify the structures, processes and resources health care organizations need to have in place to support quality practice education for the health care professions students placed in their facilities for practice education.

The following definition of “practice education”, sometimes referred to as “clinical education”, is adapted from the current Master Affiliation Agreement between the Provincial Health Services Authority and the University of British Columbia.

“Practice education” is that part of a student’s educational experience which takes place in the workplace and may involve direct patient/client care. In such an experience, the student provides services to and for the benefit of patients/clients under the general direction and supervision of health authority or educational institution employees or appointees. Employees or appointees providing direction and supervision are practicing health professionals who are authorized and qualified to provide the services.

Practice education occurs in a variety of settings including hospitals, long term care facilities, palliative care units, ambulatory care clinics, primary care units, community health centres, home care services, Telehealth, and other health and social service agencies.

Learning activities can be designed to support profession specific, interprofessional or team learning in the practice setting, and may include:

- One-to-one pairing of a student with a practitioner, often called a “preceptor” or “mentor”, to learn and provide health care services
- A group of students learning and providing health care services under the supervision of an instructor
- Student self-study about patient care or health services delivery supported by print, media or e-learning resources

In this report, “students” refers to all undergraduate and graduate students in health services professions, including interns and residents, who are involved in a practice education experience. Students who are placed in a health authority for the primary purpose of doing research are not addressed in this report, as the supports required for them are quite different.

2. Background – Increased Need for Planning and Coordination

Largely because of human resource imperatives, health authorities are now focusing new attention on student practice education. Urgent shortages of health service providers within BC, and a dwindling supply of professionals from other provinces and countries, underscore the likelihood that more and more of our new health professionals will be employed directly out of BC post-secondary education institutions after practice education placements in BC health care organizations.

BC health authorities have always provided the setting for students to acquire practical skills, but the primary responsibility for health professional training has rested with various discipline-based schools or faculties in educational institutions. In future, BC health authorities will need to work more strategically and closely with their post-secondary education partners. In particular, there will need to be an increased focus on planning and coordination related to student practice education. Two recent projects conducted through the Practice Education Collaborative of BC have noted a serious lack of

planning and information sharing within health authorities, between the different health authorities, and between the health authorities and the education institutions (PEIF *Modernization for Academic Affiliation Agreements and Health Authorities' Integrated Framework* 2007). In addition, a recent survey of stakeholders within the BC practice education system noted a “lack of standardized and well coordinated structures within the practice education domain” (BCAHC 2007, page 33).

The health authorities need to ensure that their part of the preparation of health professionals, i.e. the practice education component, is preparing students well for their future role in providing health care for the people of BC. Ideally, this practice education will include interprofessional education that prepares health professionals for collaborative practice, team work and patient-centred care, consistent with the national policy agenda for healthy workplaces and patient safety (Health Council of Canada 2005). Equally important will be the need for health authorities to build relationships with students that attract them to pursue employment opportunities within the province following graduation.

3. Challenges for Health Authorities related to Practice Education

Supporting student practice education has become increasingly challenging for BC health authorities for several reasons (Fraser Health 2005, C&W 2004):

- Hospital bed closures have resulted in patients who are more medically complex during the time they are receiving hospital care, so that students require closer supervision than in previous years.
- Fewer experienced health authority staff are available to support and supervise the increasing numbers of students, for several reasons. First, many mid-management nursing and allied health positions have been eliminated. Second, increasing numbers of the most experienced health authority staff are retiring. Third, many of the new hires replacing those who have retired are still new graduates who still need mentoring themselves. Fourth, there are higher numbers of vacant staff positions due to aging of the current workforce and recruitment challenges.
- An impending shortage of health professionals has led to a major expansion of many BC post-secondary health professions education programs. This has led to corresponding increases in requests for student practice education placements that have, in some disciplines or locations, almost overwhelmed clinical settings. The increase in post-secondary seats has also created a highly competitive approach to placing students, resulting in tensions throughout the system.
- Overwhelming workloads for clinicians have decreased their willingness to supervise students, and also increased their resistance to new and innovative ways of providing practice education opportunities.

Providing student practice education costs health authorities millions of dollars annually. These costs are mainly in staff time to work directly with students, but also for training for staff taking on the student supervision role, for administrative time to arrange placements, for management of academic affiliation agreements, for clinical supplies used by students, and for increased operating costs for classrooms and other facilities or equipment used by students (Fraser Health 2005, C&W 2004). For example, the total estimated cost to the Fraser Health Authority for approximately 5,000 student placements in 2004, with an average length of 22 days each, was about \$5 million. While the costs for providing student placements are significant, there are considerable off-setting benefits to the health authorities, the primary one being that many students are subsequently hired as employees, and their practice education experience has already provided them with a partial orientation (Fraser Health 2005, Clare et al 2003).

It is clear that student practice education is a significant activity for health authorities. It is a complex enterprise involving major challenges. It is costly, but it also provides significant benefits to health authorities (particularly in relation to recruitment). For these reasons, it is worthwhile focusing on how the health authorities can effectively and strategically support practice education. The students who come to BC health authorities for clinical practice are their single greatest resource for the future to provide health care for the people of the province.

4. Contributors to Quality Practice Education

The first step was to review the literature describing factors which contribute to quality practice education in health care organizations. In this report, “quality” practice education means practice education that prepares students well for their future professional roles, that is a highly satisfying experience for stakeholders, and that uses resources as efficiently as possible.

The literature uses many different terms to describe the factors which contribute to quality practice education in health care organizations. Clare et al (2003) describe the “benchmarks” associated with “best practice standards”. The National Health Service for Scotland (2003) identifies specific “quality standards” grouped into sets of “precepts”. The English National Board for Nursing (2001) describes “principles” and “guidelines”. The Baldrige National Quality Program (2006) lays out several “criteria” within specific categories of analysis. The term “indicator” is used as well (Stecher 2005, and Klessig et al 2000).

The literature, however, says very little about “metrics”, or “performance outcomes”, or any kind of numerical data which could be used to measure organizational performance in relation to practice education. Research is still in the early stages, and such measures do not yet exist. This is at least partly because local tracking systems, mostly manual until recently, have recorded different data elements for use locally, and these are seldom shared outside the clinical program or organization doing the documentation. Another problem is the lack of system-wide coordination, as individual staff take responsibility only for placements in their own units or program. Within BC, attempts to count total numbers of annual students have proved to be far more complex than would have been anticipated, requiring contact with dozens or even hundreds of different placement coordinators, who may have little or no communication with each other (Fraser Health Authority 2005, C&W 2004).

