MEETING THE ADVANCED CARE PARAMEDIC DEMAND

IN THE BRITISH COLUMBIA AMBULANCE SERVICE

By

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We accept this thesis as conforming

to the required standard

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ABSTRACT

This study identifies effective and efficient strategies that the British Columbia Ambulance Service (BCAS) can use to recruit and retain Advanced Care Paramedics (ACP) from the current Primary Care Paramedics. BCAS is transitioning from an employer-funded ACP training model to an employee-funded model. A successful internal recruitment process is required to ameliorate a worsening ACP shortage, while addressing the cultural impact of the changed training process. Current literature informed the study and provided a comparison for the study findings. Through an action research process, involving focus group and survey methodologies, the concerns and needs of potential ACP students were identified. Recommendations address the number of potential ACP candidates, their financial issues, organizational culture, licensing, and delivery of training.

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CHAPTER ONE: FOCUS AND FRAMING

Introduction

The British Columbia Ambulance Service (BCAS) is struggling with an aging workforce, limited funding and rising expectations for performance. As Executive Director, Provincial Programs, I have both a keen interest and a sense of professional obligation to facilitate changes that will place BCAS on a stable staffing and operational footing. Those changes include the ability to hire trained paramedics from outside the province and the ability for current employees to upgrade their qualifications at their own expense.

This study addressed the question: What effective and efficient strategies can BCAS use to recruit and retain Advanced Care Paramedics from the current Primary Care Paramedics? The study was limited to internal recruitment strategies, although internal and external recruitment are inextricably linked through a Memorandum of Agreement (Memorandum of Agreement [MOA], 2004) as detailed in the Organizational Context section.

The Opportunity

The BCAS is the largest provider of emergency health care in Canada and one of the largest in North America. It employs 3,200 full-time and part-time paramedic staff, operating out of 191 stations and three flight centres located around the province (*Service Plan*, 2005). BCAS has been operated by the Government of BC since 1974. After 30 years of slow evolution, BCAS embarked on a revolutionary process to transform the organization into a progressive, sustainable entity that could meet the challenges of today and prepare for tomorrow.

Senior management of BCAS saw the need for a strategic human resource plan that no longer restricted career progression to those chosen by seniority. Through an interest-based process with the Ambulance Paramedics of BC Bargaining Unit (APBCBU), issues were raised,

explored and evaluated in depth. This process was in stark contrast to the positional and confrontational bargaining of the past. On November 15, 2004, a Memorandum of Agreement (Memorandum of Agreement [MOA], 2004) was signed with the Ambulance Paramedics of BC Bargaining Unit (APBCBU). The MOA contains provisions which, if fully realized, will assist BCAS to cope with its pressures. The end result of the collaborative process was the signing of the MOA.

Two key features from the MOA have led to this research: the ability to hire qualified paramedic candidates from outside BCAS, and the move from post-employment, employer-funded training to pre-employment, student-funded training. Both are significant changes in the culture and the business practices of BCAS.

There are three levels of professional credential described by the professional association of paramedics (The Paramedic Association of Canada): the entry level of Primary Care Paramedic (PCP), the ACP, and the Critical Care Paramedic (CCP). There is some variation in licensing levels (and job titles) in different provinces. For example in BC, the current licensing level for a CCP is described as an *ACP with an Airevac Endorsemen*t.

Prior to the Agreement on Internal Trade (Agreement on Internal Trade [AIT], 1998) and the subsequent Mutual Recognition Agreement (Mutual Recognition Agreement [MRA], 2003), it was not possible for paramedics to have their credentials recognized in different provinces. Subsequently, BCAS was not able to hire qualified personnel from outside of BC. Paramedics' credentials are now recognized by the different provinces and so paramedics are free to move across provincial borders, subject to meeting the licensing requirements of the target province.

Previously, BCAS provided and paid for all training after individuals were hired. The paid training continued throughout employees' careers. Training for advancement was only

offered when there were positions to be filled and the employer paid wages as well as training costs. Seniority played a significant role in selection of candidates by the employer for sponsorship into a training program. Since the employees had little control over their career advancement, other than putting in time, there was no incentive for individual initiative.

Changing from a system where everyone entered the service and received training through a seniority-based process to a system of external hires, pre-employment training, and personal responsibility for advancement has been a difficult process for the BCAS staff thus far. Mid-career employees who had been putting in time with the expectation the employer would then pay for all their training are resentful of the changes. This has been manifested in resistance to applying for training and anecdotal reports of systematic obstruction of on-the-job evaluation processes for both potential out-of-province applicants and internal self-funded candidates.

The emotions associated with the change to an eligibility/merit system and advancement through self-funding was a major change to the culture of this organization, where the employer had paid for all and every piece of initial and on-going training. This presented the biggest challenge in this study. It is difficult to address the very personal impacts on individuals while meeting the pressing needs of service delivery. With an aging workforce, especially at the ACP level, BCAS needs a combination of internal and external recruitment to meet the imminent demand for ACP practitioners.

Significance of the Opportunity

Four main factors give rise to the significance of this opportunity: (a) the demand for trained staff is most critical at the ACP and CCP levels, (b) there are currently over 50 ACP vacancies in the province, (c) the average age of ACP practitioners is 46, and (d) 26 percent of the 211 current ACP group eligible for retirement within four years (Fletcher, 2005).

Training to the ACP level takes 11 to 20 months for a PCP who must have three years of high call volume experience to be eligible for advanced training. Under the previous employer-paid, post-employment training model, each ACP training spot cost BCAS $108,000 for wages and training expenses. To fill the existing 50 ACP vacancies alone would cost $5.4 million, using the employer-funded model (Tony Arimare, personal communication, May 25, 2005). A change to external hiring and pre-employment training would allow most of that money to be allocated to service delivery for the people of BC. Even if the current employer-paid training continued, training capacity and the time delay in training would make this process insufficient to meet the current and future ACP demand.

A major stumbling block to correcting this situation was the collective agreement between BCAS and APBCBU. The new MOA allows BCAS to be more creative in developing retention and promotion strategies. The MOA (2004) designates external ACPs and internal self-funded ACPs as entities outside of the normal internal promotion and job posting procedures. Article 3.6.3 of the MOA (2004) stipulates that both external ACP hires and advancement from internal self-funded ACP training will generate employer-funded ACP training spots on a sliding scale through March 31, 2008. This creates a potential win-win for those waiting for training and for the BCAS, which is in need of ACP practitioners.

Some current cultural barriers negated the progress anticipated with the signing of the MOU. With few external hires and self-funded ACP graduates completing the full licensing process, few employer-funded spots have been generated. Anecdotal evidence from ACP students and potential external hires indicates that the current ACP community may not be receptive to the change in process, decreasing the likelihood of successful education and licensure. Precepting of ACP students, and field marking for licensure are both dependent on the

ACP community.

The shortage of ACP practitioners is already affecting service delivery. BCAS is conducting a pilot program in Trail, BC in which Critical Care Transport services are provided by a hospital-based team of one CCP and one Critical Care Registered Nurse. The employment posting for the five CCP positions initially received commitment from only three applicants. The three who did commit were licensed only to the ACP level, so they needed further employer-funded training to reach the CCP level. In other areas of the province, ACP ambulances are reduced to PCP status when there is no ACP staff available to work. Plans are underway to expand Critical Care Transport services to as many as nine other centres, which will exacerbate these shortages.

BCAS and the APBCBU have reached agreement on a strategy to make more efficient use of the existing ACP staff. Plans are underway to change the ACP staffing model. Currently, ACP units are staffed with two ACP practitioners. The agreement proposes that ACP units be staffed with one ACP and one PCP who has received additional orientation training in order to fill a role on the ACP unit. The PCP partner will eventually receive the first training block of the three-block ACP course, at the employer's expense. The time and money required from the employee to achieve the full ACP training will thereby be decreased. This *de-pairing* agreement will extend the response capacity of current ACP practitioners, but will not address all of the current shortages, nor the pending vacancies through retirement. External recruitment and internal recruitment to self-funded training spots will be required for the long-term sustainability of ACP service delivery.

External recruitment is a new concept for the BCAS workforce. The Agreement on Internal Trade (1998) and Mutual Recognition Agreement (2003) make movement of paramedics

across provincial boundaries a legal reality, but this has not changed the cultural reality in BC. ACP applicants with greater than one year's experience need only write an exam through the Emergency Medical Assistants Licensing Board to be granted a temporary license in BC. ACP applicants with less than one year's experience must write an exam and pass a practical exam to be granted a temporary license. Both categories of external applicants must then complete an on-the-job *field marking* process in order to get a full ACP license (Emergency Medical Assistants Licensing Board, 2006). Anecdotal reports from external applicants state that the written exam tests knowledge specific to the operation of BCAS and not general knowledge of advanced level paramedic care. There are also anecdotal reports of systemic obstruction during the field marking process as current ACP practitioners protect the status quo in hopes of employer-paid training for their PCP union brothers and sisters. The reports of obstruction have come from both external candidates, and from internal self-funded candidates. The culture of BCAS has not yet embraced external recruitment and pre-employment training.

Internal recruitment to self-funded training is also new to BCAS. As with external recruitment, there is resistance to self-funded training. Potential students have not been accessing training opportunities. Within the past two years, the Justice Institute of BC (the training agency that holds the ACP training contract with BCAS) has cancelled one ACP intake and has had one with only five students (Dave Busse, personal communication, March 15, 2006). Once trained, ACP students have not always been well received during precepting and field marking. Anecdotal evidence from ACP students suggests that their reception in the field has not been consistently supportive. Some have suggested the environment has been openly hostile. This study will address the culture of BCAS as one of the components of internal recruitment.

In order for BCAS to be able to deliver sustainable ACP and CCP services, both internal

recruitment to self-funded training and external recruitment will be required. These in turn will require cultural and process changes to see the transformation to fruition. The scope of this study will be limited to internal recruiting strategies: strategies aimed at encouraging internal, PCP qualified individuals to apply for ACP training where some or all of the costs are borne by the individual.

Systems Analysis of the Opportunity

The Emergency Health Services Commission (EHSC) – a Commission established under the Government of BC - is the governing body of the BCAS. The mandate of the EHSC is derived from the Health Emergency Act (2004). The Act was originally passed in 1974, and led to the creation of the BCAS as the operational arm of the EHSC. The regulatory arm of the EHSC is the Emergency Medical Assistants Licensing Board (EMALB), which was created in 1989. The EMALB is responsible for licensing paramedics, at all levels, within British Columbia. The regulations in the Health Emergency Act provide the framework the under which Licensing Board grants licenses (Province of British Columbia, 2004). The regulations specify the requirements and processes to obtain a paramedic license in BC. The licensing structure is separate from BCAS operations, to provide a measure of public confidence in the impartiality of the licensing process. Thus, the BCAS has little ability to influence licensing processes to facilitate external recruitment.

Recruitment into BCAS requires the applicant first obtain a license to practice in BC. Recruitment has been slow and at current rates will not meet the demand. In the first six months of 2005, five out-of-province ACP applicants wrote licensing exams in BC and none passed. External recruitment is not currently filling the ACP gap in BC, so internal recruitment to the ACP level will be required.

The Licensing Board practices are influenced significantly by the occupational standards established by the profession's national association. The Paramedic Association of Canada (PAC) is the national professional body for paramedics, representing paramedics at national, political, health and other forums. PAC has developed the National Occupational Competency Profile (NOCP) (Paramedic Association of Canada, 2001) for all levels of paramedics. The NOCP has been accepted by the Canadian Medical Association as the basis for accreditation of training programs. They have been recognized as the basis of the Mutual Recognition Agreement (2003), although there is variation in the extent to which the competencies are integrated into practice in each province. It is within this context of a set of national standards and provincial licensing requirements that BCAS attempts to meet the ACP demand.

The demand for staff at the ACP level is exacerbated by a restructuring in how health care is delivered in BC. The restructuring established a system of primary, secondary and tertiary care centres. By downsizing the level of care in some communities and upgrading the care in more urban centres the system places greater emphasis on the province's ability to move patients efficiently between and among these designated centres.

There are five regional health authorities: Vancouver Island Health Authority, Vancouver Coastal Health Authority, Fraser Health Authority, Interior Health Authority, and Northern Health Authority. The Provincial Health Services Authority is the sixth authority and is responsible for specialty programs that service the entire province. The health authorities were created in 2001. The system BC has adopted – as have other countries – is one or rationalizing specialized services. This type of system is predicated on an efficient patient transportation system.

In BC, pressure is put on the BCAS to make up for perceived gaps in services in many communities, including transporting patients from rural hospitals to a higher level of care (Williamson, 2004). Many transports require advanced care and treatments en route that would be provided by RNs or MDs that accompany the patient to support the primary care paramedics. The health authorities would prefer an ambulance team of qualified individuals who could perform the advanced care en route and thus allow the local resources to stay in the community. This pressure for expanded ACP and CCP services will intensify the shortage of this level of paramedic in BCAS (Emergency Medical Services Chiefs of Canada, 2002, p.8).

Successful internal recruiting will still require a training capacity at the ACP level. The Justice Institute of BC (JIBC) is currently the only accredited provider of ACP training in BC. The JIBC is a specialized facility established in 1979 to provide training for the province's fire, police, corrections and EMS personnel. It's location in New Westminster, BC is efficient in that it is in the heart of the lower mainland and therefore has access to several tertiary centres and a regional ambulance service that transports a variety or routine to very sick patients. There fore it is a rich location for clinical and on-ambulance training.

The disadvantage is that it means students must relocate for up to one year - and sometimes longer if they do not meet the passing standards – in order to study and receive adequate clinical training. Maintaining only this format of training will not meet the needs of BCAS to train paramedics to the ACP level with internal recruits. Consideration may need to be given to course delivery in other parts of the province, or through other agencies.

Organizational Context

The vision of BCAS is "being a world leader in the provision of emergency medical services" (*Service Plan*, 2005, p. 5). The mission of BCAS is "to provide timely and high quality

emergency medical services … by caring for and about [their] patients and staff; providing creative solutions for changing health care needs; [and] collaborating with [their] partners in the health care system and the community as a whole" (p. 5). In order to fulfill the vision and mission, BCAS will need to continue the provision of ACP services and expand to meet the growing pre-hospital and Critical Care Transport demands. Acquiring sufficient ACP employees will require both external and internal recruiting. This project will assist BCAS in defining and implementing the internal recruitment process.

The BCAS was created in 1974 with the passing of the Health Emergency Act. Prior to 1974, ambulance services were provided by a mixture of public and private ambulance operators. The aim of the Health Emergency Act is to establish a consistent standard for the provision of pre-hospital care in the province. The BCAS is the sole provider of emergency out-of-hospital transportation in BC. BCAS relies on first responder agencies, such as fire departments and first responder societies to assist in basic pre-hospital care. Health authorities contract some transport-only work to private transfer services in areas where such a service is commercially viable. First responder agencies and private transfer services are regulated by the Emergency Health Services Commission. BCAS is the only provider of ACP services in the province.

The 191 stations that comprise BCAS are located in municipalities and townships of all sizes. The 3,200 paramedics responded to 551,290 responses in fiscal year 2004-2005 – roughly 1,500 calls every day of the year. (British Columbia Ambulance Service, 2005). Station call volumes ranged from 16 to 21,393 for the year. Given the disparity in call volume, consistency in service delivery and patient care quality is a goal, but not necessarily a reality. This is particularly true regarding the provision of ACP services. This higher level of paramedic is available in ground ambulances in the communities of Abbottsford, Chilliwack, Kamloops,

Kelowna, Nanaimo, Prince George, Vancouver, and Victoria. There is also some ACP availability in conjunction with a new Critical Care Transport program in Trail. In all other parts of the province, this level of care is only available for inter-facility transports done by the CCPs of the Airevac Program.

There may be some expansion of ACP services in the future, but in the next five years, the BCAS Strategic and Operational plans call for the expansion of the Critical Care Transport program, which will further consume ACP qualified paramedics. Plans are envisioned for nine more Critical Care Transport teams, to expand from the current programs in Kamloops and Trail. Accomplishing this expansion is part of the BCAS vision for the future.

Two recent changes made recruitment an issue for BCAS: legislative changes through the Agreement on Internal Trade, and contractual changes through the MOA. The Agreement on Internal Trade (1998) requires provinces to remove artificial barriers to movement of workers between provinces. BCAS began moving slowly in that direction. The Collective Agreement between the EHSC, the employer, and the APBCBU was a barrier to labour mobility. Paramedics could be hired from outside BC, but could only take entry-level positions, as if they had never worked in the field. This effectively eliminated inter-provincial moves, particularly at the ACP level. The Collective Agreement also prevented a BCAS employee from paying for his or her own ACP training in order to gain an ACP position. To understand the labour relations processes and how the barriers have been removed, the function of each party must be explained.

The EHSC is the legal employer and it delegates the licensing and the operations of ambulances services in BC to the Licensing Board and the BCAS respectively. However, none of the EHSC members are involved in negotiations, labour relations or the daily operations of BCAS. Even so, the terms EHSC and BCAS are frequently interchanged when referring to the

employer of paramedics. While this may create some confusion, the application of the names in practice is clear. The EHSC is named on documents as the employer of record, but the BCAS fulfills the functions normally associated with an employer. This application is assumed throughout this study.

The paramedics of BCAS are represented by the Canadian Union of Public Employees (CUPE) Local 873. The union prefers to be known as the APBCBU. The union is also the BC chapter of the Paramedic Association of Canada, with BC union officials serving on the association's executive. The association was the body behind the National Occupational Competency Profiles, and one of the driving forces for national recognition of paramedic certification. The APBCBU was in a difficult position. On the one hand it was protecting the jobs of its members by effectively blocking the mobility of workers into the BC ambulance systems, while at the same time they were the ones with a major voice on what the national standards for paramedics should be, and therefore supported the growth of this national standard. During negotiations of the MOA, the parties agreed to changes that would permit external recruiting and internal recruiting of self-funded ACP-qualified employees. This met the need of BCAS to increase the ACP capacity without the recurring, and substantial cost of covering all wages, benefits, back-fill wages, equipment and instructional costs associated with the training. Union members got an agreement where by for every internal candidate who applied and paid for training, and every ACP-qualified external hire, other union members would get an employer-paid seat in an ACP training class. This is a time limited agreement and will end in 2008 when all internal and external applicants will pay their training costs.

Section 3.6.8 of the MOA (2004) states, "The parties agree that an objective of this Memorandum is to promote the hiring of qualified applicants into full time vacancies including

the ability to hire qualified external applicants after consideration of qualified bargaining unit candidates" (p. 6). This is a significant change in philosophy and practice regarding hiring in BCAS. It is this change that lead to this study's central purpose: the internal recruitment of ACP students. Prior to the MOA, the only process for filling ACP vacancies was the employer-funded, seniority-weighted, internal process.

The MOA goes on to stipulate that qualified bargaining unit employees requesting a lateral transfer are given preference over others in bidding for positions. The internal self-funded ACP still holds a PCP position within BCAS, so is not eligible for a lateral transfer. He or she must apply for the position and be considered after internal qualified applicants who hold an ACP position. Thus, external hires and internal self-funded ACP candidates are both external to the selection process and it is this connection through the MOA that links the internal and external recruitment processes.

The possibility of an employer-funded training position is not the only encouragement offered in the MOA for current PCP employees. Section 3.6.8 of the MOA (2004) states, "The EHSC will develop a system of bursaries, loans, grants or other incentives to assist employees in upgrading their qualifications in advanced programs" (p. 7). This was one consideration in this study, in order to determine what current employees might need to undertake advanced training, and what the employer can offer and afford.

As the changes brought about by the MOA are recent, there have been no studies on this topic done within BCAS. One study addressed the related and concurrent changes within the Paramedic Academy of the JIBC as that organization moved from a post-employment training model to a tuition-based pre-employment model (Hutchison, 2003). Hutchison (2003) suggests that the Paramedic Academy position itself for the pre-employment training market by being

responsive to its clients. Since the JIBC is currently the only provider of ACP training in BC, this responsiveness will be instrumental in tailoring training to the needs of BCAS employees. This issue was addressed in this study, as the JIBC and BCAS both continue to make changes in the training model.

The BCAS has made a commitment to the Ministry of Health that there will be no more employer-funded ACP training once the negotiated transition is complete. This commitment was instrumental in getting support for other components of the MOA that required increased spending. Thus, the BCAS has significant interest in the success of internal recruitment to ACP training. Actions to address some needs of potential ACP students started prior to this study to suit both the operational demand and the political commitment. This does not negate this study, since I used the cyclical process of action research (Stringer, 1999), which can start at any point in the evolution of a process.

Project Sponsor

Within BCAS, responsibility for hiring, training, and other personnel issues rests with the Vice-President (VP), Human Resources (HR). His portfolio includes HR, labour relations, occupational safety and health, and staff development. In selecting a project sponsor, I consulted a number of people within BCAS, including the VP of HR. Given the wide range of implications of this study, the consensus was that the Human Resources Director would be the most appropriate sponsor. I approached her and she agreed to be the sponsor.

The HR Director is responsible for four regional HR offices as well as coordinating provincial HR issues. Her mandate to address the staffing needs of the BCAS will mesh well with the outcome of this study. Improving recruitment to ACP training positions will be one

strategy to address the ACP shortage and is the subject of this study. External recruitment will be the other strategy and the HR Director will be linking and balancing the two processes.

Stringer (1999) suggests that change needs to be supported at the senior levels. In this case, the HR Director has been able to support the project within BCAS. She has the authority to establish changes in process that will address the needs of potential ACP students (Stringer, 1999). The collective agreement does not need to be re-negotiated to implement changes, since the MOA specifies that "the terms and conditions contained in the 12th Collective Agreement continue to apply, except as modified by or as a result of implementation of this Memorandum" (MOA, 2004, p. 5) and the language encouraging incentives is also a part of the MOA.