Even if measures on such “performance” indicators were available, the data may be only loosely connected to quality and may also be dramatically impacted by local circumstances, e.g. number of student placements is affected by expansion of health professions education programs in local universities, number of staff trained and able to supervise students is affected by accelerating retirement rates due to age demographics, etc. Also, this type of data tends to measure level of activity rather than quality of performance, and the information may provide little or no guidance for improvement (Stecher 2005).

5. Identifying “Quality” Indicators

This report draws on the literature to identify indicators which help to indicate the extent to which the organization is engaging in practices that will lead to quality practice education. These “quality” indicators, rather than focusing on volume of activity, describe health organization processes or structures or resources which should be in place to provide the underpinning for quality practice education. Examining organizational performance in relation to these indicators will suggest actions that can be taken to improve performance. Working with quality indicators also offers the most leverage for change, because it is possible to measure improvement over time.

6. Scope Limited to Factors within Health Authority's Control

The focus in this report is on those factors over which the health authority has direct control, e.g. its own policies and processes and supports for practice education. This report does not address other factors which affect quality, but which are outside the health authority's sphere of responsibility, e.g. the students' curriculum at the post-secondary institution, or education program accreditation standards. Nor does this report address the question of who should be responsible for any increased costs for health authorities in order to support practice education, as that is a matter for discussion among the BC Ministries of Health and of Advanced Education, and the health authorities.

7. Next Step – Development of Organizational Self-Assessment Instrument

Preliminary feedback on this draft has already been provided by selected stakeholders in the health and post secondary education sectors, and used to expand and elaborate on many of the indicators identified through the literature search. The next step will be to gather broader input from participants in a provincial workshop on student practice education in June 2007. This feedback will be used to develop an organizational self-assessment instrument that health authorities can use to rate themselves against the indicators, to identify in what categories there is potential for improvement, to identify possible actions that can be taken to improve quality, and to measure changes over time.

The assumption is that health authorities which focus on improving their policies and processes and resources required to provide quality practice education for students in health care professions will receive two kinds of direct benefit. The first benefit will be a more effective and strategic use of the resources they already consume to support student practice education. The second benefit will be an increased supply of well-prepared new health professionals ready to take on their roles in the health care system.

8. Project Funding - Practice Education Innovation Fund

This project is funded through the BC government's Practice Education Innovation Fund (PEIF), and managed through the BC Academic Health Council, with the Provincial Health Services Authority (PHSA) taking the lead in project development. The project links to a parallel study, also funded through the PEIF, focusing on student, faculty, and health authority staff perspectives on factors that contribute to quality clinical learning experiences. The Vancouver Coastal Health Authority (VCHA) is taking the lead on this parallel project. The two projects complement each other, with this project focusing on the broader organizational level supports, structures and processes that need to be addressed at the health care authority level, and the VCHA project providing analysis of clinical unit and school-related factors. Progress and findings have been communicated between the PHSA and VCHA projects so they could inform each other. There are several other PEIF projects in various stages of completion, many of which will be referred to throughout this report.

B. LITERATURE REVIEW

A purposive review of literature was conducted by an experienced health research reference librarian using both bibliographic databases and grey literature search engines. The databases consulted were MEDLINE, CINAHL, Google Scholar, and Google.

An initial scoping search was conducted by searching for known items provided by the investigators and identifying key subject headings and keywords.

In both MEDLINE and CINAHL, the identified subject headings were too broad to narrow down the relevant literature so the searching was carried out using more specific keywords. The keywords used for all databases were: practice education, clinical learning environment, clinical education, fieldwork education, clinical placement, clinical clerkship.

Where required to narrow down the findings, terms were paired with terms including benchmarks, best practices, quality standards, indicators, performance outcomes, performance indicators, quality indicators.

The titles and abstracts were screened for relevancy by the librarian conducting the search. Items were excluded if written in a language other than English or produced prior to 1997. Preference was given to items produced in 2002 or later. Relevant items were subjected to a snowballing process to identify subsequent citations and key references used.

The reference sources which contributed most significantly to this report are summarized below. Additional references are cited in subsequent sections.

A major Australian study (Clare et al 2003) examined partnerships in three Australian states between universities and major teaching hospitals to identify the elements of such alliances that optimise clinical learning environments for student nurses. The study resulted in several “benchmarks” or standards against which these partnerships could be measured:

- there is a formal agreement between the university and the health service regarding practice education
- there is effective and timely communication between partners
- the rights, roles and responsibilities of all those involved in the practice education partnership are clearly defined
- both partners are involved in teaching in the practice education setting and at the university
- those involved in teaching in the practice education setting are prepared, supported, and recognized for their role
- there is regular monitoring of the quality of teaching and learning in the practice education setting

The Australian Health Workforce Officials Committee (2005) surveyed health departments, universities and colleges, and health organizations regarding practice education issues and strategies to address them. They identified several challenges including:

- an ongoing shortage of clinical placements
- some reluctance among clinicians to take on the student supervision role, and
- a lack of alignment between education institution planning for student numbers and health organization commitment to take students

Strategies proposed to address these challenges included:

- development of closer partnerships between education institutions and health organizations for joint planning purposes
- changes in clinical placement patterns to take advantage of underused times or locations
- more educational support for staff working with students to prepare them for the teaching/supervision role, and

- more benefits for staff working with students, e.g. access to university services or facilities

The National Health Service for Scotland (2003) completed a series of initiatives related to practice education, in response to rising concern about shortages of health professionals and practice education placements for students training for those professions. They developed a set of “quality standards for practice placements” defining expectations of Scottish health organizations in relation to providing student placements. These quality standards address policy and practice related to student education, staff development and support, complaint procedures, and monitoring and evaluation of practice education.

The National Health Service of Scotland (2005) then surveyed Scottish education institutions providing allied health professions education, and Scottish health organizations providing the clinical practice components of those education programs. The focus was on issues related to student placement capacity and best practice. The most significant perceived barriers to providing placements were time available for staff to support students, lack of student accommodation (including clinical and office space) and a shortage of clinical staff willing to work with students. Recommendations included mandatory participation of all suitably experienced staff in student education, improved training for staff working with students, and improved communication between the education institutions and health organizations providing student placements.

A review of North American research related to practice education for physicians in the ambulatory care context (Bowen and Irby 2002) identified several themes with potential implications for health care organizations. As with other health professions, the challenge of developing and maintaining a network of practitioners willing to serve as preceptors was identified. A key finding was that the student’s “teacher” in the clinical setting “may be the most important factor to consider when evaluating the quality of teaching sites” (page 631), which led to the conclusion that supports should be provided for these individuals, including orientation and education programs to prepare them for the teaching role. A concern frequently identified by physicians working with students was the amount of time required to teach and supervise, which can reduce the number of patients seen and thereby reduce physician income.

The English National Board for Nursing (2001) developed principles and guidelines for practice education. It stressed the importance of effective working partnerships between education and health organizations, including strong commitment to practice education at the highest level of the partner organizations. It also emphasized the importance of specific preparation of clinical staff for their role in support and supervision of students.

A 2006 Health Canada study reiterated the importance of the practice education experience. The study reviewed factors associated with the success of graduating students in passing a national exam for entry into the profession. After considering different models for professional education in several schools across Canada providing training in five different health professions, the conclusion (p. 11) was that any of the models “with a large practice education component may be successful.” For one of the professions (medical lab technology), there was evidence that a longer practice education component improves a student’s chances of passing the certification exam. One of the study’s recommendations (p. iii) is that provincial government ministries, when funding expansion of these education programs, should “consider additional funding in the health services sector to support the clinical practice education component that appears to be critical for student success.”

A survey was recently completed (BCAHC 2007) of key stakeholders in BC student practice education, including administrators, educators and placement coordinators from both the education and health care sectors. The survey followed up on an earlier BCAHC report (2004) which had

assessed the state of practice education within BC and made various recommendations. Respondents indicated significant progress in the overall state of practice education within BC, and identified challenges still faced, e.g. lack of coordination and collaboration in decision-making, and preceptor burnout. Several areas were identified as requiring improvement, including; collaboration and communication among the various organizations involved in student practice education, use of innovative models or technologies for student practice education, supports for preceptors, standardization of structures and policies, and sharing of effective strategies across regions and disciplines.

The Practice Education Collaborative of BC, a working group of the BC Academic Health Council Practice Education Committee with representation from the six BC health authorities and the BC post-secondary education sector, has developed resources to help health and education partners formalize their relationships and clarify their practice education roles and responsibilities (PEIF 2007). The new resources include:

- An updated academic affiliation agreement template
- Standard guidelines to support organizational practice education policies, e.g. on communicable diseases and immunization, and on confidentiality requirements
- Recommended health authority management processes for practice education

Two other recent BC studies also informed this report. A 2004 study at the Children's and Women's Health Centre of BC (C&W) identified current numbers of student placements (then approximately 2,300 annually) and estimated costs to the organization of those placements. The study identified barriers to the organization's ability to meet the need for increasing numbers of placements as the universities expanded their health professions programs. The 2005 Fraser Health study also identified current numbers of student placements (then approximately 5,000 annually), and estimated costs to the organization of those placements. The Fraser Health study also identified several benefits to the organization from its participation in student education, including a positive impact on recruitment and retention. Recommendations from both these studies, e.g. on ways to increase capacity and ensure the necessary infrastructure supports are in place, are referenced throughout this report.

A new policy direction nationally and provincially embraces interprofessional education for collaborative, patient-centred practice as one strategy to address a variety of health service delivery issues. Interprofessional education, in which students and practitioners learn how to practice collaboratively in a patient-centred context, is consistent with integrated health and human resource planning and implementation. It also has a demonstrated impact on quality of care and patient safety due to enhanced communication and collegial teamwork (McFerran et al 2004). The Health Council of Canada (2005, page 1) supports the need to reform workforce aspects of the Canadian health care system, including creating "opportunities for health care providers to learn and work in interprofessional teams." The Health Council of Canada (2007), through its Health Human Resource Strategy, has chosen as one of its key initiatives the development and implementation of interprofessional education. Students in all health professional programs need to experience effective collaborative practice models in the health authorities during their practice education. For this to happen, practice education co-ordinators in the education programs must support and facilitate collaborative practice learning outcomes, and health authorities must train practitioners and support collaborative practice models throughout their organizations. Indicators related to interprofessional education placements have been incorporated in this report.

The Baldrige National Quality Program (2007), a well known and widely accepted program, has developed categories of analysis for education institutions. These criteria have previously been suggested as a framework for hospital self-study to build quality in medical practice education (Leist et al 2004). The seven Baldrige criteria and definitions are summarized below:

1. **Leadership** - This category addresses how senior leaders guide the organization through setting and communicating vision and values, and through establishing plans and structures to achieve these. It addresses the commitment of senior leaders to established goals and to use of performance measure for organizational improvement.
2. **Strategic Planning** - This category addresses the organizational processes for planning activities for operational effectiveness. It also addresses the organization's ability to work collaboratively with its partners, be innovative as conditions change, and ensure adequate financial and human resources to achieve its goals.
3. **Student, Stakeholder and Market Focus** - This category focuses on how the organization seeks to meet the needs of its students and stakeholders.
4. **Measurement, Analysis and Knowledge Management** - This category addresses how the organization gathers data on its activities and uses that data to improve its performance, or to respond to changing circumstances.
5. **Workforce Focus** - This category addresses how the organization builds its workforce and then supports employees to work effectively to achieve established goals, through established systems for staff education and recognition.
6. **Process Management** - This category addresses key work processes established to maximize student learning and to ensure efficient use of resources. It addresses operational planning and support processes.
7. **Results** - This category addresses the organization's systems for measuring performance and improvements.

In this report, the seven Baldrige categories have been slightly adapted to provide a framework for categorizing indicators of quality practice education in health authorities. One of the Baldrige categories, i.e. Student, Stakeholder and Market Focus, was addressed through the VCHA project (PEIF 2007), though this report does identify the need for health care organizations to regularly seek feedback from students and stakeholders. One additional category has been introduced, i.e. Facilities and Equipment Support.

C. INDICATORS OF PRACTICE EDUCATION QUALITY

In this section, each of the Baldrige categories are addressed. Findings from the literature are summarized, and indicators are proposed. The indicators are intended to be straightforward enough that they can be used for review and assessment purposes by anyone involved in practice education at any level in the organization. For example, the indicators could be used for a review at the executive level for a broader organizational review, or they could be used by a specific program, unit or discipline for review at that level.