While the relationship with this sponsor has been mutually beneficial, there was the potential for confusion (Glesne, 1999; Lacey, 1995): My role as researcher could have been confused with my role within BCAS. Research participants may have seen me as a BCAS representative and assumes that I had the capacity to offer specific incentives. The HR Director, and other BCAS managers, could have seen me as representing BCAS and expected an outcome in their interest (Glesne, 1999). Both perspectives could have compromised the integrity of this study. To avoid that potential, I clearly and repeatedly clarified my role as independent researcher.

It was possible this study would show that internal recruitment will not meet the ACP demand and that reliance on this strategy is flawed. Block (2000) and Glesne (1999) suggest there could be considerable pressure from a researcher's employer to come to a conclusion more in line with the employer's intent: in this case to move to a completely self-funded training process. Glesne (1999) and Lacey (1995) advise that there is the potential for negative employment consequences for an internal researcher if the employer is not prepared to hear

unfavourable results. Following the advice of Stringer (1999), appropriate action research procedures ensured that the sponsor and BCAS were informed of progress and the findings were not a surprise (Stringer, 1999). This minimized the impact of any disconcerting study findings on my relationship with the sponsor and BCAS.

CHAPTER TWO: REVIEW OF THE LITERATURE

The scope of the literature review included the following subject areas: Advanced Care Paramedic (ACP) training; internal recruiting, retention and promotion; and organizational culture and change. These subjects were developed through a semi-structured brainstorming tool known as a Mind Map (Mind Maps, 2005). The process generates primary subject areas and sub-topics or branches and consequent linkages between the branches.

Advanced Care Paramedic (ACP) training is the core topic of my research question. Prior to addressing the issues specific to the British Columbia Ambulance Service (BCAS) and the current Primary Care Paramedics (PCP), I reviewed the training processes in other emergency medical services (EMS). Since there is scant peer-reviewed EMS literature, and most is focused on patient care issues, I also reviewed training in other healthcare disciplines. Preliminary discussion within BCAS indicated that there are many challenges for adult learners contemplating ACP training, so adult learning literature was reviewed. Costs for training, and whether that training should occur prior to or after employment are issues that have been discussed at length within BCAS and both sub-topics were reviewed from both the EMS and the more general healthcare perspectives.

Until recently, moving from the PCP level to the ACP level within BCAS was done by seniority after passing a threshold exam. With the switch to pre-employment and self-funded training, and external hiring, I reviewed what other EMS agencies use as criteria for promotion. The dearth of peer-reviewed EMS literature concerning system and human resource issues meant that I also needed to investigate training for promotion, employee development processes, and employee retention strategies in other healthcare fields as well as in EMS.

A key challenge to be addressed in my study is the sudden change in process for a PCP to become an ACP. There are many long-serving PCPs who expected to be able to take an employer-funded ACP program. They now see this process changed in the middle of their career. The seniority-based promotion system is seen as a *closed shop* system of ACP training and was a significant piece of the BCAS culture. It will be important to know how such a significant cultural change impacts the employees and also the organization's culture, and how any negative impact can be overcome to keep the employees within BCAS and to get them motivated to take on the ACP training in spite of the change.

Literature Review Topic 1: Advanced Care Paramedic Training

Advanced Care Paramedic (ACP) training is a relatively new entrant in the field of adult education. Most jurisdictions have less than thirty years' experience in training candidates to the ACP level. Thus the training delivery methods are still in the developmental stages. I will examine current literature on ACP training principles, ACP training delivery models, the needs of adult learners, the costs for training, and pre-employment versus post-employment training considerations. Each sub-topic will relate to the specific situation of this study and the BCAS.

Training Delivery Models

Emergency Medical Services (EMS) is a relatively young profession. The challenge for the EMS community is to take control of the future of EMS training rather than deferring to other healthcare providers to set the direction (Will, 1999). A number of jurisdictions are proactively altering the EMS training processes to enhance the professional status of EMS in the healthcare field (Balon-Totheram, 2003; Granthan, 2004; Walz, 2002; Will, 1999).

EMS education in general, and ACP education in particular, is evolving from a skills-based approach to that of comprehensive education (Walz, 2002). In the English-speaking

western world, ACP training is delivered in three main settings: hospital or EMS agency programs, post-secondary technical institutions, and colleges or universities (Balon-Rotheram, 2003; Granthan, 2004; Will, 1999). The move to associate and baccalaureate degree programs has taken hold in Canada, the US, the UK, and Australia (Balon-Rotheram, 2003; Granthan, 2004; Walz, 2002; Will, 1999). The ACP training delivery setting does not appear to impact future job satisfaction, promotion opportunities, job position, or satisfaction with co-workers (Will, 1999).

As with training delivery, accreditation of ACP training is in its infancy. Canada and the US both have national accreditation programs, but they are not mandatory processes in either country (Walz, 2002). Australia will begin accreditation in 2006 (Granthan, 2004). Accreditation is thought to ensure competent practitioners, but there is no literature to reinforce this belief. The US accreditation process is based on hours of education (Grubbs, 1997; Walz, 2002), yet one study of ACPs in the US found no correlation between the number of didactic hours in an ACP program and the scores on a validated national registry exam (Cannon, Menegazzi & Margolis, 1998). The authors speculate that the quality of the educational experience had more of an impact on student learning than did the quantity.

The theme of quality education is emphasized in the literature regarding clinical education of ACP students, although there is no consensus on what constitutes quality clinical education (Canon et al., 1998; Grubbs, 1997; Pointer, 2001; Walz, 2002). Grubbs (1997) posits that the purpose of clinical education is to develop *therapeutic judgment*. She defines therapeutic judgment as the knowledge of “1) when not to intervene; 2) when to intervene; 3) when to modify interventions; 4) when to stop; 5) how often to try; 6) when you’ve achieved success; and 7) when you’ve failed” (p. 250). Clinical and field experience are also used to help the ACP

integrate and synthesize information and skills into a useful whole (Grubbs, 1977) and as an alternative to extended didactic hours (Canon et al., 1998). Clinical and field requirements are frequently defined by time criteria and vary by ACP program, but are substantially less than the requirements of nurses, physicians, and even cosmetologists (Grubbs, 1997; Pointer, 2001). Rather than focusing on time, ACP programs should focus on quantity of patient contacts (Grubbs, 1997) or quantity of patient assessments and procedures (Pointer, 2001; Walz, 2002).

Some authors argue that ACP training programs should incorporate pedagogical methods into their curriculum used in other similar professional schools. Primary Care Paramedic (PCP) training is delivered primarily by rote and repetitive skill training, but this is seen as an insufficient means of developing clinical competence and professional excellence in ACPs (Walz, 2002). ACP training should be designed to transition the ACP from the role of technician to that of healthcare professional (Davis, 1998; Will, 1999). In many jurisdictions, a candidate can become an ACP without ever working as a PCP. This is not the case in British Columbia. To become an ACP, one must have worked as a PCP for at least three years with at least 1,000 patient contacts (Justice Institute of BC, 2004). No literature was found on the benefits and challenges of the experienced PCP student entering an ACP program. By insisting on PCP experience, the ACP training system in BC has limited the pool of ACP applicants. Arthur and Tait (2004) suggest this may exclude those most able to take on the education.

ACP training can be delivered through a number of processes and should be evolving from a skills-based process to one of critical and reflective thinking (Davis, 1998; Jones & Cookson, 2001). To enhance this more professional approach to education, integrated case studies, research assignments, class discussions, and reflective journals should all be used (Davis, 1998; Dix & Hughes, 2004; Jones & Cookson, 2001). While these techniques present

opportunities for a more comprehensive education and transfer more responsibility to the ACP student, the shift will not be immediately accepted by training, accrediting, and licensing agencies (Davis, 1998; McDonnell & Edwards, 2000). That acceptance will require recognition of the benefits of the shift, and a change from time-based training to quality-based training (Davis, 1998; Grubbs, 1997; Pointer, 2001). Enhancing reflective practice and critical thinking will be complementary to protocol-based training, since protocols rarely meet the complex needs of many patients and do not deal with other multifaceted issues such as ethical decision-making (Jones & Cookson, 2001).

Although protocol driven learning is more suitable, this shift in focus is compatible with increased use of Internet-based distance education (Jones & Cookson, 2001) but there is still a need for face-to-face clinical opportunities (McDonnell & Edwards, 2000). This presents an opportunity to increase access to ACP training. Computer-assisted learning, with a focus on problem solving, reflective practice, and critical thinking, can be combined with clinical opportunities under the direction of a mentor, supervisor, or educator (Jones & Cookson, 2001; McDonnell & Edwards, 2000).

Adult Learner Challenges

The delivery of education is only one consideration for adult learners. Adult learners, such as the PCP population for this study, have a number of other issues in their lives to consider before embarking on an education journey. Different authors report varying relative importance of these concerns, but common barriers are time, costs, accessibility, family commitments, and job commitments (Arthur & Tait, 2004; Baran, Berube, Roy, & Salmon, 2000; Fairchild, 2003; Ward & Wood, 2000; Webb, 2001). Baran et al. (2000) challenge the absolute nature of these

obstacles. They propose that the magnitude of the obstacles may be relative to the perceived benefit of the education.

Time for education can be addressed through part-time training programs and this is an option preferred by many adult learners (Fairchild, 2003; Hastie & Clark, 2004). Many adult learners want or need to work in addition to taking an education program (Fairchild, 2003) and part-time studies can enable this.

For adult learners with families, the time challenges are intensified and there may be guilt associated with taking time for study at the expense of family obligations (Arthur & Tait, 2004; Fairchild, 2003). Support from a spouse or significant other is a contributor to learner success in this situation (Arthur & Tait, 2004).

Adult learners may benefit from training in time management, study skills, and other means of coping with the challenges of their situation (Dix & Hughes, 2004; Fairchild, 2003).

Costs for Training

Bailey, Hoeppner, Jeska, Schneller and Szalapski (1989) describe a consortium, or collaborative arrangement, of shared training programs between hospitals. They posit that a philosophy of sharing leads to cost-effective training for all. This is substantiated by strong financial and course delivery data. They provide ideas for collaborative training and stress a philosophy of open sharing as a success factor. They assume that the employer will be paying for the training opportunities.

Pre-employment vs. Post-employment Training

This review of the literature could find no work on the issue of self-funded or pre-employment training, and employer-funded or post-employment training in EMS. Most papers

were either silent on the issue or assumed one funding model or the other. To address this gap, personal discussions were held with representatives from large Canadian EMS agencies.

Calgary EMS has not funded ACP training since 1983 (Steve Donaldson & Chief Tom Sampson, personal communication, June 9, 2006). Calgary EMS only allows increased access to substitution processes, such as switching shifts with other employees.

Edmonton EMS pays employees while they are participating in hospital and ambulance practicums (Chief Steve Rapanos, personal communication, June 9, 2006). They do not pay other course costs and do not pay other wages during training.

Toronto EMS pays full wages and all other training costs (Chief Bruce Farr and Deputy Chief John Lock, personal communication, June 9, 2006). Selection is by seniority after a successfully meeting a specified threshold in an exam process. The process is embedded in the collective agreement between Toronto EMS and their employees' union. If a prospective student wishes to accelerate the process by taking ACP training at their own expense, Toronto EMS will pay that employee during their practicums.

Winnipeg Fire Paramedic Services is trying to reach a target number of ACPs, and is therefore paying all training costs and wages (Josie Fernandes, personal communication, June 9, 2006). Selection of ACP students is by ranking on an exam. Selection and payment are not embedded in the collective agreement and may be subject to review once the target number of ACPs has been achieved.

Additional general business perspectives and other healthcare experiences may further inform this issue.

Barron (1996) argues for the importance of training during tight financial times and provides survey data to link training budgets to profit increases for businesses. He asserts that

training plans must be aligned with strategic plans, and that training departments must find innovative ways of delivering training. This might include distance education, or corporate universities that deliver both corporate education and degree programs. His perspective suggests that organizations might re-evaluate the premise that cutting training costs will provide a long-term benefit. This second look should consider management tactics that use trained staff more efficiently; and the role of training in operational efficiency and implementation of the strategic plan.

Hastie and Clark (2004) assessed the impact of Health Trust funded educational leave on general practitioners (GPs) in the UK. Job satisfaction and the retention rate of the GPs were both improved.

In the business world, there is some reluctance to pay for training of employees (Arthur & Tait, 2004; Baran et al., 2000). Staff turnover and poaching by other businesses are cited as primary reasons for this, with uncertainty regarding return on investment, budget limitations, and staffing problems as secondary reasons (Arthur & Tait, 2004; Baran et al., 2000).

Whatever level of support an employer might be able to offer employees to take training, it is vital to clearly communicate the approach to training and what level of support is available (Webb, 2001). The communication will need to be clear to both staff and managers. Webb's (2001) study of nurses' resistance to upgrade training in the UK found that resistance to the change was based on managers' behaviours in granting time and money that was available for the upgrade training. Resistance was not based on the training itself.

Summary ACP Training

This review of the literature has identified current trends in ACP training and a number of issues to address in this study. ACP training is becoming a more holistic process at the same time

that different delivery models are being developed. The barriers to adult education in general, and ACP training in particular, need to be evaluated in the context of tipping the balance toward the return on individual investment. Cost containment strategies, and the degree of employer support for ACP training can be informed by other healthcare and business studies, but will need to be studied in the context of BCAS

Literature Review Topic 2: Internal Recruiting, Promotion and Retention

Prior to the changes flowing from the Memorandum of Agreement between BCAS and the APBCBU, promotion from the PCP level to the ACP level within BCAS was done by seniority after passing a threshold exam. The switch to pre-employment and self-funded training, and external hiring, is believed by some within BCAS to be more in line with practices within EMS and other healthcare industries. This belief will be explored through the subtopics of EMS promotion criteria; training for promotions; and employee development, retention, and recruitment in healthcare.

EMS Promotion Criteria

O'Shea, Betsinger, and King (1999) examined career progression in a number of occupations, including EMS. Findings were detailed for each occupation studied, using consistent criteria and language for ease of comparison. O'Shea et al. (1999) state that while their study population began in EMS at lower entry level positions there is a trend within EMS towards entering the field at the apex position of ACP rather than progressing within the workforce. For the small number of participants involved in their study, the average time from entry to becoming an ACP was 2.6 years, with a range of one to seven years.

While examining the progression of their study participants, O'Shea et al. (1999) found that only one received employer support for training: the others received training at their own

expense. Seniority had no impact on career progression in this population, other than as an indicator of experience and commitment to the organization as part of a merit-based promotion. The authors conclude that “prospective paramedics should obtain the prerequisite certification and be prepared for a career that requires continuous learning” (p. 18).

O’Shea et al. (1999) found an increasing expectation amongst employers for higher education and university degrees, particularly in medical and allied health fields including EMS. Advancement within most occupations is by ability, experience and educations, with very little employer support except for maintenance of competency and licensing requirements.

Training for Promotions

There is a change coming in the workforce, as a smaller Generation X replaces the large number of retiring Baby Boomers (Duxbury & Higgins, 2003; Finegold, Benson, & Mohrman, 2002). As organizations fill vacancies with individuals who possess the necessary skills, they may find that some individuals are not a good fit within the organization. Many firms across different industries are choosing to develop existing employees to fill skilled roles, since they know the employee is a good fit for the organization (Finegold et al. 2002). Some agencies within EMS offer training bursaries as incentives for upgrading existing employees (Saskatchewan Paramedic Association [SPA], 2005). Such tuition reimbursement programs have had a positive effect on employee retention (Finegold et al. 2002).

To maximize the benefit of employer incentives for training, some organizations are developing learning contracts with the employees they support. The organization invests in the employee’s development and the employee in turn agrees to keep his or her skills up and to contribute to the learning of others ((Finegold et al. 2002).

The inclination towards developing existing employees is not universal, particularly in healthcare where employers expect to hire fully qualified applicants for apex positions in their field of expertise (O'Shea et al. 1999).

Employee Development, Retention, and Recruitment in Healthcare

With the looming shortages of skilled workers in all fields, employers need to capitalize on opportunities for employee retention and the employer's attractiveness for recruitment (Linda Duxbury, personal communication, October 5, 2005). As the number of skilled workers shrinks relative to employers' needs, organizations will need to be viewed as preferred places of employment (Gering & Conner, 2002; Lowe & Bolton, 2003). Benders and van de Looij (1994) assert that development strategies directed at current employees will positively impact the organization's image as a potential employer for others. By providing employee development opportunities, employers will not only increase their retention of current employees, they will be more likely to recruit other employees as well.

Opportunities for promotion and career development have been identified as the most important retention factors for existing employees (Benders and van de Looij, 1994; "Flexibility the Key to NHS Recruitment Drive," 2004). Employee development is an important component of a comprehensive retention strategy involving "decent pay, career progression and a stimulating work environment" ("Pay and Prospects," 2004, p. 2). Companies that invest in employee development also have more committed employees who are willing to contribute extra effort (Finegold et al. 2002). Within healthcare, continuing opportunities for development and promotion tend to be the prime motivating factors to keep employees working at their peak (McGrail, 1990). Paradoxically, in the context of this study, there is great difficulty perpetuating promotion opportunities within EMS once employees reach the ACP level and this is a

significant concern for employees at that level (Brown, Dickison, Misselbeck, & Levine, 2002; Lowe & Bolton, 2003).

As a recruitment strategy, schooling opportunities may be perceived by some potential employees to be a more attractive recruitment consideration than wages (Benders and van de Looij, 1994). For organizations undergoing change, development opportunities are important considerations in succession planning and succession development for both internal and external recruitment (Nowack, 1994).

Hardy and Smith (2001) detail a specific healthcare employee development process that was used when they were faced with having to staff a 44% increase in bed capacity in a highly skilled healthcare environment. In order to increase the number of trained staff, while maintaining quality care, they created a comprehensive development program. Development was a shared responsibility between the organization, existing employees, and new employees. In order to increase learning retention and decrease learning time, existing employees who wanted to become preceptors, and new hires were matched and paired by learning styles using the Myers-Briggs Type Inventory. Preceptors attended a mandatory preparation course, which also met some of their continuing education credit needs. The net result of this planned approach was an increase in trained staff to meet the demand, an increase in job satisfaction for both the preceptors and their students, and a change in the workplace culture to “a team-oriented unit that does not ‘eat its young’” (Hardy & Smith, 2001, p. 16).

Within EMS, there is some support for moving towards an apprenticeship model for training existing employees (SPA, 2005). This model would see periods of formal training interspersed with work experience opportunities under the guidance of a trained mentor or

preceptor. The success of an apprenticeship model would be dependent on addressing the issues associated with the mentors and preceptors, as Hardy and Smith (2001) did.

Clarke (2002) sees employee development as an investment. He cites costs such as fees, travel, wages, and replacement overtime. He details the benefits such as employee satisfaction, decreased turnover, increased productivity, decreased recruitment costs, and decreased risks regarding liability. Comparing cost and benefit, Clarke (2002) concludes that the return on investment is substantial. What he does not address, and one of the key challenges in this study, is the point at which the investment exceeds the return.

Summary Internal Recruiting and Promoting

This review of the literature has identified current trends in career progression and a number of issues to address in this study. Some EMS agencies have moved to a pre-employment training model, hiring fully qualified ACP employees. This may negatively impact the organizations' appearance as an employer of choice vis-à-vis employee development opportunities. Additionally, once hired, ACP employees see few opportunities for advancement, which can work against motivation, retention, and recruitment of others into the organization. These issues will need to be studied within the context of BCAS.

Literature Review Topic 3: Organizational Culture and Change

With the signing of the MOA, there was a sudden change in process for a PCP to become an ACP. The change to pre-employment and self-funded ACP training is a major shift in the BCAS culture. To appreciate the significance of this change on the paramedics, the concept of organizational culture will be explored. In keeping with the context of this study, the specific circumstance of a career development culture will be examined, followed by a review of culture and change.

Organizational Culture

"Culture matters. It matters because decisions made without awareness of the operative cultural forces may have unanticipated and undesirable consequences" (Schein, 1999, p. 3). The culture of a workplace is so important that it shapes not only the work environment, but also the personal identity of the members of that workplace (Izzo & Withers, 2002).

Schein (1999) defines culture as "the shared tacit assumptions of a group that it has learned in coping with external tasks and dealing with internal relationships" (p. 186). In order to fully understand a culture, Schein (1999) asserts that we must understand the assumptions that are the underpinnings of that culture. Those deep assumptions are expressed through the stated values and the artifacts of the culture.

Because culture is shared learning done over time, it becomes a very stable force within an organization. When an organization has had success with a given culture, that very stability of the culture can make it difficult to recognize the need for change in response to changes in the external environment (Schein, 1999).

Career Development Culture

Conger (2002) describes one sub-type of organizational culture: the career development culture. The career development culture of an organization can be either positive and supporting, or negative and stifling. A positive career development culture addresses the career concerns of workers and has sufficient financial and human resources assigned for support (Conger, 2002).

The competition for resources between career development and service delivery in healthcare inevitably creates tension: Frequently healthcare workers feel that they are shouldering increased workloads in a culture that does not support their career development and emotional needs (Sumner & Townsend-Rocchiccioli, 2003). If healthcare workers feel they are

merely a commodity, and not a valued asset worth developing, the resulting victimized behaviours can lead to decreased commitment to the organization and a decreased work ethic (Sumner & Townsend-Rocchiccioli, 2003).

Purvis and Copley (2003) looked at the development culture in healthcare from the perspective of the exchange relationship between employers and nurses. They found 65.9% of nurses viewed their exchange relationship in terms of opportunity for learning, self-development, and skill development. The nurses in this study clearly expect a career development culture in the workplace as part of the exchange for their services. Violating a relational contract such as this can be particularly damaging to the employment relationship, as the perceived betrayal of trust leads to anger from the employees (Purvis & Copley, 2003).

Culture and Change

Cultural change is inevitably a transformative process: People have to unlearn beliefs, values and assumptions, and then learn new ones (Schein, 1999). This is an uncomfortable process, but one that must be embarked upon if significant change is to occur. A shift from once culture to another is not a quick, unilateral course of action. “What is often labeled the ‘desired culture’ is a set of espoused values that simply may not be tenable in the existing culture” (Schein, 1999, p. 62). Schein (1999) posits that some threat or crisis must be apparent and widely understood to prompt the unlearning process.