1. Leadership

Senior Leadership Accountability and Commitment

Health authority senior leaders have an important role in establishing organizational directions and expectations through strategic planning and policy development. These are the processes that legitimize and validate the authority's role in the education and preparation of health care professionals. Active support from senior leaders within both the health organization and the education institution is critical to the sustainability and success of the partnership (Raines 2006). Part of senior leadership commitment involves regular communication with top education institution leaders regarding strategic directions and other issues of mutual concern (Clare et al 2003).

Health Authority Quality Indicators – <i>Senior Leadership Accountability and Commitment</i>	Yes	To a large extent	To some extent	No	Don't Know
• Strategic planning documents explicitly affirm the health authority's role in providing practice education for health professions students					
• Responsibility for student practice education is clearly assigned at the executive level					
• Data related to student practice education are regularly reviewed by the executive committee and used to guide organizational decision making					
• Senior leaders participate in practice education planning activities, both within the organization and with partners in education institutions and the provincial health care system					
• The organization's budget addresses resources required to support practice education, e.g. training and release time for preceptors					

Middle Management Commitment

Mid level managers responsible for the operation of clinical programs play a critical role in the allocation of staff, facility and equipment required to support practice education. A variety of pressures within the clinical setting have, in some cases, resulted in an attitude by middle managers that "students are a drain on resources and not our responsibility" (Health Professions Council of Australia 2004, p. 6). In contrast, a strong interest in, and commitment to, taking on students within the clinical programs sets a positive tone for the placement environment. A Finnish study (Saarikoski and Leino-Kilpi 2002) of over 400 nursing students completing clinical placements in hospitals concluded that, while the student's relationship with his/her mentor was the most important factor contributing to student satisfaction with the practice education experience, the next most important factor was the role of the ward manager in creating a positive clinical culture and supporting hospital staff supervising student nurses. In addition, anecdotal evidence in the allied health professions suggests that students who participate in practice education settings in which colleagues and managers are positive and happy are much more likely to seek employment in the organization following graduation.

Health Authority Quality Indicators – <i>Middle Management Commitment</i>	Yes	To a large extent	To some extent	No	Don't Know
• 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

Practice education is a complex business. It involves movement through the health authority of thousands of students every year, with coordination of resources to support their learning experiences. For example, Lower Mainland health authorities in BC provide placements for an estimated 19,000 students per year from a variety of disciplines and education institutions (Mickelson 2006).

Despite the millions of dollars required annually for health authorities to support thousands of student placements, there is a very limited amount of integrated planning. Infrastructure supporting the process varies widely. Systems for gathering relevant data, e.g. numbers and types of placements, numbers of students hired, or number of staff prepared as preceptors, are poorly linked or may not exist at all.

Complicating this further is the fact that the different post-secondary institutions usually approach the health authorities independently in their search for student placements (with some exceptions, e.g. the Lower Mainland Nursing Interschool Council), and that even disciplines within the same post-secondary institution may be unaware of the expectations they are placing on health authorities. Current shortages of placement opportunities in some disciplines and areas tend to create a competitive, rather than a collaborative environment.

Structure, Planning and Resources

BC's health authorities have different organizational structures and different levels and types of participation in student practice education. The differences between rural and urban settings mean that processes to manage student practice education will need to vary across the province. In fact, there is a Practice Education Innovation Fund sponsored project specifically intended to develop a provincial model for practice education in rural settings (PEIF UBC in progress). In any case, as recommended by the 2004 BCAHC Practice Education Survey Final Report, each health authority needs to define its internal structure for managing affiliation agreements and overseeing student practice education, by clarifying roles and responsibilities for student placements. Additionally, budgets will need to include adequate resources to support quality practice education (English National Board for Nursing 2001).

Health Authority Quality Indicators – <i>Structure, Planning and Resources</i>	Yes	To a large extent	To some extent	No	Don't Know
• 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

While individual relationships between staff of the authority and the education institution are important, formal written agreements are needed to ensure a partnership that extends beyond the tenure of those relationships and to define the responsibilities of each partner (University of Wales 2006, Clare et al 2003, UK Quality Assurance Agency for Higher Education 2001). The

health authority needs processes in place to manage these agreements (PEIF Practice Education Collaborative of BC *Modernization for Academic Affiliation Agreements* 2007).

Health Authority Quality Indicators – <i>Academic Affiliation Agreements</i>	Yes	To a large extent	To some extent	No	Don't Know
• 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 academic affiliation agreements					
• 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

Many sources (PEIF Practice Education Collaborative of BC *Modernization for Academic Affiliation Agreements* 2007, Australian Health Workforce Officials Committee 2005, BCAHC 2004, Clare et al 2003, English National Board for Nursing 2001, UK Quality Assurance Agency for Higher Education 2001) stress the importance of a collaborative approach, and emphasize that the effectiveness of practice education depends on a solid partnership between the health care and education organizations. In effective partnerships, the parties develop some shared goals and objectives (BCAHC 1999). They are knowledgeable about each other, influence each other, and contribute to and benefit from joint activities (Clare et al 2003).

The BCAHC (2007) survey of key stakeholders in practice education noted that 77% of them identified “developing linkages between practice and education partners” as a high priority for action, and flagged concerns about decisions being made without consulting or even advising partners in the practice education environment who may be impacted. For example, schools considering changing their curriculum to require longer practice education placements should consult with their clinical partners, or at least advise them well in advance. Similarly, health authorities need to advise their partner education institutions of any changes in the organization of clinical programs that will impact on their ability to place students (PEIF Practice Education Collaborative of BC *Modernization for Academic Affiliation Agreements* 2007).

Health Authority Quality Indicators – <i>Collaborative Approach</i>	Yes	To a large extent	To some extent	No	Don't Know
• There is a process in place for the health authority 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 for the health authority 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, supports for preceptors, or lobbying government					
• The health authority participates on provincial or national councils and committees working to improve practice education, e.g. the BC Academic Health Council, or the Association of Canadian Academic Healthcare Organizations					

Capacity

Health care systems in developed countries around the world are experiencing challenges in absorbing increasing numbers of students for practice education placements (Fraser Health 2005, Australian Health Workforce Officials Committee 2005, C&W 2004, Queensland Occupational Therapy Fieldwork Collaborative 2004, English National Board for Nursing 2001). The biggest challenge identified in a UK survey of five professions (Dietetics, Nursing, OT, Physiotherapy and Radiography) was an inadequate supply of qualified mentors (Mallik and McGowan 2007). Problems with capacity have been so severe, in at least one jurisdiction, that graduations have been delayed until students have been able to complete their practice education, and universities have closed programs or limited the number of student places offered (Australian Health Workforce Official Committee 2005).