The unlearning of an old culture and learning new cultural underpinnings can be informed by Bridges’ (2003) seemingly parallel concept of managing transitions. Bridges (2003) defines three stages of transition: endings, when people have to give up old ways of doing things and let go of many of the things that formed their sense of identity; the neutral zone, when the old ways have been given up but the new ways are not fully functional; and new beginnings,

when people emerge with a new identity, a renewed purpose and the changes become the new norm.

According to Bridges (2003) successful change efforts have two common characteristics: an effective plan for change and an equally effective plan to manage the psychological transition process for the employees. Bridges (2003) further explains that failed change efforts can frequently have an effective plan for change, but fail to have a plan for managing the transition process. The employees never give up parts of the old culture, get confused and disillusioned in the neutral zone and never make the new beginnings that are required to successfully implement the change.

A key component of both Schein's (1999) cultural change process and Bridges' (2003) transition process is the need for constant and consistent communication. Of particular importance in any change process is the repeated communication of a clear and consistent vision of the future (Kotter, 1996). Mercurio (2005) concurs by stating, "Whenever anticipation of change exists, management efforts should include increasing the level and frequency of communication" (p. 12). When employees can trust their organization to keep them informed during a change process, they are more productive, spend less time worrying, and are more likely to have a realistic expectations of the outcome of change (Mercurio, 2005). Schein (1999) describes communication as the prime strategy to increase psychological safety amongst workers, in order to reduce their learning anxiety to a point at which they can become effective participants in the cultural change process.

Summary Organizational Culture and Change

The culture of an organization encompasses the core beliefs of all members, becoming part of an implied exchange agreement between employees and employers. In healthcare, this

exchange agreement may be focused on career development opportunities. Any significant change in organizational culture that impacts this core value requires unlearning the previous values and processes prior to learning new cultural components. This requires a planned supportive process.

CHAPTER THREE: CONDUCT OF ACTION RESEARCH PROJECT

Research Approach

This research project followed the principles of *action research*: a process that evolved from the 1940s work of Kurt Lewin (Berg, 2004; Glanz, 1998; Glesne, 1999; Meyer, 2000; Morton-Cooper, 2000). Action research is a cyclical process, with each step described in various ways by different authors (Berg, 2004; Glanz, 1998; Glesne, 1999; Stringer, 1999) and with each cycle advancing and clarifying the interpretation of the previous cycle (Dick, 1999). Stringer's (1999) description of "look, think, act" (p. 18) will be used in this project, with three complete cycles. One cycle used a focus group to develop a survey, a second cycle administered the survey and interpreted the results, and a third cycle validated the interpretation.

Action research is a participative and collaborative process, which focuses on a problem of concern to the participants (Berg, 2004; Glesne, 1999; Meyer, 2000; Morton-Cooper, 2000; Stringer, 1999). Since the research is done in a specific situation, with a specific population, action research does not seek generalizable solutions. This research sought "reduction of ignorance rather than the production of truth" (Gough, 2002, p. 3). The specific solutions to address internal BCAS ACP recruitment will not produce a universal truth, but seek to reduce the ignorance regarding what can be done to aid recruitment within BCAS. This was done using both descriptive statistics and qualitative analysis.

Action research can utilize qualitative, quantitative, or mixed research methods (Glanz, 1998). This project utilized qualitative methods to formulate a survey, quantitative methods to interpret the survey results, and qualitative methods to validate the interpretation. The mixed approach is particularly applicable for this setting, since the qualitative methods helped describe the situation from the perspective of the participants, while the quantitative methods will satisfy

the need for numerical evidence predominant in the culture of BCAS. The desire for evidence-based decisions is particularly strong when BCAS is considering changes in patient care or changes in spending priorities (Service plan: 2005/06 – 2007-08). In particular, financial decisions are more frequently derived from quantitative analysis of the issue(s).

Action research is particularly applicable when the researcher is a part of the organization, as I am, since the research is "generally a beginning step in a longer, change-oriented process" (Glesne, 1999, p. 27). The researcher is then well placed to facilitate implementation of changes and further investigation. As an action researcher within BCAS, I also needed to deal with the challenges of being "at every moment embedded in some part of the hierarchy and current politics of the organization" (Block, 2000, p. 130). The research procedures aided in addressing the challenges, while the action research process maximized the benefits of working within my own organization.

Project Participants

There were two groups of participants: the focus group and the survey respondents. The focus group formulated the survey and qualitatively validated the interpretation of the survey results. Stringer (1999) advises that action research "includes all relevant stakeholders" (p. 38). Composition of the focus group and participation of the potential survey respondents was crucial to ensuring all voices are heard.

Using optimum purposive sampling, the focus group represented views of all potential sub-populations. An analysis of BCAS demographics indicated that members needed to be selected from each of the four geographic regions of BCAS, both sexes, different age groups, those with families, and those without. Members were primarily PCPs, although I included one manager and one self-funded ACP student or graduate to gain the perspective of one who would

be responsible for funding proposals, and one who has successfully faced the challenges of self-funded ACP training. While this purposive sampling (Palys, 2003) was not proportionally representative of the larger BCAS population, it achieved a threshold of participation for each demographic attribute to ensure inclusiveness. The focus group ensured all BCAS constituent groups had a place to be heard. Representative data came from the survey results.

Included in the focus group were a manager and a self-funded ACP participant, selected based on their ability to contribute and capacity to do the necessary work. To populate the remainder of the focus group, I sent an email to all BCAS (see Appendix A) staff explaining the research project and the role of the focus group. The email was sent through a distribution list that includes all employees. I invited those interested in participating in the focus group to reply with their contact and demographic information. A total of 80 candidates responded to express interest in participating: 74 responded before I cut off the process, and six more responded after the cut-off.

The demographic information was entered in a spreadsheet to identify each attribute the candidate represents. If an attribute was only evident in one candidate, that person was automatically included. When an attribute was evident in several candidates, a random draw selected the candidate. The selection process began by selecting from candidates where the attribute was least represented and continuing through candidates where the attributes were displayed among many, until all attributes were represented in the focus group. The result of this process was that each participant represented more than one attribute. Had an attribute not been represented by any prospective volunteer, an active recruitment process would have been initiated and targeted at the required attribute. That was not necessary. The focus group will had six participants. Each focus group participant was required to sign a consent form.

Palys (2003) suggests that researchers might "begin with a unique sample or site of interest and then search for other unique samples that promise to broaden (or limit) whatever concepts emerged in the initial study" (p.141). This effectively describes my use of a focus group to develop the survey concepts and variables, and a broad search for survey participants to elaborate on the suggested topics.

Statistics Canada (2003) defines a *list frame* as a conceptual or physical list of "all units in the survey population" (p.24). Statistics Canada (2003) evaluates the quality of a frame through the parameters of relevance, accuracy, timeliness, and cost. In this study, participants in the survey came from the physical list frame of all BCAS employees. This frame was relevant according to Statistics Canada (2003) criteria since it allowed access to the target population.

With regard to accuracy of this frame, there was considerable over coverage, since the invitation was sent by email to all BCAS employees: PCPs, ACPs, and managers (see Appendix B). It was likely that only those with a particular interest in ACP recruitment would respond to the survey. Although overall response could have been low and the results may not have been representative of the opinions held by all BCAS staff, information relevant to the sub-population interested in ACP training was gathered. While the topic of ACP recruitment is most applicable to the approximately 3,000 basic life support paramedics, the current ACPs also have relevant input and including them is consistent with the principles of action research (Berg, 2004; Glesne, 1999; Meyer, 2000; Morton-Cooper, 2000; Stringer, 1999). In practical terms, there was no way of excluding ACPs from the survey since the email addresses used within BCAS do not distinguish employees by license level. To accommodate the over coverage, participants were asked to identify their degree of interest in ACP training, and their current license level, in order that these data could be separated when necessary.

The list frame was timely, since it was readily available, and came at no cost to this research project since it was already developed.

The survey was conducted online to facilitate administration and data analysis. Computer-based surveys have the advantage of simultaneous data collection and data capture (Statistics Canada, 2003). Unit Chiefs, the frontline supervisors, were asked to post a hard copy of the invitation at the station to capture those who might not check their email regularly. Other methods to maximize response rates will be discussed below.

Research Methods and Tools

Methods

A number of different methods can be utilized in action research: Interviews, focus groups, observation, surveys, historiography, and oral histories are a few examples. I chose a focus group to gather wide-ranging information while optimizing the time-cost constraints (Berg, 2004), and a survey to access a larger population and to quantify the relative importance of issues raised in an easily accessible format (Palys, 2003). The focus group was used a second time to validate the interpretation of the survey results. Using several data collection methods helps triangulate the data (Berg, 2004, Glesne, 1999, Stringer, 1999). The use of a focus group pre-and post survey and the survey itself helped triangulate this data. Each method is a different route to the same target information, with each method minimizing the threats to validity attributed to the other methods. Triangulation is a means of demonstrating reliability and validity of qualitative processes, when each source of data is compared and contrasted to generate a more complete picture of the issue under investigation (Lacey & Luff, 2001; Glesne, 1999, Stringer, 1999).

Tools

Focus group

Palys (2003) advocates the use of a focus group when the researcher is "trying to develop instruments … that have integrity with respect to the phenomenology of those under study" (p. 162). He further suggests the focus group assist with wider interpretations of data. I used a focus group for both purposes: to generate survey variables that would be relevant to potential ACP recruits, and to validate and expand the interpretation of survey results. The focus group also decreases the time required to gather information, when compared to individual interviews (Berg, 2004).

A focus group has many advantages over individual interviews. Palys (2003) notes that in a group setting, differences in perspectives can be explored to gain a greater understanding of the issue. The various experiences and comments from the focus group participants converge on the topic to "allow the phenomenon to be confronted, as much as possible, on its own terms" (Berg, 2004, p. 128). These socially-constructed understandings reflect the perceptions of all participants, resulting in better quality accounts of the issue discussed (Berg, 2004; Palys, 2003).

Within a focus group, a synergistic process is possible where one participant can draw from comments made by other participants (Berg, 2004). This can lead to generating a large number of ideas through collective brainstorming (Berg, 2004). In order to maximize this benefit of the focus group, the disadvantages of the process needed to be managed.

As in any group, there is the possibility of one or two individuals dominating the discussion and thereby controlling the output of the process. To minimize this negative potential, Berg (2004) advocates that the facilitator encourage passive members while tactfully managing

the input from more dominant group members. The focus group procedures detailed below helped address this issue.

The focus group was populated as described in the Project Participant section. The output from this process was a survey that drew out information from the larger population of prospective ACP recruits.

Survey

Kirby and McKenna (1989) "recommend that surveys be developed with and for the research participants involved" (p. 74). Morrel-Samuels (2002) suggests that informed stakeholders be interviewed as part of the survey development. My process incorporated these suggestions, as the survey variables were developed from the perspective of the focus group participants, most of whom were also targets of the survey. I formulated the specific survey questions based on the variables developed by the focus group.

Palys (2003) suggests that survey development "start with the general objectives …. then isolate specific elements …. and translate those elements into variables" (p. 174). The variables can then be evaluated in the survey questions. This describes the focus group process that I used. I explained the overall objective of the project, the focus group identified the specific issues from their perspectives, and we delved deeper into the issues to identify items for survey questions.

Morrel-Samuels (2002) provides 16 guidelines for development of a successful survey. The guidelines are in the areas of content, format, language, measurement, and administration. His article was shared with the focus group as pre-reading for the first focus group session. A summary of other authors' suggestions was also be provided to the focus group, in order to maximize the value of variables developed by the group.

Beins (2004) identifies three domains for survey questions: “measures of memory and behaviour, measures of attitude and opinion, and demographics” (p. 209). He describes several potential problems to avoid in each domain. Palys (2003) and Morrel-Samuels (2002) concur with the need for demographic questions, but suggest that these questions be at the end of the survey and minimized in number in order to minimize concerns about participant anonymity. I included only those questions needed to describe the survey sample and to allow subgroup analysis of the survey data.

Survey questions can be either open-ended, allowing participants a free voice to answer, or closed-ended, allowing participants to chose from provided answers (Beins, 2004; Palys, 2003). Both types of questions lead to comparably valid answers, but closed-ended questions facilitate data analysis (Beins, 2004). Morrel-Samuels (2002) suggests that adding open-ended questions may provide a way to validate the survey results. I used closed-ended questions to gather the quantitative data favoured within the culture of BCAS, and to simplify data analysis. One open-ended question was included at the end of the survey to provide additional meaning to the respondents’ responses.

Once developed, the survey was tested by the focus group participants and a convenience sample of current ACPs and managers. All completed the survey and commented on their perception of the ease of taking the survey and the ability of the questions to address the research question. The survey was modified based on this feedback (see Appendix C for the final survey).

The survey was administered using the Internet. This had the advantages of relatively low cost, accessibility, convenience, data control, and participant comfort and anonymity (Palys, 2003). Using the Internet also presented some disadvantages to address: access and anonymity (Palys, 2003).

All BCAS employees have access to email and the Internet at the station. Access is not easy in all stations, since some smaller areas still rely on dial-up access. This discourages frequent checking of email and slows the process of survey completion. I asked Unit Chiefs to post a hard copy of the invitation to participate in the station, to prompt potential participants to check their email and access the survey.

Anonymity of the participants limits my ability to evaluate the seriousness with which the survey is completed. While not unique to online surveys, this is a limitation that must be noted. An advantage of the anonymity is that respondents might be more forthright in their survey answers. This could mitigate some of the social desirability bias identified by Statistics Canada (2003) with regard to answering sensitive questions.

Beins (2004) asserts that comfort with computers is a further limitation of online surveys. This should not have been a limiting factor in the target population, since all BCAS employees have participated in online continuing medical education in order to renew their paramedic licenses.

The target population for the survey is all BCAS employees, as previously described. The self-selected sample that responded to the survey is likely not representative of the larger BCAS population (Beins, 2004; Palys, 2003). In some research applications, this would be considered a limitation, but I consider this a strength in this study. Those who chose to respond are more likely to be interested in ACP training, and thus provided the most useful information for enhancing internal recruitment of ACP students. By addressing the needs of those interested in ACP training, BCAS is more likely to attract ACP candidates.

Palys (2003) and Beins (2004) both raise the need for assurances of confidentiality and anonymity in online surveys. These issues were addressed directly in the invitation to participate

and in the consent that each participant acknowledged prior to taking the survey. At the end of the project, I will destroy any information that could possibly link an individual to their participation in the survey as recommended by Beins (2004).

Procedures

Focus group 1

In action research, the researcher is expected to play an active role in facilitating the heuristic process and the development of socially-constructed concepts (Palys, 2003; Stringer, 1999). I have been trained as a facilitator through the Justice Institute of British Columbia, and acted as facilitator for the focus group sessions.

With the informed consent of all participants (see Appendix D), focus group sessions were recorded using a digital audio recording device. The recording was used only when required to validate written notes and flip chart products after the session.

The first focus group session began with introductions and an icebreaker exercise to enable participants to gain comfort with each other. We discussed general rules of conduct and I asked the group to develop conduct guidelines upon which they could all agree (Berg, 2004; Stringer, 1999).

The exploration of issues began with a general question, as suggested by Stinger (1999), to allow participants to describe from their point of view the advantages, disadvantages and enablers of taking ACP training. As discussion proceeded, key points were written on flip charts for later discussion.

Once all participants identified their perspectives on taking ACP training, the issues raised were discussed. Berg (2004) describes this as *bracketing*, in which “you hold some phenomenon up for close and careful inspection” (p. 128). This was done for each issue raised,

with issues discussed, compared, and contrasted. The goal was to list topics that all participants agree needed to be explored in the survey.

Agreement in this context is best achieved through consensus rather than a majority vote, since consensus lends strength to the agreed-to issue (Stringer, 1999). The corroboration of opinions implicit in consensus enhances the validity of the focus group process (Berg, 2004). In this application, the final outcome was a list of variables. With no limit to the number of survey questions, except the convenience implications for respondents (Morrel-Samuels, 2002) and other impacts of lengthy surveys (Palys, 2003), consensus on the topics to explore was not difficult to achieve.

Once the issues were identified, the focus group addressed each one to identify the relevant variables to be addressed in the survey questions (Palys, 2003). I took the list of variables to complete the process and distributed the draft survey questions to the focus group members for their approval.

Survey

The survey was developed using Zoomerang ®. This electronic format facilitated data capture (Statistics Canada, 2003) and data analysis (Palys, 2003). Palys admonishes to "always do a pilot study" (p. 187) of any research instrument. I asked the focus group members and a convenience sample of ACPs and BCAS managers in Kamloops to complete the survey. I asked them to comment on the ease of completion and their opinion regarding the extent to which the survey would elicit information relevant to the research question. The few suggested revisions were incorporated into the final survey.

The survey was available online. All BCAS employees were invited by email to participate in the survey. The email contained a link to the survey. The survey was left available

for two weeks to maximize the accessibility to employees working various shift patterns. I sent follow-up emails at the end of the first week and early in the second week to thank those who had participated and to encourage and remind those who had not yet participated. Schillewaert, Langerak, and Duhamel (as cited in Beins, 2004) found that a total of three emails increase response rates to 31% in the general population, which would have generated over 900 responses in this case. An earlier study conducted in BCAS achieved 679 responses on the topic of paramedic communication (Wainman, 2005). I had hoped that ACP training would stimulate at least as much interest within BCAS. The number of respondents was a significant indicator of the level of interest in ACP training, and will be an important piece of information in and of itself.

Beins (2004) suggests that incentives might increase participation. I offered a one-year subscription to an emergency medical services journal via a random draw of all participants. The journal is symbolic of the pursuit of education this study hopes to advance. The draw required that respondents provide their name. The survey provided assurances that the name would only be used for the draw, not to identify respondents' other data, and entry of their name for the draw was optional. The survey data numbered each respondent. To determine the winner, I solicited a random number in the range of survey respondents from the website Random.org. The first number selected matched a respondent who did not wish to provide a name, so a second random number was selected. I sent an email to that respondent, gathered more information and purchased the journal subscription in the respondent's name.

Once the survey closed, I sent another email thanking all participants, releasing the number of participants, and announcing that the draw prize has been awarded. I demonstrated my commitment to confidentiality and anonymity by not releasing the name of the winner.

Focus group 2

Once the survey data were analyzed and a preliminary interpretation formulated, the focus group re-convened. This session was held via teleconference to keep costs down, and since I felt the shared interpretation could still be accomplished using that medium. The same guidelines for participation were used for the second session.

Prior to the second focus group session, each member was provided with the processed survey data and my draft interpretations. During the focus group, each theme from the interpretation was bracketed (Berg, 2004) to ensure complete discussion on the theme. When all perspectives have been brought forward, my draft interpretation of the theme was accepted, modified, expanded, or replaced with another interpretation. This process was done by consensus, to increase validity of the process (Berg, 2004). Had consensus not been achieved, my interpretation would have prevailed, with dissenting interpretations included in the final report and with references to applicable literature. Consensus was achieved on all conclusions, with only minor modifications of some interpretations.

Three focus group participants were not able to attend the second session. In conjunction with the three who did attend, I decided to contact the other three individually for the sole purpose of identifying issues that they felt were not identified in the data analysis. The focus group felt that the social construction of knowledge was sufficiently important to the validity of the interpretation that individual comments on the data should only be included if they raised a significant issue that had not already been identified. I telephoned the other three individuals and no new interpretations were identified.

At the conclusion of the second focus group, participants were asked to complete an evaluation of my competence in the areas of communication skills, leadership, character, style,

creativity, and team building skills. Evaluation forms were sent by email to each participant. They were asked to complete the evaluation form and forward their response to one volunteer from the group. That volunteer was asked to gather the evaluation forms and to deliver them to the Project Supervisor.

Data Analysis

Qualitative research can generate copious amounts of data, in the form of interview or focus group transcripts and survey comments (Pope, Ziebland & Mays, 2000). With the cyclical nature of action research, Dick (1999) cautions researchers to "record only the data directly relevant to your current interpretation" (p. 4). I took this advice to heart, while maintaining all available data as a back-up in the event that interpreted data requires verification. For example, I recorded focus group sessions and kept the audio record in the event that flip chart documentation, the primary data source, required verification. I did not transcribe the proceedings since the additional work and data would not necessarily contribute to the research process.

Analysis of qualitative data can be done in many ways. Focus group data was analyzed during the focus group sessions in order to adapt subsequent steps to the emerging data (Glesne, 1999). Initial brainstorming of issues to address in the survey were analyzed during the bracketing process. Issues were accepted, combined, or rejected during the focus group discussion process. Flip chart records of the issues were modified to reflect the agreed-to analysis of the issues. Issues were further analyzed to develop variables to constitute survey questions. All flip charts developed through these processes were kept as data from the focus group.

Survey data was analyzed using the capabilities within the Zoomerang ® software (Zoomerang, n.d.). Once data were grouped, they were entered into Excel ® for further analysis and to create graphs and charts. This allowed reporting of Likert-scaled nominal data and as a percentage of respondents, as an example. Relationships were made between variables, enabling subgroup analysis. For example, comparisons were made between the need for study time as expressed by respondents with children and those without. The level of analysis was determined by the questions developed by the focus group.

Comments received from survey respondents were analyzed deductively, using the framework developed by the focus group. Framework analysis is particularly applicable to policy research (Lacey & Luff, 2001; Pope, Ziebland & Mays, 2000), which is a practical description of this study. The framework approach is much more informed by existing literature and pre-existing concepts, such as those developed during the focus group (Lacey & Luff, 2001; Pope, Ziebland & Mays, 2000), while still allowing for emerging concepts to generate new themes for the framework (Lacey & Luff, 2001). Initial rounds of data analysis looked for data units that clearly fit the themes in the framework. Where data units did not fit the categories and themes of the framework they were noted for further analysis, particularly during the second focus group session which dealt with survey data interpretation. Validity of the analysis is enhanced when all views, including divergent opinions, are included and discussed in the context of the data interpretation (Lacey & Luff, 2001)

While deductive framework analysis was used, inductive analysis of the data was also considered. Berg (2004) prefers inductive analysis as a means of representing the expressions of the participants. Inductive analysis works to produce theories from the data, in contrast to fitting the data into pre-supposed themes in the deductive process. Inductive analysis creates possible

relationships between concepts produced during the data analysis. The researcher continues the "process of constant comparison [of concepts and data] until they reach theoretical saturation, that is no new significant categories or concepts are emerging" (Lacey & Luff, 2001, p. 7).