The challenge is partly due to student placements being scheduled closely together in certain locations or times. This happens because the students' education programs require them to complete blocks of academic studies in advance of different types of clinical practice. Blocks of students completing academic components at the same time result in large numbers of students all needing placements at the same time (BCAHC 2007). The resulting high numbers of students moving through these clinical areas can reduce the quality of both the practice education experience for the student, as well as the clinical care.

There appear to be many locations which seldom or never accept students, often in exactly those areas where future employees are most needed. For example, the numbers of students placed in ambulatory care programs is still relatively small. This is the case, even though ambulatory care has emerged as a significant trend as hospital beds have closed, with whole new facilities being built to provide care on an outpatient basis. The BCAHC (2007) survey of key stakeholders in practice education noted that, while placements are primarily requested in acute care, there are several other sectors which may be capable of increasing student capacity, e.g. primary care, community health, and long term care. Few placements are on evenings and weekends, even though clinical care is delivered on a 24 hour basis and placement patterns should reflect the full range of times when that care is delivered (Fraser Health 2005, National Health Service of Scotland 2005).

Many health organizations are exploring ways to expand their capacity, in order to increase the supply of health professions students moving through the education system in preparation for entering the health system workplace. For example, they may gather data to help them assess their capacity to absorb student placements and then make decisions on target numbers of students that can be placed in various settings. Or they may focus on identifying more staff willing to take on students, and offer those staff training and support to do so. Taking such actions to increase capacity is an indicator of commitment to the critical student practice education component of the preparation of health care professionals.

Health Authority Quality Indicators – <i>Capacity</i>	Yes	To a large extent	To some extent	No	Don't Know
• A process is in place for estimating 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 teamwork is expected in clinical service delivery. Most health organizations have moved away from discipline based administrative structures toward program based administrative structures focused on patient-centered care. The education institutions continue to be organized by discipline, however, and the vast majority of students are supervised and supported by a professional in their own discipline.

The health authorities need to work with the education institutions to ensure the student is exposed to and acquires some experience in working with interprofessional teams, as this will be expected during clinical practice after graduation (Health Council of Canada 2005, National Health Service of Scotland 2003). Specifically, “students should have the opportunity to see how all staff contribute to the provision of care” (English National Board for Nursing 2001, p. 11) and to experience the reality of staff from different professions working together as a team. Additionally, clinicians from the various disciplines need to work together on practice education challenges which they all face.

Health Authority Quality Indicators – <i>Interprofessional Learning and Practice</i>	Yes	To a large extent	To some extent	No	Don't Know
• Students have opportunities to work in interprofessional clinical 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

The challenges in providing practice education are substantial, and new thinking is required to increase quality and capacity. As service delivery models have shifted, practice education models will also have to adapt. Successful partnerships foster innovations, both in the design of practice education and in how it is delivered. It will be important to investigate varied models of student placement, and the use of technology-based learning for both preceptors and students (BCAHC 2004). It will also be important to communicate findings across the system so that innovations may be adapted as appropriate to various regions or disciplines (BCAHC 2007).

Health Authority Quality Indicators – <i>Innovation</i>	Yes	To a large extent	To some extent	No	Don't Know
• Innovation in practice education is encouraged and supported by health authority management					
• New models for student supervision and practice education are being explored					
• Students are being placed within emerging service delivery models, e.g. ambulatory care, interprofessional teams					
• Learning for both students and preceptors is supported by technologies, e.g. videoconferencing, e-learning, simulation					
• There is a process in place for sharing knowledge and experience regarding 'best practice' in student education					

3. Measurement, Analysis, and Knowledge Management

The authority will need to determine what data should be gathered in relation to practice education, how the data will be gathered, and how it can be used to support quality practice education.

Data Gathering

Data may be gathered for a variety of purposes.

One purpose may be to document the level of educational activity within the health authority. This may be important for raising awareness of the important role played by health care organizations in the education of BC future health care professionals. The BCAHC report on academic health centres (1999) specifically suggested collecting data on “medical student days” as an indicator of the level of the organization’s educational activity. Data on the number of on-site days by students in other health professions is also important. Other possible measures of level of education activity are annual numbers of student placements, and total days students are individually supervised or preceptored by health authority staff (rather than attending in group placements supervised by university faculty).

Another purpose is to help determine whether, where and when additional students can be accommodated. Data on location and timing of placements will assist with that analysis.

Another purpose is to maximize the benefit to the health authority of its resources spent on student practice education. Data on numbers of new hires who were previously students placed in the health authority will indicate how successfully the health authority is linking its work with students with its recruitment requirements.

Yet another purpose for gathering data is to track performance in order to improve over time. Some performance indicators which may be useful include capacity (numbers of students who can be accommodated in various locations at various times), or utilization (actual numbers of placements), or numbers of staff recruited and trained to supervise students along with turnover among those staff, satisfaction level of students with their practice education experience, etc.

Once performance measures have been identified, systems for gathering data should be put in place. Many health organizations or disciplines within BC are currently tracking data using manual systems that vary from one location to another within the health authority. However, this produces data that cannot easily be compared across the organization. It would be preferable to identify common data elements to be tracked, and then to use electronic systems for data gathering system-wide.

The HSPNet system (BCAHC 2006), developed within BC and now adapted for use in many jurisdictions across Canada, is an alternative approach for data gathering and analysis that improves communication and information exchange while reducing handling of paper. The HSPNet system compiles comprehensive data on placement activities and trends. These can be used for both short-term planning and longer term evaluation and improvement purposes, both at the health authority and provincial levels. A survey of administrators, educators and placement coordinators from both the education and health care sectors in BC (BCAHC 2007) indicates that implementation of HSPNet has improved access to information and data, made the placement process more transparent and streamlined, and increased the ability to match sites with placement requirements.