Since the purpose of this study is to describe and quantify the perceived needs of potential ACP students, and the focus group developed the survey questions and resultant framework, the deductive framework analysis of the survey comments provided a sufficient level of analysis. The rational for this process is that the focus group represented the population in question and its collective wisdom would uncover the main categories and themes related to the project's questions. The survey data would confirm this rational and also allow for additional categories and themes to be uncovered.

Reliability, validity and credibility of the data analysis and interpretation were demonstrated through triangulation and focus group validation (Berg, 2004; Glesne, 1999; Lacey & Luff, 2001, Stringer, 1999). Triangulation involved comparing focus group preliminary data, survey findings, and further focus group discussion regarding my interim interpretation. All contributed to the final interpretation and conclusions. The focus group validated the preliminary discussion data on flip charts, tested the survey, and validated or expanded my interpretation of the survey results. These processes are key demonstrations of rigour in the research process (Lacey & Luff, 2001).

Lacey and Luff (2001) caution that individuals within the focus group may "have particular personal, professional, or political reasons for disliking the researcher's interpretation" (p. 24). I was conscious of this during the final validation process. If one participant appeared to be advocating a position contrary to the preponderance of evidence, or out of proportion to the supporting evidence, I balanced their input against what I know of their personal interest and

against the input from the remainder of the focus group. As I facilitated a discussion towards consensus, focused on the data, I attempted to address the issue raised by the individual to the satisfaction of the group without sacrificing the integrity of the findings. This was one of many instances where ethical practices were tested.

Ethical Issues

This study was guided by eight ethical principles (MRCC et al., 2003). The application of each principle will be briefly described, with emphasis on those most applicable to my project. Research and consulting ethical perspectives will be compared to highlight the potential confusion between my role as researcher and the perception that I am an internal consultant for BCAS.

"Respect for human dignity" (MRCC et al., 2003, p. i.5) is an overarching principle that guided my day-to-day conduct and directed the balancing and combining of the other ethical principles (Palys, 2003). This principle was particularly applicable as I facilitated the focus group sessions and managed the interactions of the individuals within the group.

I developed a process for "free and informed consent" (MRCC et al., 2003, p. i.5). The consent informed participants of the voluntary nature of their involvement, provided assurance that no harm would come from participation, and advised that they may freely withdraw at any time (Glesne, 1999). The consent clarified my position as researcher for the benefit of both the participants and the project sponsor, and clarified that my research did not imply an offer of training incentives (Palys, 2003). Focus group members signed a consent form, while survey respondents acknowledged acceptance of a written consent as the first step in the survey.

Maintaining "respect for vulnerable persons" (MRCC et al., 2003, p.i.5) was done by acknowledging that vulnerability is an individual's perception, looking at issues from the

participant's perspective, and ensuring participants are protected (Palys, 2003). It was a component of facilitating the focus group sessions. This is consistent with the ethical consulting process of acknowledging the risk clients or participants are assuming by partaking in a suggested activity and supporting them in the process (Bellman, 1990).

Lacey (1995) encourages internal consultants to develop a clear contract with the client to facilitate tackling tough issues. This was equally important for me as researcher in ensuring "respect for privacy and confidentiality" (MRCC et al., 2003, p. i.5). As a BCAS employee, I could have been pressured by senior managers to reveal who voiced particularly negative comments during the study. As a researcher, I clarified in advance to the participants and the sponsor that anonymity would be protected. This could have impacted my research design, since any BCAS-funded travel for the study would identify the participant. I offered the alternative of telephone participation to focus group participants. One participant attended by telephone, for reasons other than anonymity. The research imperative for confidentiality is at odds with some consultants' preferences for "open data" (Lacey, 1995, p. 79) and reporting "personal and organizational data" (Block, 2000, p. 43). Emphasizing my role as researcher alleviated this potential conflict.

The principle of "respect for justice and inclusiveness" (MRCC et al., 2003, p. i.6) identifies three issues to address. Procedural justice was achieved via a thorough review of the research methods. Distributive justice was realized through the same processes that dealt with harm and benefits, discussed below. A survey available to all BCAS employees ensured inclusiveness, while the focus group validated and expanded on the survey results.

The principles of "balancing harms and benefits …. minimizing harm …. [and] maximizing benefit" (MRCC et al., 2003, p. i.6) are inter-related. The greatest risks for harm in

this study were breach of confidentiality and setting unrealistic expectations. These were addressed by clarifying my role, adhering to confidentiality processes, and making potential benefits explicit. The only benefit to the participants was the opportunity to tell their story (Glesne, 1999). Acting on their story will be the prerogative of BCAS.

The use of an internet-based survey could have raised ethical issues: invasion of privacy, incurring Internet time costs, inadvertent receipt by a minor and violation of company rules (Beins, 2004). Since this survey was sent through an employee-targeted email list and the recipients' employer sponsored the survey, the potential ethical issues were not a concern.

By following the eight ethical principles, I was prepared to deal with issues as they arose in the unpredictable environment of research (Palys, 2003).

CHAPTER FOUR: ACTION RESEARCH PROJECT RESULTS AND CONCLUSIONS

Study Findings

This project was designed to determine effective and efficient strategies that BCAS can use to recruit and retain Advanced Care Paramedics (ACP) from the current Primary Care Paramedics. Information was gathered from BCAS staff, using a survey developed in conjunction with a focus group. In order to provide a context for the data, a summary of the respondent demographics will be presented. This will be followed by a presentation of the survey data. Presentation of data will vary according to the purpose: Some data will be presented graphically, while other data will be presented in nominal form. Survey results will be combined with information from the literature to form study conclusions. Finally, the limitations of the study will be explained.

Respondents

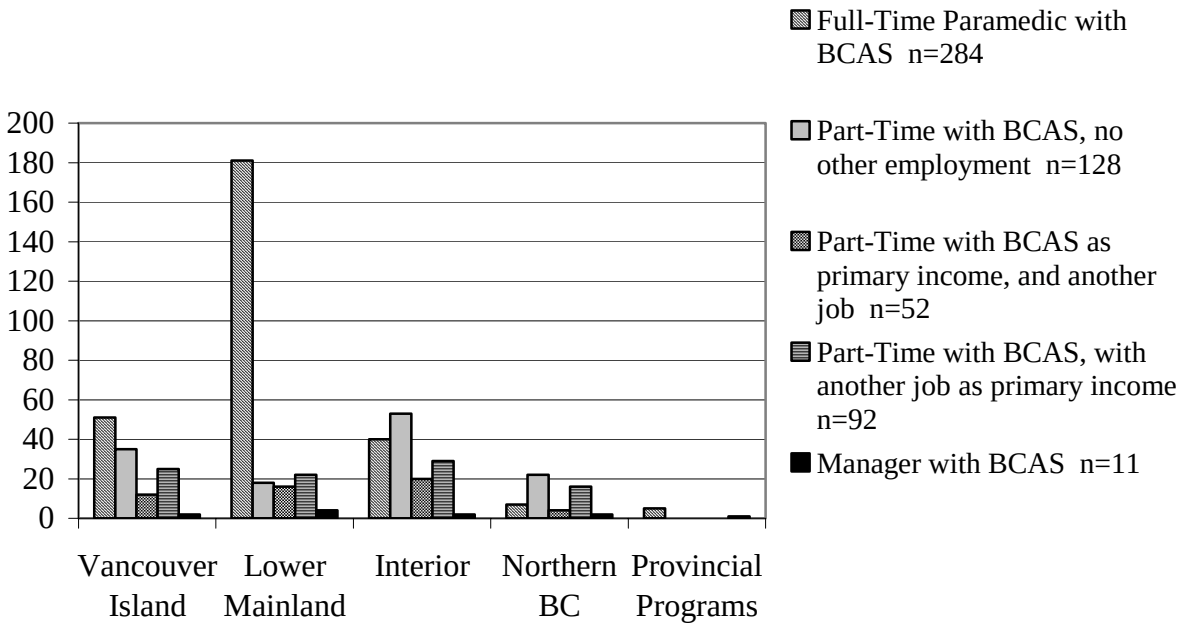
Respondents were asked for the region in which they work. Within BCAS, there are four geographic regions and one provincial program area. Respondents were asked about the geographic designation of their primary work station: remote, rural, urban, or metro. To categorize respondents' place in the workforce, they were asked to identify the highest license level they have achieved, how many years they have worked for BCAS, and their current employment status with BCAS. To categorize respondents by family status, they were asked how many dependent children they have, and their marital status. Finally, respondents were asked about their gender and the highest level of non-paramedic education they have attained.

There were 567 completed surveys. This represents only 17% of the total paramedic population of 3336 (BCAS, 2006a). Beins (2004) and Palys (2003) state that there is a selection bias in respondents for self-enumeration surveys. Those who are not interested in ACP training

would be less likely to respond to this survey. Thus the findings of this survey would more-closely represent the needs of PCPs who are interested in ACP training.

The dominant respondent group, at 50% of respondent, is the full-time paramedics from the Lower Mainland Region. This number is close to their approximately 30% representation in the general BCAS population (BCAS, 2006c) and will be an important factor to consider in the interpretation of other data. Figure 1 presents a breakdown of the respondents by region and employment status.

Figure 1. Respondents by Region and Employment.



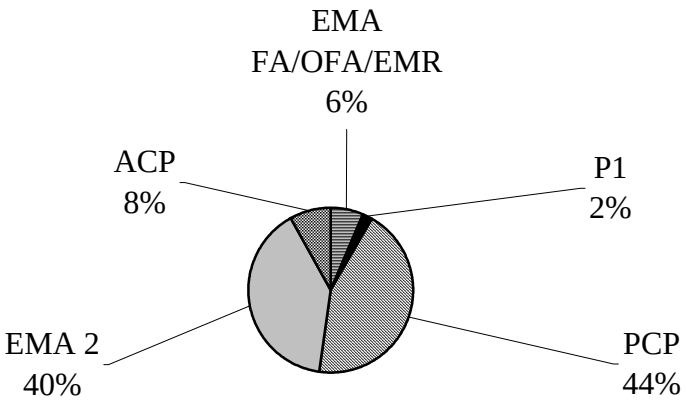
The location of the respondents can also be classified according to the BCAS station designation. The designations are relevant for staffing agreements pursuant to the MOA. The largest group of respondents was from the Metro posts of Vancouver and Victoria, as shown in Table 1.

Table 1. *Geographic Designation of Respondents' Home Station*

Designation	Respondents	Percent
Remote	45	8%
Rural	160	28%
Urban	163	29%
Metro	199	35%

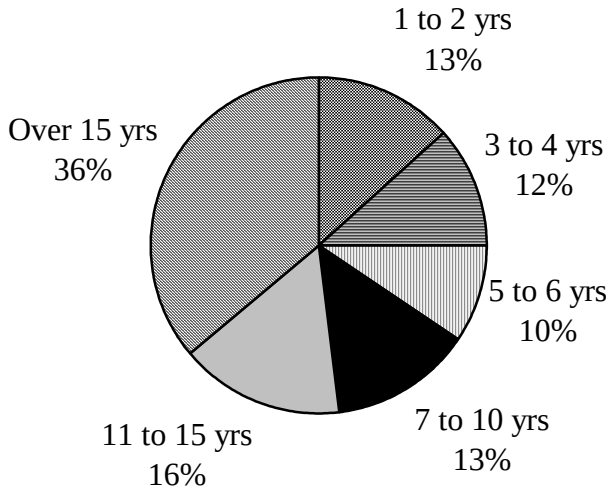
Respondents represented all license levels, with 84% at license levels from which they could begin an ACP program: the Emergency Medical Assistant Level 2 (EMA 2) and PCP levels. Other license levels included the outdated Paramedic 1 (P1), Emergency Medical Assistant First Aid (EMA FA), Occupational First Aid (OFA), and Emergency Medical Responder (EMR). Figure 2 illustrates the distribution graphically and shows that those licensing levels closest to the ACP eligibility level were the most frequent responses.

Figure 2. License Level of Respondents.



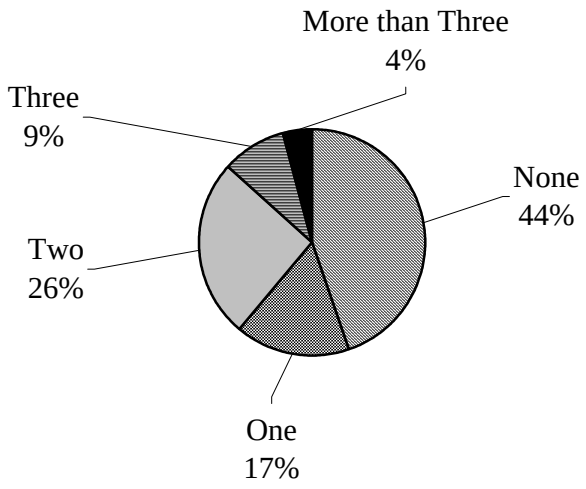
Most respondents had greater than five years of experience with BCAS. The experience level of candidates entering ACP training has been a concern of the current ACP practitioners. Anecdotal reports and comments in this survey indicate a preference to have only experienced PCPs enter ACP training. The population of respondents in this study has the desired experience. Figure 3 illustrates the distribution of years of service.

Figure 3. Respondents' Years of Service in BCAS.



Remarkably, 44% of respondents stated they had no dependent children. Although the data does not illustrate why this percentage is so high, there may be several postulations. First, it may be because 52% of respondents have greater than 10 years of service and their children may no longer be considered dependent. Second, and perhaps in addition, there may be a selection bias with employees without dependent children being more likely to be interested in the current ACP training delivery and thus more likely to respond to the survey. The number of dependent children identified by each respondent is illustrated in Figure 4.

Figure 4. Number of Dependent Children.



Seventy-three percent of respondents stated they were either married or in a long-term co-habiting relationship. Seventeen percent stated they were single, and 10% were either separated or divorced.

Seventy-two percent of respondents were male and 28 % were female, just slightly out of proportion to the 69% male and 31% female proportions in the general BCAS paramedic population (BCAS, 2006b).

Most respondents reported having some non-paramedic post-secondary education, with 18% achieving at least one degree. Table 2 details the highest level of education reported by respondents.

Table 2. *Education of Respondents*

Education	Respondents	Percent
Did not complete high school	8	1%
High school graduation	90	16%
Some post-secondary	367	65%
Undergraduate degree	81	14%
Post-graduate degree	21	4%

Survey Findings

The first survey question provided the details required for informed consent and asked participants if they gave full and informed consent to participate in the project. Since this was a mandatory question, with only one answer, all respondents had to give consent before continuing the survey.

The second survey question asked about the level of interest the respondent has in enrolling in an ACP program. For the purposes of this study respondents had to have indicated that they were *interested* or *very interested* to be considered as a likely candidate for recruitment. This assumption was included because of the time and money required to complete the ACP. Based on this criterion, a total of 384 people were either interested or very interested and would be considered likely ACP candidates.

The survey did not ask the age of the respondents: a recognized weakness in the data. Respondents did provide their service seniority. There were 215 respondents with ten years of service or less, who were either interested or very interested in ACP training. The distribution of interest in ACP training by years of service shows that the majority of interest comes from those

employees with less than two years and those with over seven years of service. Table 3 illustrates the spread of interest by years of service.

Table 3. *Interest in ACP Training by Years of Service*

Interest in ACP training	Overall n=567	1 to 2 yrs n=76	3 to 4 yrs n=66	5 to 6 yrs n=54	7 to 10 yrs n=76	11 to 15 yrs n=91	> 15 yrs n=204
Not at all interested	58	2	6	2	1	6	41
Slightly interested	125	12	11	10	13	18	61
Interested	184	28	26	21	25	32	52
Very interested	200	34	23	21	37	35	50

Of the 384 respondents who were interested or very interested in ACP training, 169 were from the Lower Mainland, 96 from the Interior, 79 from Vancouver Island, 36 from Northern BC, and four from Provincial Programs. Table 4 shows the distribution of interest in ACP training by region.

Table 4. *Interest in ACP Training by Region*

Interest in ACP Training	Overall	Van. Island	Lower Mainland	Interior	Northern BC	Provincial Programs
Not at all interested	58	15	23	15	4	1
Slightly interested	125	31	49	33	11	1
Interested	184	38	75	47	21	3
Very interested	200	41	94	49	15	1
Total	567	125	241	144	51	6

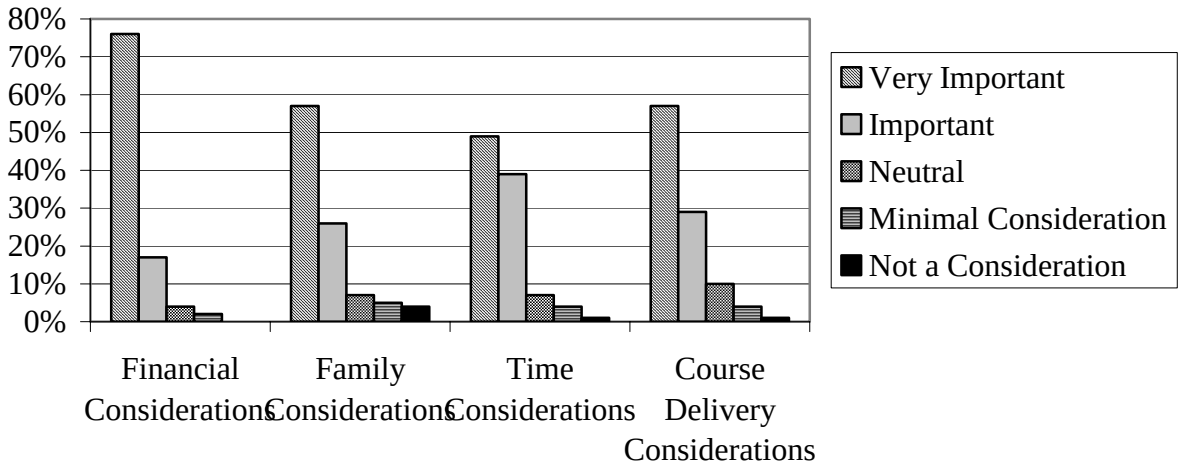
Question three asked about the respondents understanding of how much BCAS pays as a post-secondary subsidy for every ACP student, in addition to the $10,000 tuition the student pays. Only 12% of respondents correctly identified $8000 as the amount of subsidy. 56% of respondents indicated that BCAS did not pay anything. The focus group felt this lack of understanding regarding costs may contribute to or be a symptom of an overall lack of understanding surrounding funding ACP training. This lack of understanding could underpin other issues surrounding ACP training. Table 5 illustrates the range of understanding related to BCAS's current subsidy of ACP training.

Table 5. *Estimates of BCAS Subsidy of ACP Training*

Subsidy	Respondents	Percent
$0	315	56%
$2,000	39	7%
$4,000	48	8%
$8,000	69	12%
$10,000	96	17%

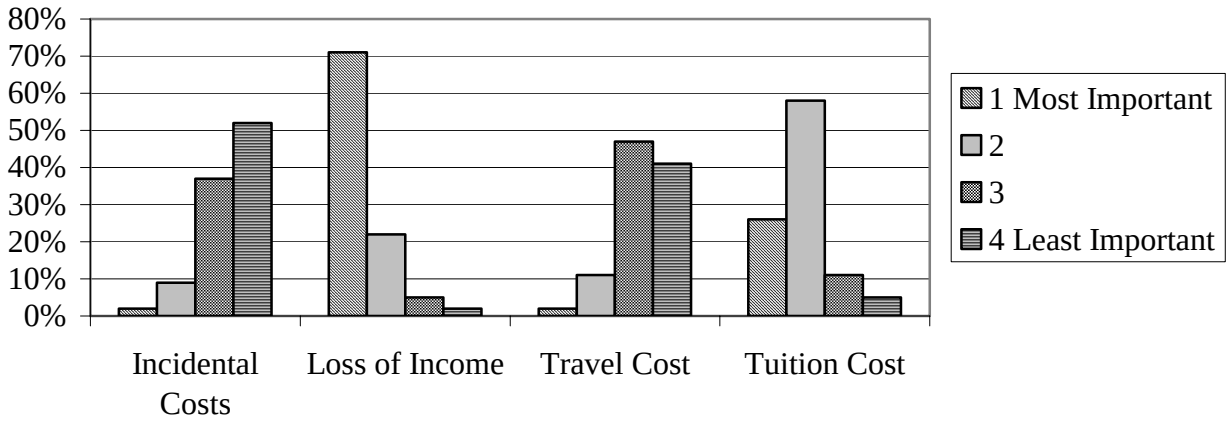
Question four asked respondents to rate the level of importance of four general considerations: financial, family, time, and course delivery. The most frequent rating for all four general considerations was *very important,* with financial considerations rated most frequently as '*very important'*. Further analysis showed that the ratings of all categories were relatively consistent across seniority, gender, and number of dependent children. Fig 5 shows the distribution of importance by consideration.

Figure 5. Importance of Considerations for ACP Training.