Health Authority Quality Indicators – <i>Data Gathering</i>	Yes	To a	To	No	Don't
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		large extent	some extent		Know
• Key performance indicators have been identified, e.g. related to capacity, utilization, recruitment					
• Key quality indicators have been identified, e.g. related to satisfaction, education outcomes					
• An organization wide system, e.g. HSPNet or an equivalence system, is in place to gather and collate data on practice education indicators					

Data Analysis and Reporting

Once data are gathered on practice education, a system needs to be in place for analysis (PEIF Practice Education Collaborative of BC *Modernization for Academic Affiliation Agreements* 2007). Once again, the HSPNet system can provide support (BCAHC 2006). For example, the HSPNet Capacity Manager module allows sites receiving students to set target levels for student placements, which could be based on student-to-staff ratios or established to address recruitment needs. The module then tracks actual placements against those target levels. It also enables the health authority to “find” available capacity, e.g. to support education program expansion, or to replace placements which have to be cancelled.

Health Authority Quality Indicators – <i>Data Analysis and Reporting</i>	Yes	To a large extent	To some extent	No	Don't Know
• 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

Many jurisdictions have faced the challenge of clinicians who are hesitant to take on the responsibility of student supervision (Australian Health Workforce Officials Committee 2005, Fraser Health 2005, C&W 2004, Clare et al 2003, Bowen and Irby 2002, English National Board for Nursing 2001). Identifying clinicians to take on the role of preceptors, and supporting them in that role, will be a major challenge for health authorities.

Participation in Student Practice Education

If practice education is considered a key component of the health authority’s mandate, there will be an expectation that its clinical staff and managers support and participate in that mandate. The National Health Service of Scotland (2005, p. 27) suggests that all staff should “consider student supervision as a core component of the job of a trained professional.” Other sources suggest that formal clinical job descriptions include an expectation of participation in student education (C&W 2004, English National Board for Nursing 2001), and that performance in supporting student education be included in performance appraisal criteria (C&W 2004). At the very least, there should be an expectation that every clinical program will be involved in student education, and that managers will support student education.

Health Authority Quality Indicators – <i>Participation in Student Practice Education</i>	Yes	To a large extent	To some extent	No	Don't Know
• There is an expectation that all clinical programs/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

As staff and physician involvement is key to quality practice education for health professions students, providing supports and incentives in recognition of academic responsibilities is very important (BCAHC 1999). The BCAHC (2007) survey of key stakeholders in practice education noted that 73% of them identified “increasing preceptor development and support” as a high priority for action.

Staff and physicians who mentor and supervise students require specialized educational skills. The problem has become more urgent as experienced preceptors retired from the work force, and recent graduates with only a few months work experience are increasingly being asked to supervise students (BCAHC 2007). Many sources point out that excellence in practice education will be more easily achieved if staff and physicians taking on roles in practice education receive specific education about their support and supervision role with students (Scottish Social Services Council 2006, University of Wales College of Medicine 2006, Australian Health Workforce Officials Committee 2005, Fraser Health 2005, Palmer et al 2005, BCAHC 2004, C&W 2004, Queensland Occupational Therapy Fieldwork Collaborative 2004, Clare et al 2003, Bowen and Irby 2002, English National Board for Nursing 2001, BCAHC 1999). Additionally, the mentor role has been described as “developmental” and therefore requiring regular and ongoing learning related to skills in working with students (Mallik and McGowan 2007).

The National Health Service of Scotland (2003) has established a national certification program for staff working with students called “Learning Together”, and recommended (2006) that all “practice educators” undertake the minimum training requirement before supervising students. The United Kingdom Nursing and Midwifery Council has developed standards for mentorship education programs to enable nurses to “qualify” as mentors; recommends ongoing updates of current mentors; and recommends that job descriptions for senior positions include completion of the mentor education program (Mallik and McGowan 2007). Another UK initiative involving three universities (Universities of Ulster, Northumbria and Bournemouth 2007) has developed an interprofessional web-site with extensive resources to support practice education, including comprehensive on-line learning materials for preceptors.

The University of Wales College of Medicine (2006) has a program “Even More Effective Teaching” which it encourages its hospital and community based student supervisors to complete. Bowen and Irby (2002) noted the existence of physician preceptor education programs developed at several American universities, including Stanford, Michigan State, the University of California and the University of Washington. Within BC, UBC (2006) has developed a Certificate in Practice Education that combines online learning, classroom teaching, and independent study, with a particular focus on interprofessional collaboration across disciplines. Many health authorities and education institutions, both within BC and elsewhere, have developed their own preceptor/mentor education programs. Providing such education opportunities is the most broadly reported strategy for improving student practice education in all the sources reviewed for this report.

Health Authority Quality Indicators – <i>Preceptor/Mentor Education Programs</i>	Yes	To a large extent	To some extent	No	Don't Know
• 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

Increasing complexity or volume of clinical case loads can make it very difficult for clinicians to accommodate the extra workload of student supervision. Preceptor burnout has been identified as a very significant challenge associated with student placements (BCAHC 2007). The student supervision role involves significant additional workload for clinicians who will need to liaise with the education institution faculty, become familiar with the student’s curriculum and learning objectives, plan a sequence of learning activities, coach and debrief the student, and participate in the student’s assessment (Fraser Health 2005). Bowen and Irby (2002) noted that one impact of physicians taking time to teach medical students in ambulatory care settings is reduced patient flow, for which physicians compensate by extending their workdays by 30-50 minutes. The National Health Service for Scotland (2005) reported that the greatest barrier to providing practice placements was lack of time for clinicians to supervise students adequately, and has formally included in its *Quality Standards for Practice Placements* (2003) “preparation time prior to student arrival ... on day 1 for student induction [and] time to assess the students developing competence/achievement of learning outcomes.” A UK survey (Mallik and McGowan 2007) identified one of the major challenges for mentors as finding enough time to support student learning while continuing to provide good quality patient care. They recommended that employers acknowledge the extra burden through some reduction of clinical workload.

Finding time to supervise students can be particularly challenging in disciplines where there are currently unfilled positions. The resulting increased work load for existing staff makes it difficult for them to take on the additional work of supporting students. Providing some flexibility in clinicians’ clinical work responsibilities is one strategy to enable more time to be dedicated to the responsibilities of student supervision. Respondents to the BCAHC survey (2007, page 34) of practice education stakeholders described a need for “dedicated time to meet with students, prepare teaching materials, complete required documentation, and other functions related to the preceptors role.” Some BC health authorities have in recent years been obtained additional government funding to enable them to provide nurse preceptors with a few hours at the beginning of the placement free from clinical responsibility so they can work directly with the student (Fraser Health 2005, C&W 2004).