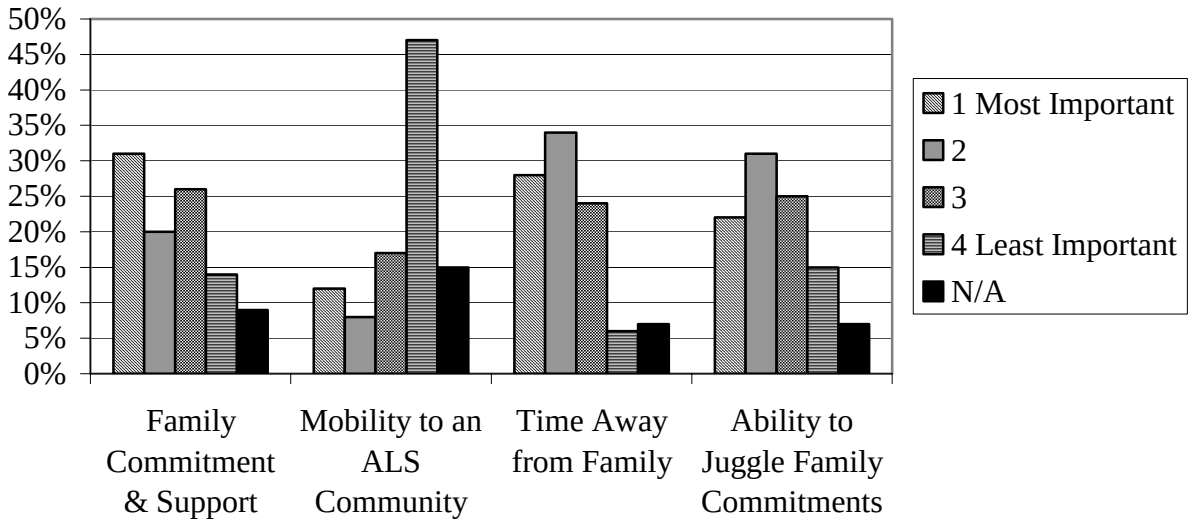
The next four questions explored each general consideration in more detail by asking respondents to rank four specific issues within each general category. The issues used were those identified by the focus group. Question five asked respondents to rank four financial considerations: incidental costs, loss of income, travel costs, and tuition costs as pressures impacting their decision. Loss of income was clearly the most important financial issue, followed by tuition costs, travel costs, and incidental costs. Figure 6 illustrates the rankings.

Figure 6. Ranking of Financial Considerations.



Question six asked respondents to rank four family considerations in order of importance: family commitment and support, mobility to an ALS community, time away from family, and ability to juggle family commitments with studies. There was considerable variability in the answers. Although family commitment and support had the most number one rankings as most important, it may have been difficulty for respondents to discriminate between the conditions and the difference between rankings may have been slight. This may have presented a difficulty for respondents in choosing a rank (Statistics Canada, 2003). To get a general impression of the importance of factors, I added the number of top two rankings. Time away from family had the most top two rankings, followed by ability to juggle family commitments, with family commitment and support having the third-most. Mobility to an ALS community was clearly the least important consideration. Figure 7 illustrates the rank of importance reported for the four family considerations.

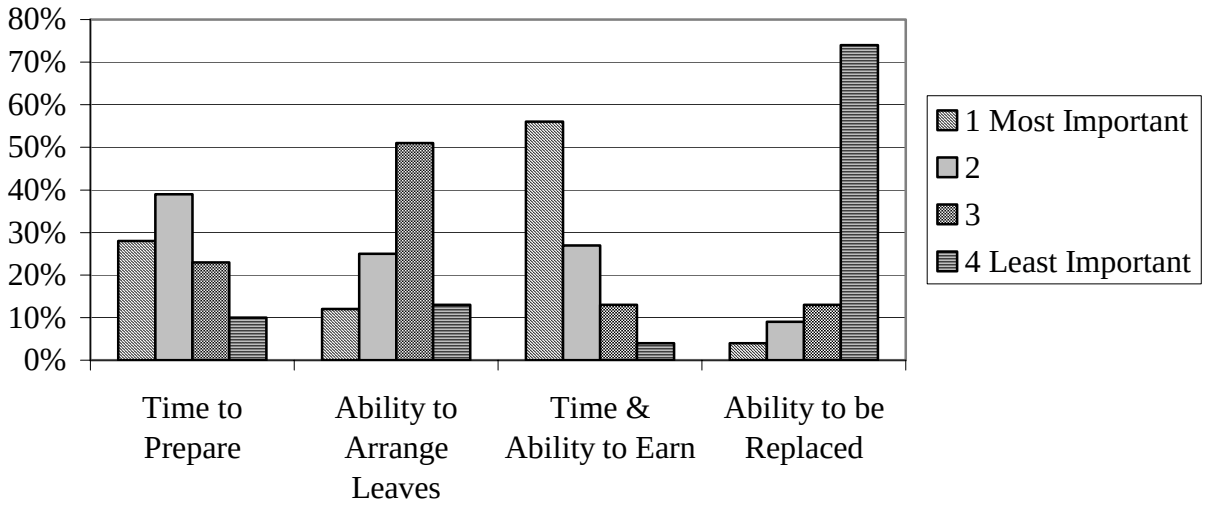
Figure 7. Rank of Family Considerations.



Question seven asked respondents to rank four time considerations in order of importance: time to prepare for the courses, ability to arrange leaves from work, time and ability

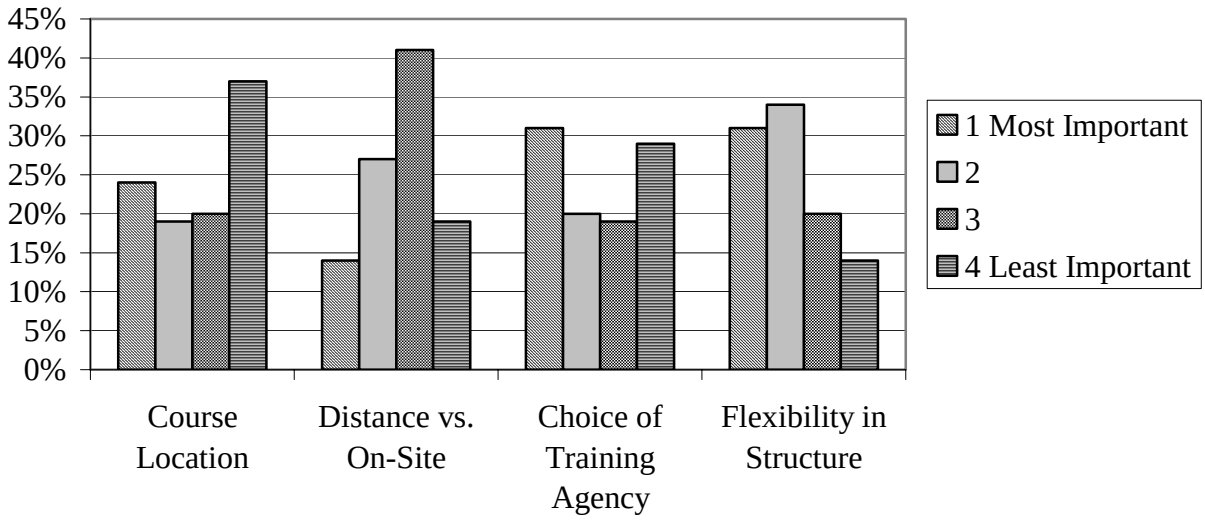
to earn while training, and ability to be replaced in current position. Although each had some first rank responses, time and ability to earn was ranked as the most important time consideration. This may be an indication of the close relation this issue has to the most-important financial consideration, loss of wages, identified in question five. Time to prepare was second-most important, ability to arrange leaves was third, and ability to be replaced was a distant fourth. Figure 8 illustrates the reported importance of the four time considerations.

Figure 8. Rank of Time Considerations.



Question eight asked respondents to rank four course delivery considerations: course location, distance options vs. on-site, choice of training agency, and flexibility in course structure (a continuous course vs. distinct and intermittent blocks of training). Choice of training agency and flexibility in structure each received identical numbers of most-important rankings. Adding the number of second place rankings, flexibility in structure became the most important issue. The rankings of each course delivery consideration are illustrated in Figure 9.

Figure 9. Rank of Course Delivery Considerations.



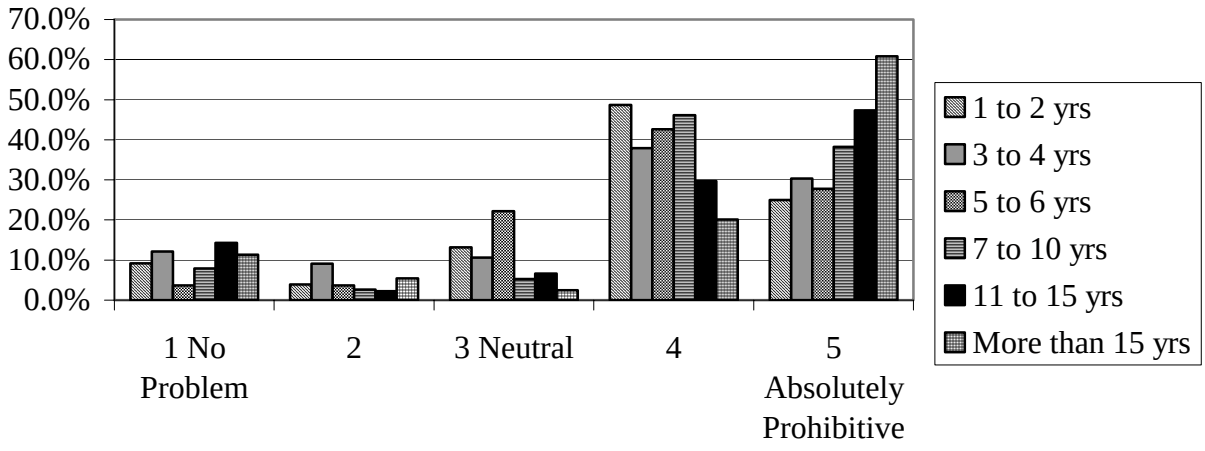
Question nine asked respondents to rate 10 potential barriers to ACP training, as identified by the focus group. Many of these were also rated in the previous four questions: This question allowed some comparison across the previous general categories. The 10 potential barriers were rated on a five-point scale from no problem to absolutely prohibitive. The greatest barrier to ACP training was loss of wages, with 77% of respondents identifying the issue as absolutely prohibitive or just below that rating. The next most important barrier to ACP training was tuition cost. Ratings of potential barriers to ACP training are detailed in Table 6.

Further analysis of the issues showed that some were a bigger issue to certain demographic groups than others. Loss of wages was significantly more important to those with 15 years of service or more. This may be an indication of their greater level of financial commitments, pension concerns, or a greater sense of entitlement to full pay for employer-funded training. The importance of wage loss by seniority is illustrated in Figure 10.

Table 6. *Ratings of Potential Barriers to ACP Training*

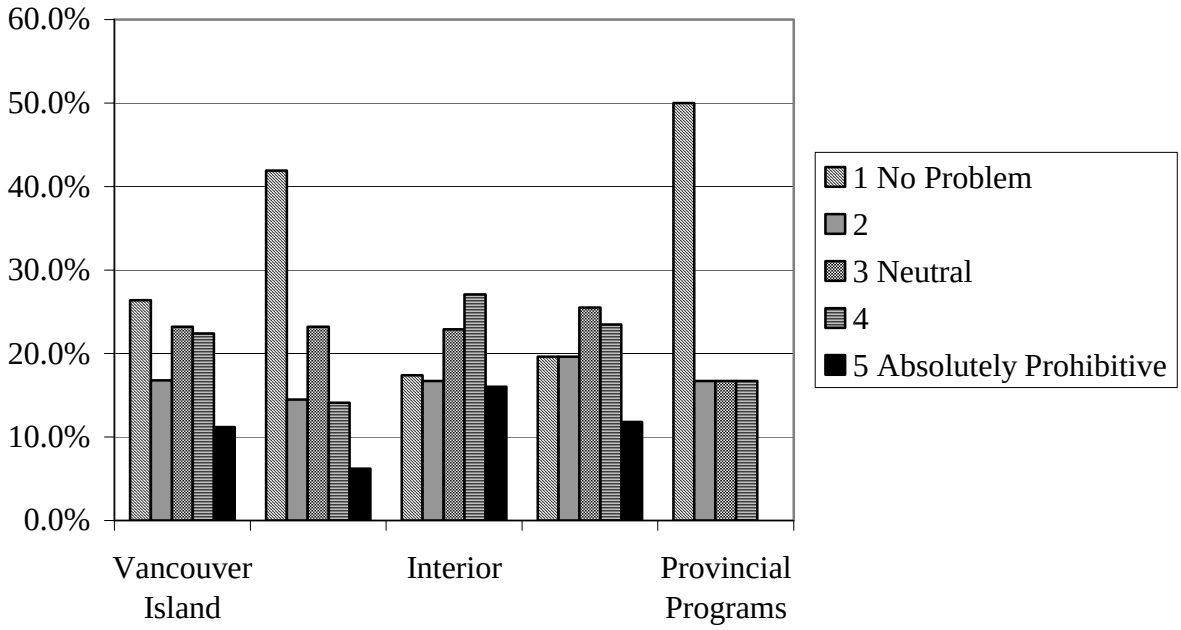
Potential Barrier	1 No Problem	2	3 Neutral	4	5 Absolutely Prohibitive
Tuition Costs	11%	8%	14%	46%	21%
Loss of Wages	10%	5%	8%	33%	44%
Incidental Expenses	9%	19%	45%	24%	3%
Travel	13%	23%	33%	25%	5%
Relocation to ALS Community	30%	16%	23%	20%	10%
Time to Prepare	10%	17%	28%	37%	8%
Location of Training	22%	11%	25%	26%	16%
Family Commitments	17%	13%	23%	36%	15%
Degree of Support Available	14%	13%	23%	36%	15%
Prospects for a Job	30%	17%	19%	21%	13%

Figure 10. Wage Loss Impact by Seniority



Not surprisingly, relocation to an ALS community was less important to respondents from the Lower Mainland and from Provincial Programs, which is primarily located in the Lower Mainland. Few respondents rated relocation as absolutely prohibitive. This may reflect a selection bias, with paramedics from current ALS communities being most interested in ACP training, and thus most likely to respond to the survey. The importance of relocation by respondents' region is shown in Figure 11.

Figure 11. Impact of Relocation to ALS Community by Respondents' Region.



Not surprisingly, location of the training in the Lower Mainland was less of an issue for respondents from the Lower Mainland, and a larger issue for respondents from Northern BC. The importance of training location varied across respondents' home region as shown in Table 7.

Table 7. *Importance of Training Location by Respondents' Region*

Region	1 No Problem	2	3 Neutral	4	5 Absolutely Prohibitive
Vancouver Island	12.8%	8.0%	21.6%	36.8%	20.8%
Lower Mainland	36.5%	15.4%	27.4%	16.2%	4.6%
Interior	9.7%	10.4%	26.4%	29.9%	23.6%
Northern BC	7.8%	3.9%	11.8%	39.2%	37.3%
Provincial Programs	0.0%	0.0%	66.7%	16.7%	16.7%

Question ten asked respondents to rate their impression of various components of the ACP program. Rating was on a scale from excellent to poor, with the option of stating they had not heard anything or had not formed an opinion about the component. The clinical or hospital time received the most positive rating. The impressions of other components varied, with the exception of the training agency. Fifty percent of respondents rated the training agency as poor and another 19% rated it fair. Ratings of the various components of ACP training are shown in Table 8.

Table 8. *Ratings of ACP Training Components*

Component	Excellent	Good	Neutral	Fair	Poor	No Opinion
ACP Independent Study	4%	26%	20%	17%	15%	17%
ACP Classroom	1%	16%	17%	21%	21%	23%
ACP Clinical	12%	33%	17%	11%	4%	23%
ACP Precepting	7%	24%	15%	20%	18%	16%
ACP Field Marking	3%	15%	18%	17%	25%	22%
Training Agency	1%	7%	16%	19%	50%	7%

The ratings were not consistent when broken down geographically. While some ratings varied across components and regions, the Lower Mainland respondents did not follow the same trends. These respondents are of particular interest for two reasons: they are the largest group of respondents interested in ACP training, and they are most likely to have regular contact with the ACP program and its students. Thus, their impressions will be important to recruitment and they are the most reliable sources for first-hand and second-hand impressions of the ACP training program.

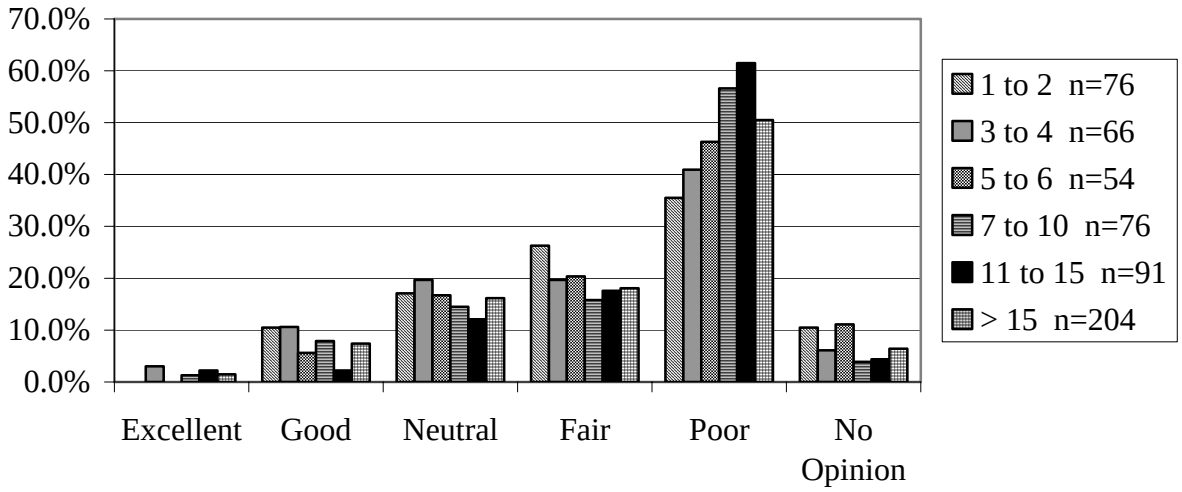
When compared to other regions, Lower Mainland respondents had similar impressions of the ACP independent study, were more negative about the ACP classroom time, more positive about the ACP clinical time, much more negative about ACP precepting, much more negative about the ACP field marking, and very much more negative about the training agency. These are important impressions that will need to be overcome, regardless of the basis of the impression. The impressions reported by Lower Mainland respondents are detailed in Table 9.

Table 9. *Rating of ACP Training Components by Lower Mainland Respondents*

Component	Excellent	Good	Neutral	Fair	Poor	No Opinion
ACP Independent Study	3.7%	29.5%	19.9%	19.9%	18.7%	8.3%
ACP Classroom Time	0.8%	16.6%	12.4%	26.6%	33.6%	10.0%
ACP Clinical (Hospital) Time	15.4%	38.2%	17.0%	12.9%	5.4%	11.2%
ACP Precepting	5.4%	22.8%	17.0%	23.7%	26.6%	4.6%
ACP Field Marking	3.7%	12.9%	18.3%	22.8%	34.4%	7.9%
Training Agency	0.0%	3.7%	11.6%	17.4%	64.7%	2.5%

Since the impression of the training agency was so negative, particularly in the Lower Mainland, I drew on discussion from the focus group to help determine the origin of that impression. Focus group participants indicated that the reputation of the training agency may not be positive in the field, but recent experiences with that agency had been positive. To investigate the possibility of an historical background to the impression, I evaluated the responses by seniority. Ratings were generally more negative with increasing seniority. While this suggests an historical basis for the low ratings, the impressions still exist and will be a barrier to internal recruitment of ACP students within BCAS. Ratings of the training agency by seniority are illustrated in Figure 12.

Figure 12. Impression of Training Agency by Respondent Seniority.



Question 11 asked respondents to rank six factors that impact the optimal age for entering ACP training: years left to work, years of experience, ability or capacity to learn, keeping good people before they find other careers, maturity regardless of age, and service seniority. Since ranking is a very subjective process, and the relative differences between rankings may vary from one choice to another, it is difficult to state unequivocally the importance of each factor (Statistics Canada, 2003). To get a general sense of the most important factors, I added the number of first and second place rankings for each factor. Using this method, capacity to learn was most important, followed by years of experience. At the lower end, I added the number of fifth and sixth place rankings. Service seniority was the least important factor, followed by years left to work. Of the two remaining factors, maturity received a greater percentage of high rankings and would thus be deemed the third most important factor, with keeping good people being fourth. Rankings of the selection factors are detailed in Table 10.

Table 10. *Ranking of Selection Factors for Potential ACP Candidates*

Selection Factor	1 Most Important	2	3	4	5	6 Least Important
Years Left to Work	12%	9%	13%	17%	27%	23%
Years of Experience	22%	25%	19%	21%	11%	2%
Capacity to Learn	32%	25%	20%	13%	7%	3%
Keeping Good People	15%	14%	19%	24%	16%	11%
Maturity	15%	21%	21%	16%	19%	8%
Service Seniority	4%	7%	8%	9%	20%	53%

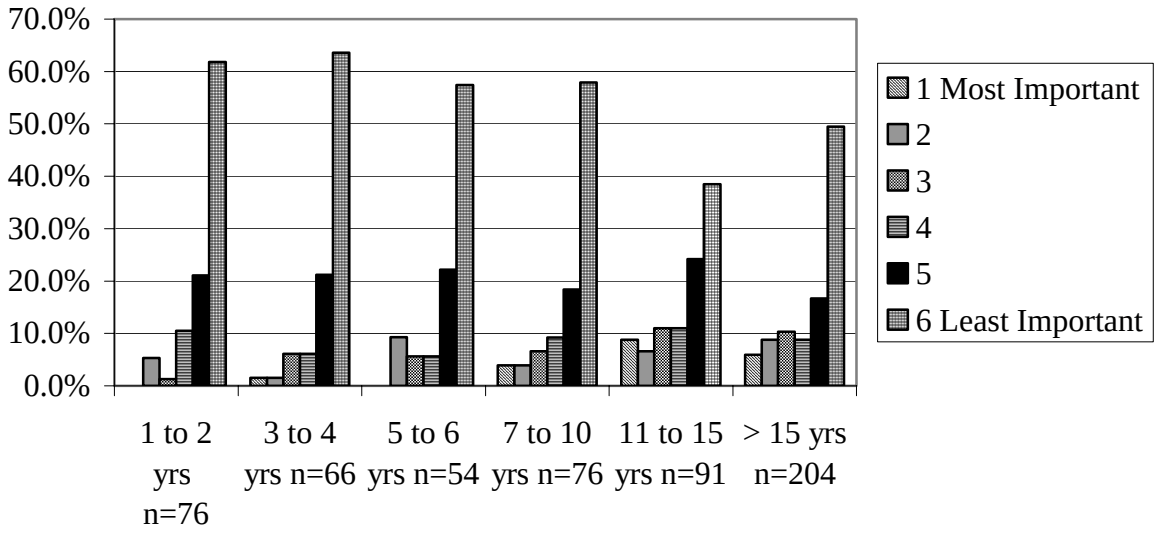
Since capacity to learn could be considered an obvious first choice, I did not pursue further evaluation of that factor. Since years of experience was the next most important factor according to the respondents, I wondered if the ratings would vary by region or by seniority. The importance of experience was rated more highly as seniority increased. The question remains whether this is a reflection of wisdom gained by respondents, or a measure of protectionism by respondents wanting to maintain the system of employer-funded training by seniority. Rankings of years of experience by seniority is shown in Table 11.