Different models of supervision or teaching strategies may also reduce time spent by individual staff repeating standard instruction over and over to different individual students. Most health professions use a 1:1 supervision model. Nursing, however, has for years brought groups of students to the clinical setting, accompanied by a faculty instructor who takes primary responsibility for their learning. Medicine also groups students for some learning experiences during practice education. Bowen and Irby (2002) described a strategy involving pairing of two same-year residents to work together. Other strategies for saving preceptor time include using technologies such as videoconferencing or on-line learning. Simulations, in particular, have potential benefit to enable students to get initial clinical experience without actually having to be present in the clinical setting.

Health Authority Quality Indicators – <i>Time for Student Supervision</i>	Yes	To a large extent	To some extent	No	Don't Know
<ul style="list-style-type: none"> Clinical supervisors/preceptors are supported with the additional workload associated with students, through reduced patient load or dedicated time clear of clinical responsibilities 					
<ul style="list-style-type: none"> 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, etc. 					

Recognition and Thanks

Surprisingly, it has not been usual practice until recent years to recognize and thank clinicians who work with students. A recent UK survey identified lack of formal recognition and reward for mentors as a serious problem (Mallik and McGowan 2007). Several jurisdictions are now implementing strategies intended to show appreciation for the work of clinicians who work with students (Australian Health Workforce Officials Committee 2005, Palmer et al 2005, Fraser Health 2005, C&W 2004, Queensland Occupational Therapy Fieldwork Collaborative 2004, Singh 2004, Clare et al 2003). Statistics Canada (2006, p. 35), in its upcoming research into the infrastructure of health education programs has included a question “What are the types of incentives used to retain preceptors?”, also affirming the challenge of encouraging staff to continue in this role.

Strategies may include individual letters of thanks placed on personnel files, certificates of appreciation, and celebratory events involving senior health leaders. Some health organizations have also worked with their partner education institutions to implement additional strategies to recognize staff for their student practice education work and to more closely link them with the education institution. These may involve academic cross-appointments for staff, access to university libraries and data bases, research opportunities and support, and free or subsidized access to continuing education or credit courses.

Health Authority Quality Indicators – <i>Recognition and Thanks</i>	Yes	To a large extent	To some extent	No	Don't Know
<ul style="list-style-type: none"> Staff who supervise students receive recognition and thanks from the health authority for their practice education work, e.g. through letters of thanks 					
<ul style="list-style-type: none"> Senior health authority leaders speak publicly about the importance of practice education, and participate in events recognizing staff involved in practice education 					
<ul style="list-style-type: none"> 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 services/facilities, etc. 					

Link with Recruitment Needs

One of the greatest benefits for health organizations of being involved in student practice education is the access it provides to competent and partially oriented new employees (UK Quality Assurance Agency for Higher Education 2001). Practice education placements provide an opportunity to observe and assess student skills and then hire with a relatively high level of confidence in the student’s potential for success (Fraser Health 2005). A useful strategy may be to work toward increasing the number of student placements in disciplines where there are current or anticipated shortages, though this may be a challenge as staff who are scrambling to meet clinical needs often feel unable to take on student supervision responsibilities (Fraser Health

2005). One jurisdiction in Florida (Raines 2006) now provides scholarships to nurses completing practice education within its hospitals in return for a two year work commitment following graduation.

Rural areas are experiencing particular recruitment challenges. The Government of BC (2007) currently offers a student loan waiver program for students in medicine, nursing, pharmacy, physiotherapy, occupational therapy, and speech pathology who work in underserved communities following graduation. There is some evidence that students who are placed in rural areas often develop interest in staying in those areas after graduation. For example, 50% of the medical graduates who trained in a rural setting through the UBC Department of Family Practice between 1981 and 1992 ended up practicing in a rural area (Whiteside and Newbery 1997). Similar results were found in Northern Ontario (Pong and Russell 2003) among students who were placed in rural areas for practice education. Placements in settings where the student can experience interprofessional and collaborative practice can be very appealing in a rural context where there are fewer specialized resources available. These types of experiences may also help to attract students into positions that are currently hard-to-recruit.

As health authorities find it increasingly necessary to hire new graduates, even into specialty areas, some innovative strategies to support new staff will likely be necessary. Many BC health authorities now have well-established “fast track” specialty training programs to prepare their staff to enter specialty positions. These programs enable health authorities to hire new graduates, and then transition them into specialty roles.

An RNABC (2003) study indicated that positive experiences during a clinical placement play an important role in the decision made by the student to accept a position with the organization after graduation. When health authority staff and students know there is a realistic chance of future employment, it is likely that both will focus on creating quality in the placement experience. In any case, it makes sense to increase the numbers of placements that can realistically lead to the student becoming a new employee. Statistics Canada (2006, p. 36 and 48), in its upcoming research into the infrastructure of health education programs, has included two questions, “What is the link between practical training available and market needs?” and “Are there any communication links between employers and education institutions regarding the ability of a program to meet the market needs – who makes the decision on the number of seats?” Both of these questions affirm the importance of linking placements with recruitment needs.

Health Authority Quality Indicators – <i>Link with Recruitment Needs</i>	Yes	To a large extent	To some extent	No	Don't Know
• 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 the BC government student loan waiver program, or by supporting preceptors					
• Students are welcomed, have positive experiences during their placements, and are encouraged to consider employment with the health authority after graduation					
• Data are recorded on whether new employees were previously students with the health authority					

5. Facilities and Equipment Support

Several sources note that facilities in health organizations are often less than ideal to support students, and suggest the facilities and equipment described below as requirements for quality practice education (BCAHC 2007, University of Wales 2006, Australian Health Workforce Officials Committee 2005, Fraser Health 2005, C&W 2004, Eastaway and Campbell 2004, Clare et al 2003).

Senior students who are providing clinical care similar to that provided by staff require additional supports. The National Health Service of Scotland (2005) identified lack of office space as a major barrier to placements of senior students as they may require some minimal space in which to see patients or prepare clinical reports. Lack of such space can be the reason why a decision is made not to accept a graduate student (Fraser Health 2005). This is a real loss for the health authority, as students are usually the ones who contribute most to the health authority's clinical work, and are also the ones who are closest to graduation ready for employment (Fraser Health 2005).

It will be important to take advantage of technology to support learning for students (BCAHC 2004). Facilities may be required to support some technologies, e.g. simulation, which can reduce the overall time requirements for clinical staff who are supporting and supervising students. There are several projects currently underway in BC exploring the potential of simulation to support practice education. These projects are funded through the Practice Education Innovation Fund, with a complete list available on the BC Academic Health Council website at www.bcahc.ca.