Table 11. *Ranking of Importance of Experience by Respondent Seniority*

Rank	1 to 2 yrs n=76	3 to 4 yrs n=66	5 to 6 yrs n=54	7 to 10 yrs n=76	11 to 15 yrs n=91	> 15 yrs n=204
1	17.1%	18.2%	22.2%	23.7%	20.9%	24.5%
2	26.3%	25.8%	13.0%	19.7%	27.5%	27.0%
3	23.7%	24.2%	24.1%	15.8%	18.7%	16.2%
4	18.4%	27.3%	25.9%	19.7%	17.6%	21.1%
5	13.2%	4.5%	14.8%	19.7%	9.9%	8.8%
6	1.3%	0.0%	0.0%	1.3%	5.5%	2.5%

Similarly, the importance of years of service varied by seniority of respondents. Those with 11 to 15 years of seniority gave years of service more importance than other groups, followed by those with more than 15 years of seniority. This was demonstrated by more high rankings or importance and fewer low rankings. Newer employees rated service seniority as having less importance. The question remains whether this is an ego-centric view of seniority, or a hedging of answers against the historical backdrop of employer-funded, seniority based training selection. The trend of rankings by respondent seniority can be seen in Figure 13.

Figure 13. Importance of Service Seniority by Respondent Seniority.



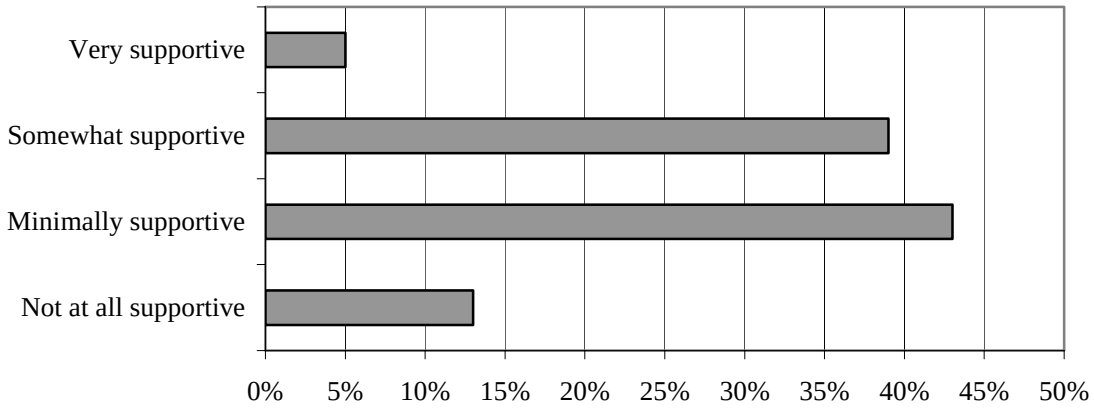
Question 12 asked respondents to consider their answers from question 11 and to identify the optimal age for entering an ACP program. Answers were consistent regardless of the respondents' years of service. The most frequent answer was 31 to 35 years, followed by 26 to 30 years. The answers do not leave any impression of respondent bias to protect personal interests.

Question 13 asked respondents to describe their impression of ACP practice by picking one of three provided statements. Responses showed that respondents had understandings of ACP practices similar to those of the focus group, with 81% selecting *high level of knowledge required*, 16% choosing *more tools in the toolkit*, and 2% picking *many protocols to remember*.

Question 14 to 16 aimed to gain a greater understanding of the culture in which ACP students learn in the field. Question 14 asked respondents to rate the degree of support in the BCAS culture for new ACP students on a range from *not at all supportive* to *very supportive*. Forty-three percent of respondents reported a *minimally supportive* culture, while 39% rated the culture as *somewhat supportive*. The answers were consistent across regions and respondents'

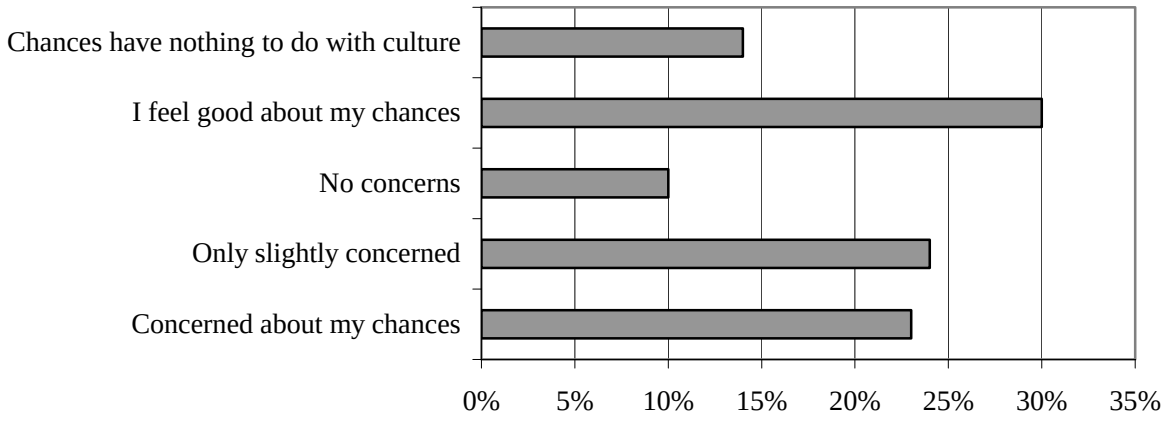
years of service. Given the stress inherent in the intensive ACP training process, this level of perceived support is likely a barrier to recruitment of ACP students within BCAS. The ratings of perceived support are represented in Figure 14.

Figure 14. Degree of Support in BCAS Culture.



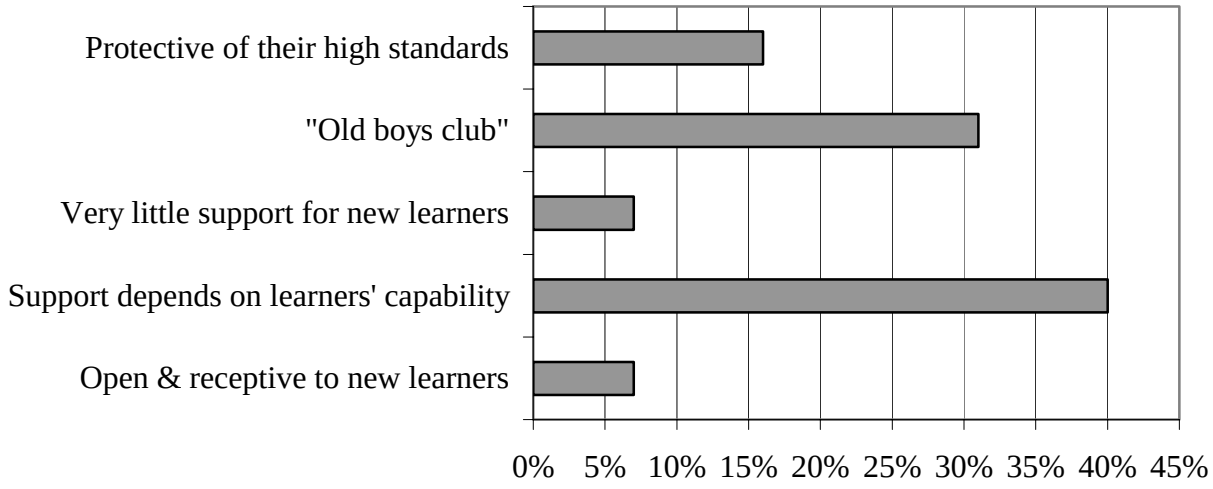
Question 15 asked respondents to reflect on the current culture of BCAS and the degree of support available in the field and then to rate their chances of succeeding in an ACP program. Respondents selected one of five statements. Responses did not demonstrate any particular pattern, and were consistent across regions and respondents' years of service, as shown in Figure 15.

Figure 15. Respondent Estimate of Chance of Succeeding in ACP Training.



Question 16 asked respondent to describe their general impression of the ACP community, by selecting one of five statements. Significant to the ACP recruitment from within BCAS, only 7% of respondents described the ACP community as *open and receptive to new learners*. Forty percent of respondents felt that the degree of support shown by the ACP community was conditional on the learner's capability, while 31% described the ACP community as an *old boys' club resistant to new learner*s. Answers were consistent across regions and respondents' years of service and are illustrated in Figure 16.

Figure 16. Impression of the ACP Community.



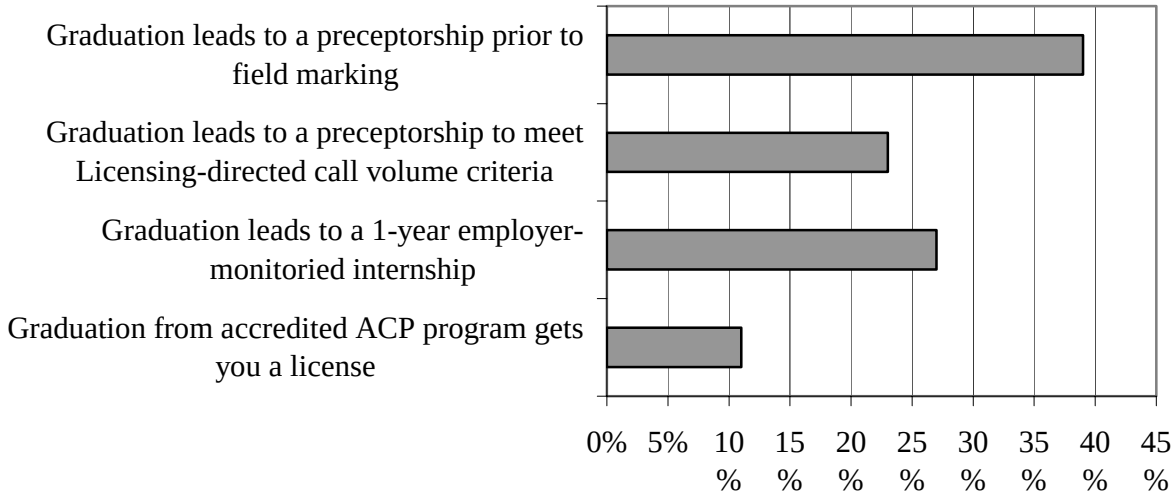
In order to explore the impression of the ACP community further, I evaluated responses by license level. Of particular interest, the current ACP respondents did not rate themselves as more open and receptive than others rated them. The current ACPs were more likely to rate themselves as protective of their high standards and only slightly less likely to rate themselves as showing little support for new learners. Distribution of responses by license level is shown in Table 12.

Table 12. *Impression of ACP Community by Respondent License Level*

Impression	FA/OFA/EMR n=33	EMA 1 n=10	P1 n=54	PCP n=225	EMA 2 n=204	ACP n=41
Open & receptive to new learners	15.2%	0.0%	7.4%	8.4%	4.9%	4.9%
Support depends on learners' capability	27.3%	60.0%	51.9%	40.9%	37.3%	39.0%
Very little support for new learners	6.1%	0.0%	9.3%	7.1%	6.4%	4.9%
"Old boys club"	30.3%	20.0%	25.9%	30.7%	33.8%	22.0%
Protective of their high standards	21.2%	20.0%	5.6%	12.9%	17.6%	29.3%

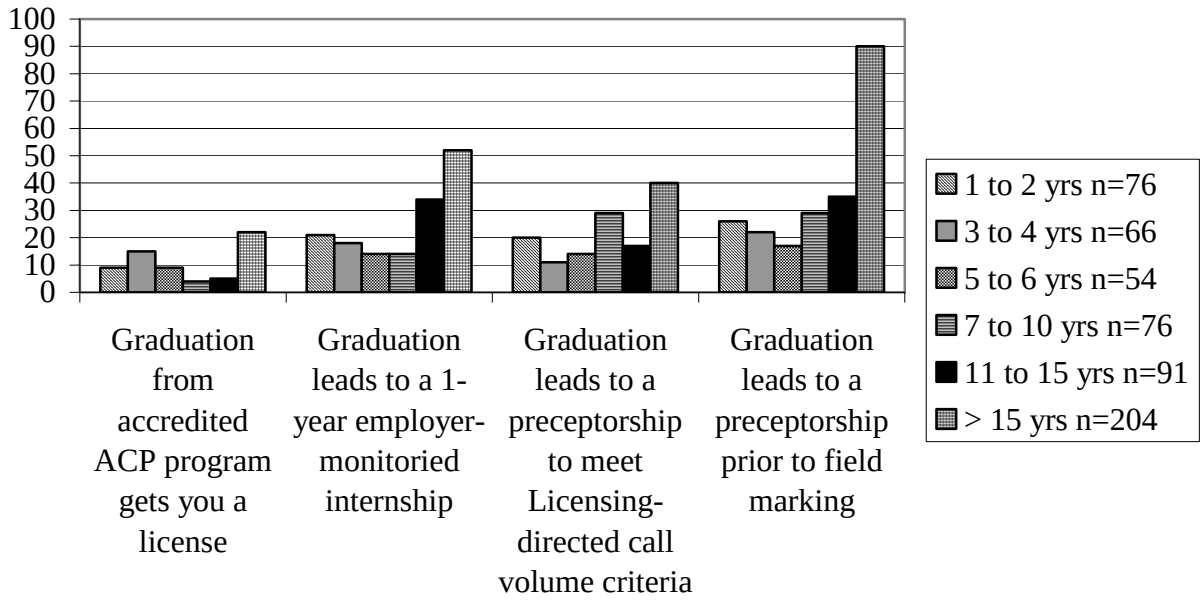
Question 17 asked respondents to select their ideal licensing process at the end of an ACP program from four choices. While focus group members, managers, and externally recruited ACPs have all denounced the current system of field marking, 39% of respondents chose that current system as their preferred licensing process. Only 11% chose the licensing process most common in other jurisdictions: graduation from an accredited ACP program. Preferred licensing processes identified by respondents are illustrated in Figure 17.

Figure 17. Preferred Licensing Process.



While preferences for different licensing processes varied by seniority, there was a marked increase in preference for field marking amongst respondents with more than 15 years of service, as shown in Figure 18.

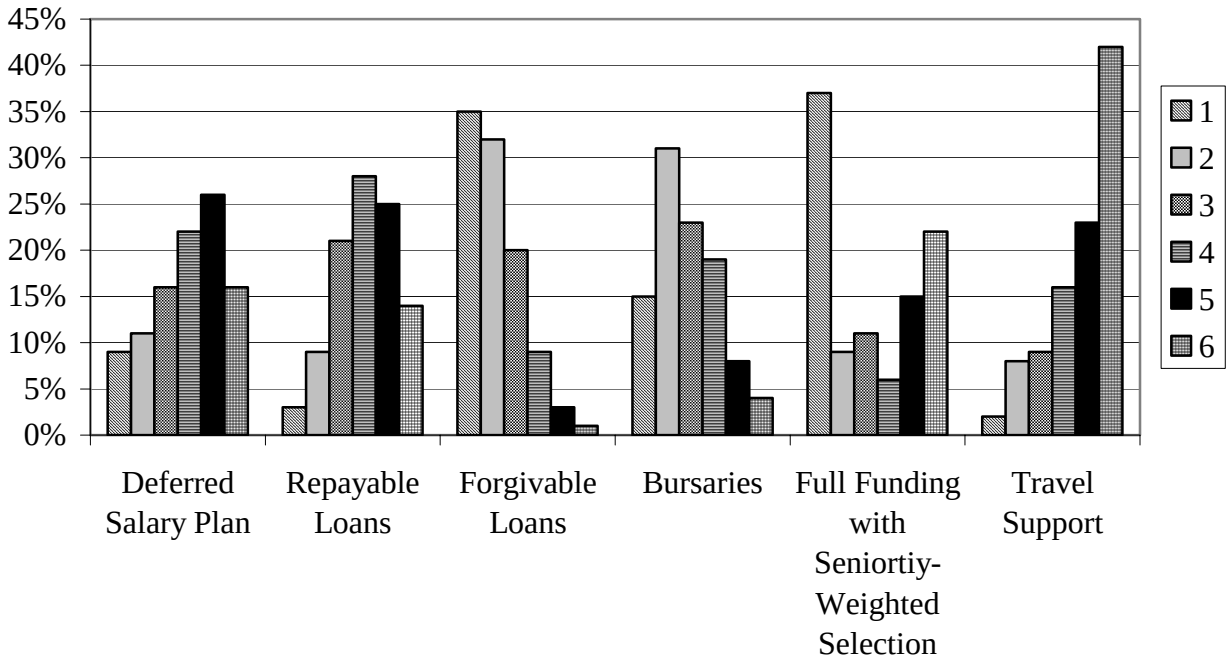
Figure 18. Preferred Licensing Process by Respondent Seniority.



With the exception of EMA1 respondents, preferences for licensing processes were relatively consistent across all license levels. The EMA1 discrepancy can be explained in part by their small numbers (10 respondents) and their lack of familiarity with licensing processes. By virtue of having EMA1 as their highest license, they have not had experience with upgrade training and licensing for at least eight years. The EMA1 program was replaced by the P1 program in 1998.

Question 18 asked respondents to rank six potential financial support options identified by the focus group. Since financial issues were determined by the focus group to be the most likely barriers to ACP training, and because they have the potential for great impact on the BCAS budget, I wanted to get an indication of where BCAS could get the greatest return on any potential investment. Ranking was used in this question in order to determine the support most likely to contribute to recruitment of ACP students within BCAS. The resulting data can be interpreted in many ways. The option of full funding with seniority-weighted selection was selected as the preferred option by 37% of respondents: more than any other option. Since this was the historical process of financial support, and the respondent population is skewed towards senior, full-time employees, this finding is not surprising. Ranking of the various options is shown in Figure 19.

Figure 19. Rank of Financial Support Options.



The ranking of full funding fell off sharply after the first place selections, and then gradually rose inversely with the rankings. Thus, it was not necessarily the most-preferred option amongst all respondents. Since ranking is a very subjective process, and the relative differences between rankings may vary from one choice to another, it is difficult to state unequivocally the preference for each option (Statistics Canada, 2003). To get a general sense of the most preferred options, I added the number of first and second place rankings for each factor. Using this method, forgivable loans was the preferred option. The next two places had identical totals, so I added the number of third place rankings to break the tie. Using this method, a program of bursaries was the second-most preferred option, with full funding third. At the lower end, I added the number of fifth and sixth place rankings. Travel support was the least-preferred option,

followed by a deferred salary plan. This left repayable loans as the fourth ranked option overall. The selected ranking and the interpreted ranks are shown in Table 13.

Table 13. *Respondent Rank and Interpreted Rank of Financial Support Options*

Financial Support Option	Interpreted Rank	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6
Deferred Salary Plan	5	9%	11%	16%	22%	26%	16%
Repayable Loans	4	3%	9%	21%	28%	25%	14%
Forgivable Loans	1	35%	32%	20%	9%	3%	1%
Bursaries	2	15%	31%	23%	19%	8%	4%
Full Funding with Seniority-Weighted Selection	3	37%	9%	11%	6%	15%	22%
Travel Support	6	2%	8%	9%	16%	23%	42%

In spite of this analysis, the fact that 37% chose full funding as their most-preferred option cannot be ignored. This will need to be considered as recommendations are developed.

Question 19 asked respondents how interested they were in six options of support for getting time to take ACP training: removing the existing cap on cumulative time off (CTO) bank; a deferred salary program; deferring holidays; removing the cap on switch shifts; changing to a part-time course delivery model; and changing to a distance, self-directed course delivery model. Level of interest was used in this question since most options could be done for little or no cost. Thus it was not as important to get the top one or two options: a range of options of interest to respondents was sufficient. Since some options applied only to full-time employees, respondents had the option of indicating that an option did not apply to them.

All options presented received support from respondents, and all could be considered as part of a comprehensive support plan. Respondents' interest in the time support options are summarized in Table 14.

Table 14. *Respondents' Interest in Time Support Options*

Time Support Option	1 Very Interested	2	3 Neutral	4	5 Not at all Interested	N/A
No Cap on CTO Bank	28%	10%	7%	3%	5%	47%
Deferred Salary Program	14%	16%	10%	6%	7%	47%
Deferred Holidays	16%	15%	10%	5%	7%	47%
No Cap on Switch Shifts	33%	19%	25%	6%	8%	9%
Change to P/T Course Delivery	40%	29%	14%	6%	6%	5%
Change to Distance Self-Directed Course	33%	22%	17%	7%	15%	6%

Another view of the level of interest in time support options can be gained by removing the responses of those who indicated that the option did not apply to them. From this perspective, the level of interest in removing the cap on CTO, for example, increases from 28% of all respondents to 53% of all applicable respondents. The dual perspective will assist in evaluating targeted support, such as those options for full-time paramedics, while maintaining a big picture view of the impact an option might have on internal ACP recruitment. Respondents' levels of interest in time options that applied to them are detailed in Table 15.