As new facilities are built, needs related to student practice education should be considered (National Health Service of Scotland 2006, Fraser Health 2005). For example, some examining rooms need to be large enough to accommodate observing students, as well as patients and attending clinicians. If groups of students are expected on site, there needs to be adequate teaching space to accommodate them.

Health Authority Quality Indicators – <i>Facilities and Equipment Support</i>	Yes	To a large extent	To some extent	No	Don't Know
• 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, videoconferencing, etc.					
• 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 senior 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

This section addresses indicators related to health authority systems for organizing practice education programs to ensure quality and efficient use of resources.

Standard Operating Processes

The authority will need to establish overall policies and procedures to direct student practice education, consistent with the formal affiliation agreements (BCAHC 2007, PEIF Practice Education Collaborative of BC *Modernization for Academic Affiliation Agreements* 2007, Clare et al 2003).

The authority will need to engage in cooperative planning with the post-secondary institution on operational details of placements. Roles of all those involved in student practice education should be clearly defined and well disseminated (PEIF Practice Education Collaborative of BC *Modernization for Academic Affiliation Agreements* 2007, Scottish Social Services Council 2006, Clare et al 2003, English National Board for Nursing 2001). Accountable individuals should be identified to liaise between the clinical setting and the education institutions (PEIF Practice Education Collaborative of BC 2007). The health authority will need to agree with its partner education institutions on types, numbers and timing of student placements that will meet the specific requirements of the education programs and that can be accommodated by the health authority (PEIF Practice Education Collaborative of BC 2007, Scottish Social Services Council 2006, Clare et al 2003, English National Board for Nursing 2001). The extent to which health authority staff will be involved in supervision and evaluation of students for different types of placements should be defined (PEIF Practice Education Collaborative of BC 2007, Scottish Social Services Council 2006, University of Wales 2006, Clare et al 2003, English National Board for Nursing 2001, UK Quality Assurance Agency for Higher Education 2001).

Health Authority Quality Indicators – <i>Standard Operating Processes</i>	Yes	To a large extent	To some extent	No	Don't Know
• 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 of students, e.g. on confidentiality and immunizations, to the education institutions (PEIF Practice Education Collaborative of BC *Modernization for Academic Affiliation Agreements* 2007, UK Quality Assurance Agency for Higher Education 2001), or to students directly if their placement is not arranged through an education institution.

Current practice is for education programs to provide information to the clinical organization on students' level of knowledge and learning objectives; the health authority needs to ensure this information is received by individual preceptors (PEIF Practice Education Collaborative of BC 2007, Scottish Social Services Council 2006, University of Wales 2006, Clare et al 2003, English National Board for Nursing 2001).

Health Authority Quality Indicators – <i>Communications</i>	Yes	To a large extent	To some extent	No	Don't Know
• The health authority communicates to the education institutions/students its requirements for students and faculty, e.g. on confidentiality, immunization, liability and personal injury coverage, or accident reporting					
• The health authority provides its partner education institutions with its policies/procedures/guidelines relevant to student practice education					
• Health authority staff supporting students receive information from the education institution about students' level of knowledge and learning objectives					

Orientation

An orientation to the clinical environment should be provided for all students (PEIF Practice Education Collaborative of BC *Modernization for Academic Affiliation Agreements 2007*, Scottish Social Services Council 2006, University of Wales 2006, Clare et al 2003, National Health Service for Scotland 2003, English National Board for Nursing 2001, Callaghan and McLafferty 1997), ideally one that can be used by all disciplines (National Health Service for Scotland 2006, C&W 2004).

In BC, an orientation to interprofessional learning and collaborative practice is currently being developed (PEIF C&W 2006). The intent is to provide a template in which health authorities can incorporate their own information, and which students can access on-line before their placement. Content topics for the template have been identified, both for the health authority level, e.g. on confidentiality, and the organizational/unit level, e.g. related to rural practice education or Aboriginal health. The initial report of the project (PEIF C&W 2006) noted that orientation has traditionally relied on a variety of overlapping paper and electronic formats prepared by different programs, resulting in duplication of effort and cost across programs. These have usually been supplemented with in-person orientations, which require significant staff time and are therefore costly for health authorities. E-orientations will have the advantages of being easily accessible to students, easily updated by health authority staff, easily spread over time as needed by the student, and at least partially replacing time previously required by health authority staff repeating standard information to students.

Health Authority Quality Indicators – <i>Orientation</i>	Yes	To a large extent	To some extent	No	Don't Know
• 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 for all students					
• More specific orientation to individual facilities or units/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

Problems will always arise. For example, working with students who are having difficulty in their placement can be particularly challenging for preceptors and there need to be processes in place to address these situations (Mallik and McGowan 2007). There may be dissatisfaction of other sorts which may result in complaints. This requires agreed upon processes for dealing with individual complaints and also for addressing broader issues of mutual concern (PEIF Practice Education Collaborative of BC *Modernization for Academic Affiliation Agreements 2007*,

Scottish Social Services Council 2006, National Health Services of Scotland 2003, UK Quality Assurance Agency for Higher Education 2001).

Health Authority Quality Indicators – <i>Addressing Problems</i>	Yes	To a large extent	To some extent	No	Don't Know
• 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					

7. Results

The BCAHC's (1999) background paper on academic health sciences centres affirms that one of the distinctive characteristics of outstanding health organizations is their willingness to constantly challenge themselves through ambitious improvement plans. This section addresses indicators related to the health authority's systems for measuring, evaluating and improving its practice education performance.

Because student practice education is a significant component of the health authority's overall work, because it consumes significant health authority resources, and because its quality directly impacts the preparedness of large numbers of its new employees, it is reasonable to expect that the health authority will devote some energy and resources to ongoing assessment of its performance in providing student practice education.

This ongoing assessment of practice education will ideally be a joint initiative with the post secondary institutions, as they are partners in the process and also have a vested interest in monitoring the quality of the students' practice education experience (University of Wales 2006, Clare et al 2003, UK Quality Assurance Agency for Higher Education 2001).

The health authority may also want to go beyond gathering feedback and using it to improve student practice education. Particularly with its major education institutions partners, it may wish to engage in more sophisticated evaluation and research initiatives related to the design and implementation of student practice education.

Health Authority Quality Indicators – <i>Results</i>	Yes	To a large extent	To some extent	No	Don't Know
• Goals are set and performance is measured for organizational performance related to practice education, e.g. related to 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					

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