Table 15. *Respondents' Level of Interest in Time Support Options*

Time Support Option	1 Very Interested	2	3 Neutral	4	5 Not at all Interested
No Cap on CTO Bank	53%	19%	14%	5%	9%
Deferred Salary Program	27%	30%	19%	11%	13%
Deferred Holidays	31%	28%	20%	9%	13%
No Cap on Switch Shifts	36%	21%	27%	6%	9%
Change to P/T Course Delivery	42%	30%	15%	6%	6%
Change to Distance Self-Directed Course	35%	24%	18%	7%	16%

Question 20 asked respondents to indicate their level of interest in four options for changes to the ACP training delivery: changing to a distance, self-directed course; changing course location; splitting the program into blocks with the ability to practice at that level between blocks; and having a choice of training agency. There was significant interest (63%) in splitting the program into distinct blocks with the ability to practice at that level between blocks. Choice of training agency also received a high level of interest, with these results reflecting and validating the results of question eight. Not surprisingly, support for a distance program and a change in course location was higher in respondents from Northern BC, with 64.7% of those respondents being very interested in the two options. Level of interest in course delivery options is shown in Table 16.

Table 16. *Respondents' Level of Interest in Course Delivery Options*

Course Delivery Option	1 Very Interested	2	3 Neutral	4	5 Not at all Interested
Change to distance, self-directed course	36%	22%	18%	10%	14%
Change in location for easier access	36%	26%	22%	10%	6%
Split program into blocks (practice between)	63%	25%	8%	2%	2%
Choice of training agency	49%	19%	21%	8%	3%

Respondent Comments

At the end of the survey, respondents were invited to include up to 250 words of additional comments on the topic of recruiting ACPs from the current PCPs. Two hundred and thirty respondents submitted comments. Comments were analyzed deductively, using the framework developed by the focus group. Emerging topics were added to the framework, with the frequency of each topic recorded (see Appendix E).

The most frequent comments asked for a different training agency, or at least a choice of training agencies. This is congruent with the responses to questions eight, ten, and twenty. Many of the comments were particularly negative about the current training agency. One positive comment was made about the current training agency.

The second most frequent comments expanded on the focus group suggestion of distinct training blocks separated by opportunities to work. Thirty-five respondents mentioned an extended mentoring or precepting process, with many referring to an apprenticeship program.

The third most frequent comments expounded on negative experiences with instructors and preceptors, either directly as a student, or indirectly as an observer of other students. The 29 negative comments were in contrast to the three positive comments made about instructors and preceptors.

Loss of income was mentioned by 26 respondents. This is in contrast to the high number of respondents citing loss of income as their most significant financial consideration in question five. It is possible that respondents felt they had already made their point about wage loss and their focus in this section shifted to areas not already addressed.

Twenty respondents indicated that the entry criteria for ACP training needed to be more stringent, particularly in the area of experience. This was in contrast to the eight respondents who stated that the entry criteria needed to be less stringent, particularly in the area of experience. The latter comments included comparison to medical school entrance criteria. This is the paradox of ACP training in British Columbia: current entry criteria and respondent beliefs demand significant experience prior to entering a training program; while other medical training such as nursing, medical school, and other allied health training do not require specific experience prior to entering a training program.

Nineteen respondents commented on difficulties moving to one of the current ALS communities, with many of those commenting on the inadequacies of providing ALS services only in those select communities.

Eighteen respondents mentioned the cost of tuition as a negative aspect of ACP training. This is consistent with the answers to questions four, five, and nine in the survey.

Twelve respondents mentioned the loss of full employer funding for ACP training, or stated a desire to return to full funding. This was surprising, given that full funding was the mode

when respondents ranked financial support options. Full funding was also in the top three overall in calculated financial support options using the method described for question 18 above.

Field marking elicited 11 negative comments: some from personal experience and some from observation of others. There were no positive comments about the field marking process in spite of the fact that it was the preferred licensing process of 39 % of respondents.

Other aspects of ACP training and recruitment received fewer than ten comments each. The Appendix details all comments made, categorized by focus group framework criteria or researcher-generated criteria.

Study Conclusions

Potential ACP Candidates

Almost one third of respondents were full-time paramedics from the Lower Mainland, 169 of whom were interested or very interested in ACP training. The largest number of potential internal ACP training candidates are from the Lower Mainland. This does not mean that recruitment efforts should be targeted solely to that region. There have traditionally been difficulties getting ACP employees to transfer to Northern BC, and some areas in the Interior region and Vancouver Island have recently had difficulty filling ACP vacancies through the transfer process. The answer to filling ACP vacancies in those regions may be to train existing employees who have already chosen to live there. The challenge for BCAS will be to address the issues and needs of the full-time paramedics from the Lower Mainland without ignoring the needs of other key target groups.

Significantly, 73% of respondents stated that they were either married or in a long-term co-habiting relationship. The mobility of the respondents for ACP training and to take an ACP

position is impacted by the mobility of their partners, further emphasizing the importance of course and job location.

A total of 384 people were either *interested* or *very interested* in ACP training. This number is somewhat concerning, given that in the general BCAS population, 54.2% of those eligible to enter an ACP program are over the age of 45 (BCAS, 2006a). If this respondent group were representative of the BCAS population, approximately 208 of the interested respondents would be over 45, and 176 interested respondents would be under 45. If this is accurate, there is a small group of people for BCAS to try to get into an ACP program. Those over 45 may still be interested, but will provide a limited return on investment for both the employer and the employee, given the time remaining before their potential retirement age of 55.

BCAS will want to focus on potential ACP students who will provide a return on investment for both the employer and the employee by providing service for a number of years after completing training. Using a potential retirement age of 55, a 45-year-old ACP student would provide nine years of service after completing ACP training. If the 384 respondents who were interested or very interested in ACP training are representative of the general BCAS paramedic population, only 176 would be under the age of 45. Using seniority as a proxy for age, there were 215 interested or very interested respondents with less than ten years of service, increasing the number of potential ACP students who might provide a significant return on a training investment.

Although the survey population represented only 17% of all BCAS paramedics, the survey would have a significant selection bias towards those interested in ACP training (Beins 2004; Palys, 2003). The intention of this study is not to calculate exact numbers of potential ACP students: The intention is to gather overall impressions and generate potential internal recruiting

strategies. Thus the numbers of interested or very interested respondents under the age of 45 give an idea of the low number of potential ACP training candidates within BCAS. When selection criteria are applied to the already low numbers, the magnitude of the recruiting challenge becomes evident: BCAS will need to have an effective internal recruitment strategy in order to maximize the portion of potential candidates who are successfully recruited to ACP training.

Finances

Financial considerations were *very important* to 76% or respondents and *important* to another 17%. This finding is congruent with other authors' reports (Arthur & Tait, 2004; Baran, Berube, Roy, & Salmon, 2000; Fairchild, 2003; Ward & Wood, 2000; Webb, 2001). Against that backdrop of importance, loss of income was the most important financial consideration for 71% of respondents and second-most important to another 22%. Loss of income was also deemed to be prohibitive or just below prohibitive by a total of 77% of respondents. Time and ability to earn a living while participating in training was the most important time consideration. Loss of income was mention by 26 respondents in the open-ended questions, many citing the prohibitive nature of the issue. Finally, time away from family was cited as the primary family-related consideration and this would presumably be exacerbated by any effort to address financial issues by trying to work while participating in ACP training. Clearly the most successful recruitment strategies will need to address the income issue to some degree.

ACP training in BCAS has historically used an employer-funded model with full wages throughout the training process. A return to this system was cited as the preferred option by 37% of respondents, and supported by 12 responses to the open-ended question. After estimating overall importance by adding the number of top-two selections, the full-funding model fell to third place out of five financial support options. Forgivable loans had the greatest number of top-

two selections, followed by bursaries. This presents a range of options for BCAS to consider in order to address the primary financial issue facing potential ACP candidates, similar to the range of funding strategies used by other EMS systems across Canada.

Culture

The BCAS culture is not seen as supportive of new ACP students. The culture was described as *minimally supportive* by 43% of respondents and only *somewhat supportive* by another 39%. There were 29 negative comments regarding experiences with instructors and preceptors in the open-ended question responses. This was the third most common area of comments and is indicative of one area of concern within the BCAS culture. A further nine comments were made about the lack of support from current ACPs. To enhance recruitment and subsequent chances for success in ACP training, BCAS needs to move towards a culture that could be described as *very supportive*. Only 4% of respondents used that description to describe the current BCAS culture. Only 7% of respondents described the current ACPs as *open and receptive*. Addressing these cultural barriers will take considerable effort.

Full employer-funded training is a significant part of the BCAS history and has become imbedded in the paramedic culture. Purvis and Copley (2003) found a similar exchange relationship between nurses and their employers: A career development culture is expected as part of the exchange for services. While the move to self-funded training has been on the management agenda for some time, it is a relatively new change for BCAS paramedics. There has been no effort to address the cultural impacts of such a significant change. The fact that 37% of respondents cited a return to full funding as their preferred model of financial support cannot be ignored. Of the twelve open-ended responses, many cited a fully funded model, including

wages, as the only option for them to take ACP training. If the employer-funded model is to be eliminated, the cultural impact of that decision will need to be addressed.

Licensing

The focus group and 11 open-ended question respondents have described the experience of field marking in a very negative way. There were a further 29 negative comments about personal or observed experiences with instructors and preceptors. This description of the lived experience of recent ACP students stands in contrast to the 39% of respondents who selected the current field marking process as their preferred method for getting an ACP license. This incongruence between the lived experience of those going through the process and those observing the process will need to be addressed. The preference for the current process was most pronounced in the group of respondents with greater than 15 years of service and may represent another cultural artifact that has not been addressed.

Countering the preference for a field marking process, Lower Mainland respondents, who are most likely to have experienced or seen the process, did not have favourable impressions of field marking: 34.4% rated field marking as *poor* and another 22.8% rated field marking as *fair*. The actual experience of those who have been through the process is what will have the greatest impact on the recruiting potential for ACP students. While interested observers may indicate a preference for one process, those who are actively considering ACP trianing will be influenced more readily by the comments of those who have recently lived or observed the experience. Thus, the field marking process will need to be addressed in any successful internal recruitment strategy. At the same time, changing the licensing process without addressing the beliefs of paramedics may give the perception that standards are compromised in order to get more people through at the expense of patient care.

Training

The training agency was the main training concern of respondents with 50% ranking the agency as *poor*. This rose to 64.7% of respondents from the Lower Mainland. This is significant given the large number of respondents from the Lower Mainland and their more frequent contact with ACP students going through training at that agency. The largest group of potential targets for recruitment, and those with the greatest opportunity to observe, must have their perceptions addressed.

The poor rankings were supported by 44 negative comments and another 29 negative comments about instructors and preceptors.

The negative impression of the training agency worsened with increasing seniority of respondents, indicating there may be some historical issues that have not been addressed in the minds of respondents. This notion is supported by positive comments made about the agency during the focus group session. Thus, while not dismissing the fact that there may be quality issues for the agency to address, much of the problem may be historical image issues that need to be addressed.

All options for time support received significant interest from respondents. This included the options of part-time and distance training. Other authors have identified part-time training programs as preferred options for adult learners (Fairchild, 2003; Hastie & Clark, 2004). Additionally, 63% of survey respondents were very interested in splitting the ACP program into distinct blocks with the capability of practicing at that level between blocks. In the absence of full employer funding, including wages, these preferred changes to the training process present a range of options to explore to increase the potential to recruit ACP students.

Thirty-five responses to the open-ended question advocated expanded mentoring and precepting processes, with many mentioning an apprentice style of program. This was the second most frequent topic of respondent comments. Hardy and Smith (2001) detailed a healthcare employee development process that may inform recommendations in this regard.

When respondents ranked factors to consider for entrance to an ACP program, experience was ranked second: behind only the capacity to learn. Twenty comments stated the need to increase the experience of ACP students, with eight comments stating the need to relax experience requirements. A move to an extended training program with the ability to practice at transitional levels could satisfy the desire for more experience, as significant experience would be gained by the end of the program. It could also satisfy the desire for less experience at the entry point, since experience would be gained throughout the training program. With appropriate licensing, ACP students could practice on regular duty units to anchor their training, increase the operational capacity of BCAS, and address some of the income issues of the ACP students.

Recommendations for action will be based on combinations of these conclusions, in order to maximize the potential for successfully recruiting ACP students from the current PCPs.

Scope and Limitations of the Research

This study gathered information exclusively from BCAS employees, and was therefore influenced by the culture of BCAS. Cultural influences within BCAS include the long history of employer-funded ACP training, historical interactions with the training agency, and the power of the union within the BCAS workforce. Additionally, BCAS is a provincial organization: a unique model within emergency medical services (EMS). While the conclusions and subsequent recommendations may inform other EMS agencies, blind application of the findings to other services is discouraged.

Stringer (1999) states that the goal of action research is not to produce generalizable knowledge: rather, it is “to build collaboratively constructed descriptions and interpretations of events that enable groups of people to formulate mutually acceptable solutions to their problems” (p. 188). Berg (2004), on the other hand, states that case studies such as this have scientific value, given the predictability of human behaviour. This study should be taken in a combination of the contexts offered by Stringer (1999) and Berg (2004): Some findings are based on predictable human behaviour, and others are based on the specific situation of BCAS employees.

CHAPTER FIVE: RESEARCH IMPLICATIONS

Study Recommendations

Action research is intended to investigate and resolve specific problems (Stringer, 1999). Recommendations for action will be presented, with supporting findings from the study and relevant literature. The implications for implementing the recommendations within BCAS will be discussed. Finally, areas for future exploration will be presented.

Recommendations Regarding Potential Candidates

Only 384 respondents were either interested or very interested in ACP training. Given the selection bias in the survey, this may be an accurate order of magnitude of the interest in ACP training. The selection process for ACP training will further reduce the number of potential ACP candidates. The challenge for BCAS is to increase the level of interest in ACP training and to facilitate every step in the process from selection to licensing to maximize uptake from the limited pool of candidates.

Recommendation One

To increase the level of interest in ACP training in Northern BC, the Interior, and Vancouver Island, BCAS should work with the training agency to increase access to training. This may be through a combination of distance learning; part-time programs; and course delivery in these areas, even if this necessitates a longer training program.

Twenty-five percent of respondents were from the Interior, 21% from Vancouver Island, and nine percent were from Northern BC. Location of training was a significant barrier to these respondents. Additionally, Finegold et al. (2002) state that developing existing employees has the advantage of knowing there is a fit between the organization and the employee. In this case,

BCAS would not only increase the pool of potential ACP candidates, they would know that the candidates already fit in the geographic area.

The current location of training is, in part, based on the belief that the Lower Mainland is the best setting in which to get timely access to patients and other training opportunities. While the Lower Mainland is a convenient location from the training agency's perspective, other authors suggest that the training location can be changed to suit student needs. The length of training may need to be extended to account for number of patient contacts (Grubbs, 1997) or the quantity of patient assessments and procedures (Pointer, 2001; Walz, 2002)

Recommendation Two

To increase the level of interest in ACP training in the Lower Mainland, BCAS should address the financial issues and work with the training agency to address that organization's reputation amongst crews.

Almost one third of respondents, and 44% of interested or very interested respondents were full-time paramedics from the Lower Mainland. This represents the largest pool of potential candidates, and they are already located in the region with the greatest financial challenges for paramedic relocation. The needs of this group must be addressed in order to create a sustainable flow of ACP candidates.

Recommendation Three

To address the low overall number of potential ACP candidates, BCAS should do all that is possible to make ACP training attractive, remove potential barriers, and increase the level of discussion of this important issue.

Efforts in employee development will make the organization more appealing to potential external hires (Benders & van de Looji, 1994), and to those internal employees considering ACP training.

Recommendations Regarding Financial Issues

Financial issues were the primary impediment to ACP training for the survey respondents. With the low overall numbers, the stated importance of financial issues, and the looming demand for ACP practitioners, BCAS must realize that enhancing internal ACP recruitment requires a commitment to addressing financial concerns. Financial considerations are important to most adult learners (Arthur & Tait, 2004; Baran et al., 2000; Fairchild, 2003; Ward & Wood, 2000; Webb, 2001). Baran et al. (2000) cite perceived return on investment as a key factor in the apparent magnitude of barriers to adult education. To minimize the financial impact of ACP training on potential candidates, BCAS should develop an array of incentives and mitigation strategies to enable ACP candidates to select the mix that fits for them. This should include strategies to maintain income, maximize earning potential, and minimize student expenses.

Recommendation Four

To maintain income for ACP candidates, BCAS should compile a package that would make it possible for a student to maintain their current income through their entire training program.

Training delivery changes can make more of the ACP program available on a part-time, distance basis, so ACP candidates can complete the training while still working. When face-to-face training in the classroom or hospital is absolutely necessary, ACP candidates will need a variety of options to support their income: current holidays, holidays deferred from previous

years, an unlimited cumulative time off bank, an enhanced capacity for switch shifts, salary deferral from previous years, or a credit against future salary increases. The use of two-person training units, instead of three-person units with a supernumerary student, will enhance BCAS' response capacity while keeping the student as paid, contributing employees. These financial measures will take considerable effort to implement, as discussed in the implications section. Successful implementation will make ACP training financially viable for students, with minimal cost to the employer. This is close to being the full employer-funded model preferred by 37% of survey respondents, yet with minimal cost to the employer.

Recommendation Five

To minimize the financial outlay required by ACP candidates, BCAS should establish a program of forgivable loans to cover tuition and textbooks.

Forgivable loans were one of the preferred strategies identified in the survey, and the focus group identified tuition and textbooks as an appropriate application. For the $10,000 involved, a five-year term of employment after full licensing would be an appropriate repayment, with a requirement to pay a pro-rated amount should the employee wish to terminate their employment with BCAS prior to five years.

Recommendations Regarding Organizational Culture

A number of the issues identified in the survey stem from a failure to address the cultural implications of changes in ACP training. Specific changes can be tackled in the larger context of organizational culture and change.

Recommendation Six

To successfully change the ACP training process, BCAS must address the changes in funding processes directly, with open dialogue, recognizing that this may be an uncomfortable process.

Schein (1999) asserts that changing culture involves unlearning one way of being before a new way can be accepted. He posits that some threat or crisis must be apparent and widely understood to prompt the unlearning process. BCAS managers must initiate discussion about the financial implications of the previous ACP training process, the rationale for change in the context of overall sustainability of BCAS, the benefits of increased employee control of their career progression, and the efforts made to minimize the financial impact on ACP candidates. The employees' interests in career development, one component of the exchange relationship with the employer, must be kept as an underlying premise in these discussions (Conger, 2002; Purvis & Copley, 2003).

The previous, unilateral change in direction vis-à-vis ACP training has left a communication and expectation gap that will take considerable effort to bridge. This will take substantial effort at all levels in the organization and will be dependent on articulating a clear vision and path for all to follow.

Recommendation Seven

To navigate the required cultural changes, BCAS must articulate a clear and constant vision of the future of ACP training, and communicate that vision repeatedly and consistently.

Regular and repeated communication, clearly articulating the organization's vision and plan for the future is required to initiate and sustain significant change initiatives (Bridges, 2003; Kotter, 1996; Mercurio, 2005; Schein, 1999). The communication may seem repetitive to

managers who have already changed their perspectives on ACP training but, for paramedics, the repetition and consistency is required to initiate unlearning of old processes, and to facilitate learning and believing in the new processes. For successful implementation of the new processes within the organization, Webb (2001) suggests a clear statement of what level of support is available to employees. This clarifies expectations for employees, and establishes the requirement for managers at all levels to facilitate access to support for all interested employees.

Recommendations Regarding Licensing

Field marking is perceived by those who have lived the process and those who have observed it, as a negative practice and a barrier to taking ACP training. Changes are needed to remove this perceived barrier. Other licensing steps will be required to support recommended changes in the ACP training process.

Recommendation Eight

To eliminate the negative aspects of field marking, BCAS should work with the Emergency Medical Assistants Licensing Board (EMALB) to replace field marking with a formal, employer-monitored orientation process for ACP graduates.

Field marking was rated as poor by 34.4% of Lower Mainland survey respondents and another 22.8% rated filed marking as only fair. These respondents are the ones who have either experienced or directly observed the process, since it is rare for field marking to occur in other regions.

The magnitude of this recommendation should not be underestimated. Changing the licensing process for paramedics has implications in legislation, public safety, service provision, and organizational culture. A significant, considered effort will be required to make the necessary changes.

Recommendation Nine

To support other recommended actions, BCAS should work with the EMALB to develop rules, processes, and licensing protection for two-person training units; and distinct licensing categories to allow students to practice at the completion of each block of training.

Training is currently done on three-person units, with the student supernumerary to the core staffing of the unit. This allows the student to be supervised at all times. Two-person units would increase the operational capacity of BCAS by either adding dedicated training units, or redistributing staff to reduce the amount of overtime paid or the number of part-time staff required on a given shift. For the student, two-person units would allow continued income during training. Since most advanced life support calls involve the dispatching of two ambulances, the option of having both student and preceptor in the back of the ambulance would be available when the patient's needs exceeded the current license of the student. One paramedic from the second responding ambulance could drive the student, preceptor, and patient to hospital. Progressive increases in licensing would gradually reduce the need to have the preceptor directly supervise care enroute to hospital. The graduated licensing process would also allow the student to practice independently at the various levels if a preceptor were not available, or if the student required an interruption in the training process for other reasons.

Recommendations Regarding Training

The survey results clearly showed an image problem for the training agency. Aside from advising the agency, actions in this regard are outside the scope of this project. With relatively low student enrollment, an ACP course would be difficult for other agencies to develop and deliver on a sustainable basis. The focus of this project will therefore be based on working with

the current sole provider of ACP training in BC to make training more appealing to potential students.

Recommendation Ten

To make training more accessible, BCAS should work with the training agency to make available part-time and distance training options for ACP courses.

Part-time training is an option preferred by many adult learners (Fairchild, 2003; Clark, 2004), and was supported by 72% of survey respondents. Internet-based training, incorporating case studies, discussions, and reflective journals can be successful for components of ACP training (Jones & Cookson, 2001), particularly when combined with clinical opportunities under the direction of a mentor or preceptor (Jones & Cookson, 2001; McDonnel & Edwards, 2000). Those clinical opportunities are available around the province, albeit not with the same frequency as in the more populated Lower Mainland.

Recommendation Eleven

To facilitate ACP students' ability to earn an income and to maximize operational capacity, BCAS should work with the training agency and the EMALB to split ACP training into distinct blocks with the capacity to practice at the achieved levels between blocks and while working on subsequent training blocks.

Graduated licensing would offer the benefits detailed for recommendation nine. The distinct blocks would allow students to earn a living while working as an operational paramedic on a two-person training car. Having the capacity to practice at intermediate levels would allow the student to take breaks from the training if required. If any of these benefits extend the training process, the delay may in fact help the student integrate their learning (Grubbs, 1997).

Recommendation Twelve

To make ACP training a positive and effective process, BCAS should work with the training agency to develop preceptors and mentors. Recognizing the important role these people play, they should be given adequate paid time at shift change and between calls to work with their students and to manage the learning process.

With two-person training units, the BCAS operational ACP capacity could be increased. This extra capacity should be directed towards allowing time for proper learning.

Hardy and Smith (2001) found preceptor development and proper matching of preceptors to students to be key components of a successful development process. Other authors have identified the important role that preceptors or mentors play in the development of ACP candidates (Jones & Cookson, 2001; McDonald & Edwards, 2000). The selection, training and remuneration of preceptors should be commensurate with the role they play. The current instructor pay of $375 per month (12th Agreement, 2001) appears inadequate to recruit and retain people with the desired aptitude and attitude for the role. Precepting ACP students should be a respected and sought-after role.

Organizational Implications

BCAS has an existing and worsening shortage of ACP practitioners. The recommendations above are part of an overall strategy to enhance recruitment of ACP candidates from the current PCPs. This section will give an overview of general implementation strategies.

Key stakeholders will need to be engaged to assist with implementing the recommendations. The training agency has already been identified as a stakeholder with specific items to support. The Ambulance Paramedics of BC Bargaining Unit (APBCBU) will be a

crucial party to successful ACP recruitment strategies. The EMALB will also play an important role in removing obstacles and facilitating process changes.

BCAS and the APBCBU will need frank discussions around the changes required to decrease the financial impact of ACP training on potential students, and means of supporting changes in training, licensing, and organizational culture. In the absence of contract negotiations, the Provincial Joint Labour-Management Committee is the venue for such dialogue (MOA, 2004).

To decrease the financial burden for ACP students, BCAS and the APBCBU must agree to change the policy limiting switch shifts to twelve per year (BCAS, n.d.). The administrative procedures for cumulative time off in lieu of overtime must be changed to allow contribution to an educational time bank for credits in excess of the current eight-shift maximum (12th Agreement, 2001). The definition of payment for unused holiday time at the end of the year (12th Agreement, 2001) should be modified to include payment to an educational bank for an effective deferral of holidays until they are required for training. For those who are interested in full-time training, the Deferred Salary Leave Program (British Columbia Public Service Agency, n.d.) should be publicized and any administrative requirements discussed.

The APBCBU has a stake in the success of BCAS, including the successful recruitment and development of ACP students. This joint interest should be leveraged to emphasize the important role of mentoring and precepting all developing paramedics. A joint initiative, supported through the grassroots by the union, and through financial and time allocations by management, could successfully change the culture of BCAS. The current situation was described negatively in the survey and is a deterrent to potential ACP candidates. Hardy and Smith (2001) successfully changed the culture of a healthcare institution using an inclusive team

approach to staff development when faced with a pressing staffing need similar to the one BCAS faces.

The EMALB is charged with protecting public safety by ensuring competent paramedics are licensed to practice. In times of a developing profession, plentiful paramedics and sufficient training resources, the EMALB fulfilled their mandate through rigorous examination processes. With the maturing of EMS, looming shortages of paramedics, and limited training resources, maintaining the same approach may have the net effect of risking public safety by contributing to the shortage of paramedics, particularly at the ACP level. The EMALB must be engaged to discuss their role in facilitating ACP development and licensing.

Field marking is a clear starting point for change. The negative comments received about the process from those who have experienced and observed it cannot be ignored. Other jurisdictions in Canada use the examination criteria of the accredited training agency as sufficient proof of competence for licensing. The employer is then charged with orienting the new ACP and providing a safe, monitored environment in which the newly licensed ACP gains experience and develops. If specific assurances are required, such as conditions on new licenses and progress reporting, these can be developed through a collaborative process. This mature approach would remove one perceived barrier to ACP recruitment.

Graduated licensing during training has been discussed in the recommendations and would required EMALB cooperation.

BCAS, the training agency, the APBCBU, and the EMALB are all stakeholders in successful ACP recruitment strategies. Kouzes and Posner (2002) assert that the key to getting buy-in from others is to give them a sense of ownership and a sense of choice in the process. This can be accomplished by engaging all parties in open dialogue to develop a shared vision for

the future of ACP recruitment and training. From that base, the respective tasks can be undertaken.

Previous experiences with change initiatives within BCAS have emphasized the need to empower one person to lead the change effort. Manion (2005) describes empowerment as a sequential process of assessing the individual's capability for the role; assigning responsibility and having responsibility accepted; agreeing on a level of authority; and maintaining accountability through a review of decisions and actions. A planned empowerment process, with sufficient dedicated time, will enhance the likelihood of succeeding with the recommended changes.

Implications for Future Research

Research does not occur in a vacuum: it is informed by previous work, impacts current activities and unearths questions for future study. This study has both exposed unanswered questions and suggested process changes that will themselves need to be investigated.

Bailey et al. (1989) posited training efficiencies through shared instruction amongst multiple organizations. Future research should investigate courses that could be common to other healthcare professions that might offer relevant knowledge for ACPs with cost efficiencies when compared to ACP-specific courses. This would require investigation of content, process, and cultural implications.

This study addressed issues from a BCAS perspective. As BCAS changes recruiting and training processes, a more extensive evaluation of practices in other EMS agencies would be informative.

The recommended changes will themselves benefit from further study. While the overall success of the strategies would be an interesting follow-up, specific changes should be studied in detail for efficacy and safety.

The effectiveness of different education methods should be assessed and compared to the current baseline. Distance and online education, part-time training, varied locations, and extended training programs should all be evaluated as they are implemented to validate their potential and to look for further refinements.

Two-person training units have implications not only for the students and preceptors, but also for the patients they see and the system in which they operate. Future research should assess patient treatment efficacy, operational impacts, student success rates, and preceptor satisfaction.

Eliminating field marking may require future study to assess the impacts of the change and to verify or refute the safety of ACP graduates and their practice.

The inquisitive pursuit of further knowledge will validate or modify the recommendations of this study and will no doubt lead to other unanswered questions and proposed changes requiring further investigation.

CHAPTER SIX: LESSONS LEARNED

Research offers the chance to look not only at the findings and recommendations, but also at the process itself for additional learning opportunities. This study offered lessons in conduct of the research and in leading organizational change.

Conduct of the Research

Focus groups present the challenge of coordinating individual schedules and accounting for the unexpected, while concurrently trying to minimize cost and inconvenience. Flexibility was key to completing the focus group tasks in a credible manner.

There was a mechanical issue with the aircraft used by one participant and it was uncertain whether or not he would be able to make the first focus group session. While plans were made for teleconference participation, he got a flight and attended the meeting only a few minutes late. This necessitated a brief recap of introductions and a restatement of process with opportunity for input and further discussion.

A second focus group member was injured in the days prior to the session and was unable to attend in person. Telephone participation was used to get input, but some degree of participation was likely lost without the ability to strengthen trusting relationships with the group through face-to-face interaction and through sharing a meal.

The second focus group session was intended to validate the data analysis and interpretation. Only one half of the focus group was able to participate in the teleconference, for a variety of reasons. Discussion with the participants lead to a determination that the social construction of knowledge was sufficiently important to the validity of the interpretation that individual comments on the data would only be included if they raised a significant issue that

had not already been identified. I telephoned the other three individuals and no new interpretations were identified.

The survey presented another learning opportunity. When I saw the small number of respondents likely to register for ACP training, I wanted to look at the ages of the respondents and to compare them with the ages of the general BCAS population. I realized that I had not directly asked for respondents' age. My intention to minimize the apparent intrusiveness of what I thought might be a sensitive survey lead to a gap in the data.

Leading Organizational Change

I anticipated that the survey topic would be emotional for many people within BCAS. What I had not anticipated was the vitriol that would be directed at the researcher and the organization. Profane comments in survey responses and accusatory emails came as a surprise. Fortunately, these negative incidents were significantly outnumbered by positive comments and emails.

As the project began, I had the opportunity to apply for and obtain a significant promotion within BCAS. This did not appear to impact my effectiveness as a researcher, but taking on a challenging learning curve in my work life at the same time as the challenge of this project created additional pressure. At times, this required compromises. While the compromise was frequently related to sleep or personal time, it would be naive to believe that neither work nor this project suffered. I have made every effort to minimize the impact of the concurrent challenges.

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APPENDIX A – INVITATION TO FOCUS GROUP

From: Fisher, Les M HLTH:EX
Sent: Wed 2/15/2006 6:13 PM
To: hlth BCAS All Staff
Cc:
Subject: Research regarding internal ACP recruitment

My name is Les Fisher and this research project is part of the requirement for the degree of Master of Arts in Leadership and Training. My credentials with Royal Roads University can be established by contacting the project supervisor, Dr. Tony Williams at (250) 391-2600 local 4145. Although I hold the position of Director, Provincial Operations for the British Columbia Ambulance Service (BCAS), my role in this research project is solely as a student of Royal Roads University. My role within BCAS does not imply that BCAS will support the recommendations of this research project.

The title of the project is Meeting the Advanced Care Paramedic Demand in the British Columbia Ambulance Service. The purpose is to gather information to determine effective and efficient strategies that the BCAS can use to recruit and retain Advanced Care Paramedics (ACP) from the current Primary Care Paramedics. All Primary Care Paramedics will be invited to participate in a survey. The variables that will be assessed in the survey will be determined by a focus group. The focus group will also assist in validating my interpretation of the survey data.

Involvement in the focus group will involve one full day for an initial session, along with pre-reading preparation time. That session will be held prior to March 15, 2006. A second focus group session will be either a half-day session, or a teleconference. The second session will be held between May 15, 2006 and May 31, 2006

I am looking for a focus group that will achieve participation of all potential participant groups. An analysis of BCAS demographics indicates that members need to be selected from each of the four geographic regions of BCAS, both sexes, different age groups, those with families, and those without. If you are interested in participating in the focus group, please send an email to XXXXXXXXXXX. In the email, please indicate your name, current station, license level, age, marital status, and family status. All information will be kept in confidence and will be stored on a password-protected computer.

You are not compelled to take part in this project. Similarly if employees or other individuals elect not to take part in this research project, this information will also be maintained in confidence. If you do elect to take part, you are free to withdraw at any time with no prejudice.

I look forward to hearing from you.

Les Fisher

APPENDIX B – INVITATION TO SURVEY

From: Fisher, Les M HLTH:EX
Sent: Sat 4/8/2006 8:34 PM
To: hlth BCAS All Staff
Cc: Tony Williams (E-mail)
Subject: Survey Regarding Recruitment of ACP Students

UNIT CHIEFS PLEASE PRINT AND POST AT STATION

Survey Regarding Recruitment of ACP Students

At the bottom of this note is a link to a survey designed to solicit your input on the topic of recruiting Advanced Care Paramedic students from the current Primary Care Paramedics in the British Columbia Ambulance Service.

My name is Les Fisher and this research project is part of the requirement for the degree of Master of Arts in Leadership and Training. My credentials with Royal Roads University can be established by contacting the project supervisor, Dr. Tony Williams at (250) 391-2600 local 4145. Although I hold the position of Executive Director, Provincial Programs for the British Columbia Ambulance Service (BCAS), my role in this research project is solely as a student of Royal Roads University. My role within BCAS does not imply that BCAS will support the recommendations of this research project.

As a paramedic in BCAS, you no doubt have opinions that can inform this research project. I am asking you to share those opinions with me in an anonymous way. As a token of my appreciation, at the end of the survey you will be asked to submit your email address to be entered in a draw for a one-year subscription to the Journal of Emergency Medical Services. This part of the survey is optional. The email addresses gathered will only be used for the draw. They will not be used to link to other responses, and will be destroyed after the draw.

The survey closes Sunday, April 23 at 1800 hrs. Please visit the survey as soon as you can and be sure to spread the word amongst your peers. The survey can be accessed at:

<http://www.zoomerang.com/survey.zgi?p=WEB2257J6UQ3CZ>

Thank you, in advance for participating in this survey. Your input is important.

Les Fisher

APPENDIX C – SURVEY QUESTIONS

Note that the format of the survey has been changed from the Zoomerang layout, but the content is identical.

1. Please bear with this lengthy introduction and consent:

My name is Les Fisher and this research project is part of the requirement for the degree of Master of Arts in Leadership and Training. My credentials with Royal Roads University can be established by contacting the project supervisor, Dr. Tony Williams at (250) 391-2600 local 4145. Although I hold the position of Executive Director, Provincial Programs for the British Columbia Ambulance Service (BCAS), my role in this research project is solely as a student of Royal Roads University. My role within BCAS does not imply that BCAS will support the recommendations of this research project.

The title of the project is Meeting the Advanced Care Paramedic Demand in the British Columbia Ambulance Service. The purpose is to gather your thoughts on effective and efficient strategies that the BCAS can use to recruit and retain Advanced Care Paramedics (ACP) from the current Primary Care Paramedics. This survey is the tool that will collect your opinions on the topic. It is expected that this will take less than 15 minutes of your time. The survey is being conducted using Zoomerang ®. In the event that your survey response is processed and stored in the United States, you are advised that its governments, courts, or law enforcement and regulatory agencies may be able to obtain disclosure of the data through the laws of the United States. Data will be used only by me (Les Fisher) as principal investigator and will be stored on a password-protected computer. I will release aggregate data to a focus group, along with the data analysis. The focus group is a representative sample of BCAS employees who have helped develop the survey question and will assist in the interpretation of the data.

Survey data will be summarized, in anonymous format, in the body of the final report. Demographic data will be used for data analysis. Quotes may be used, but any participant comments that include identifying data regarding person or station location will not be used. At no time will any specific comments be attributed to any individual unless specific agreement has been obtained beforehand. No data attributable to an individual will be released beyond the principal investigator. All data will be destroyed at the conclusion of the study. At the conclusion of the survey, you will be invited to submit your email address to be entered in a draw for a subscription to the Journal of Emergency Medical Services. This is optional. The only identifying data collected will be the names of survey participants who wish to be entered in the draw for a book. The names will be used for the draw only and then destroyed. There will be no link between the names and the other survey data.

You are not compelled to take part in this project. Similarly if employees or other individuals elect not to take part in this research project, this information will also be maintained in confidence. If you do elect to take part, you are free to withdraw at any time with no prejudice. The Final Report of this research project will be submitted to Royal Roads University. One copy will be sent to Library and Archives Canada and will be publicly available through that body and through the Royal Roads University Library. A copy will also be delivered to the British Columbia Ambulance Service. By clicking on “I Agree” below, you give free and informed consent to participate in this project.

Agree __

2. I would like to get some idea of your level of interest in taking ACP training. How interested are you in enrolling in an ACP program? (Please pick one.)

Not at all interested
Slightly interested

Interested
Very interested

3. ACP tuition is approximately $10,000. What is your understanding of how much BCAS pays as a post-secondary subsidy for every ACP student (in addition to the $10,000 the student pays)?

$0
$2000
$4000
$8000
$10,000 or more

4. How important are the following general considerations to you if you were contemplating entering an ACP program?

	1 Very Important	2 Important	3 Neutral	4 Minimal Consideration	5 Not a Consideration
1. Financial Considerations (tuition, travel costs, income reduction, incidental costs)					
2. Family Considerations (level of support, mobility to ALS community, time away, childcare, commitments)					
3. Time Considerations (time to prepare, ability to arrange leave from work, time to earn, ability to be replaced at work)					
4. Course Delivery Considerations (course location, distance vs. on-site, training agency, course structure)					

5. Please RANK the following financial considerations in order of their importance to you if you were considering entering an ACP program. (Each rank can only be used once. 1 is most important, 4 is least important.)

	1	2	3	4
1. Incidental costs				
2. Loss of income				
3. Travel costs				
4. Tuition costs				

6. Please RANK the following family considerations in order of their importance to you if you were considering entering an ACP program. (Each rank can only be used once. 1 is most important, 4 is least important)

1 2 3 4

1. Family's commitment and support
2. Mobility to an ALS community
3. Time away from family
4. Ability to juggle family commitments with studies

7. Please RANK the following time considerations in order of their importance to you if you were considering entering an ACP program. (Each rank can only be used once. 1 is most important, 4 is least important.)

1 2 3 4

1. Time to prepare for the courses
2. Ability to arrange leaves from work
3. Time & ability to earn while training
4. Ability to be replaced in current position.

8. Please RANK the following course delivery considerations in order of their importance to you if you were considering entering an ACP program. (Each rank can only be used once. 1 is most important, 4 is least important.)

1 2 3 4

1. Course location
(Currently New Westminster)
2. Distance options vs. on-site
3. Choice of training agency
4. Flexibility in course structure
(Continuous vs. distinct & intermittent blocks)

The following question is aimed at gaining a greater understanding of the impact that some perceived barriers to ACP training may have on you. While it addresses similar issues to the previous questions, it does so in a way that provides comparison across categories.

9. How important would the following issues be to you if you were contemplating enrollment in an ACP program?

	1 No Problem	2	3 Neutral	4	5 Absolutely Prohibitive
1. Tuition costs					
2. Loss of wages					
3. Incidental expenses					
4. Travel					
5. Eventual relocation to an ALS community					
6. Time required to prepare for and complete the program					
7. Location of training in Lower Mainland					
8. Family commitments					
9. Degree of support for successful completion					
10. Prospects for a job on completion					

10. It is quite likely that you have heard about various components of the ACP program. What is your current impression of the following items?

	Excellent	Good	Neutral	Fair	Poor	Have not heard or formed opinion
1. ACP Independent Study Course						
2. ACP Classroom time						
3. ACP Clinical (hospital) time						
4. ACP Precepting						
5. ACP Field Marking						
6. Training Agency (Justice Institute)						

11. The focus group has identified pros and cons of entering ACP training at different ages and stages in one's career. In order to get your opinon, please rank the factors that impact the optimal age for entering ACP training. (Each rank can only be used once. 1 is most important, 6 is least important.)

1 2 3 4 5 6

Years left to work after completion
Years of experience
Ability or capacity to learn
Keeping good people before they find other careers
Maturity regardless of age
Service seniority

12. Considering the above issues, what is your impression of the optimal age for entering an ACP training program?

20 to 25
26 to 30
31 to 35
36 to 40
41 to 45
46 to 50
Over 50

13. Which statement best describes your impression of ACP practice? (Pick only one)

There are more tools in the toolkit
There are many protocols to remember and use properly
There is a high level of knowledge required to understand the larger context of patient care

14. Individuals within BCAS have had varying experiences with regard to mentoring and support as they learn to become a paramedic. In general, how do you rate the degree of support in the BCAS culture for new ACP students?

Not at all supportive
Minimally supportive
Somewhat supportive
Very supportive

15. Within the current culture of BCAS, and with the degree of support available in the field, how would you rate your chances of succeeding if you were enrolled in an ACP program?

Concerned about my chances
Only slightly concerned
No concerns
I feel good about my chances

My chances have nothing to do with the culture

16. Which statement best describes your impression of the ACP community in general?

Open and receptive to new learners
Their degree of support depends on the learner's capability
Very little support for new learners
An "old boys' club" resistant to new learners
A group protective of their high standards

17. Which statement best describes your ideal Licensing process at the end of an ACP program?

Graduation from an accredited ACP program gets you a license.
Graduation from an accredited ACP program gets you a license, but you must serve a 1-year employer-monitored internship.
Graduation from an accredited ACP program gets you a license to practice in a preceptorship to meet Licensing-directed call volume criteria (type & number of calls)
Graduation from an accredited ACP program gets you a license to practice in a preceptorship to gain experience prior to a field marking process for final licensure (current process).

18. If financial support were available for ACP training, please RANK the following options in order of preference. (Each rank can only be used once. 1 is most important, 6 is least important.)

	1	2	3	4	5	6
1. Deferred salary plan						
2. Repayable loans						
3. Forgivable loans (with a service time commitment)						
4. Bursaries						
5. Full funding with seniority-weighted selection to the program						
6. Travel support						

19. If time support were available for ACP training, how interested would you be in the following options? (Note – Some of these do not apply to part-time staff. If you are a part-time employee with BCAS, please select "Does not apply to Me" for the options that are for full-time staff only.)

	1 Very Interested	2	3 Neutral	4	5 Not at all interested	Does not apply to me
1. No cap on CTO bank (F/T only)						

2. Deferred salary program (F/T only)
3. Deferred holidays (F/T only)
4. No cap on switch shifts
5. Change to a part-time course delivery model
6. Change to a distance, self-directed course (for as much as possible)

20. If changes to the ACP training delivery were available, how interested would you be in the following options?

1	2	3	4	5
Very Interested		Neutral		Not at all interested

1. Change to a distance, self-directed course (for as much as possible)
2. Change in location for easier access
3. Split program into blocks with ability to practice at that level between blocks
4. Choice of training agency

In order to analyze the survey data, certain demographic information is required. This information will only be used for data analysis and will not be used to link specific answers to individuals.

21. What Region are you currently assigned to? (Full-time station or Primary Operator station)

Vancouver Island (formerly Region 1)
Lower Mainland (formerly Region 2)
Interior (formerly Regions 3 & 4)
Northern BC (formerly Regions 5 to 8)
Provincial Programs (formerly Provincial Operations or Airevac)

22. What designation has your station been assigned?

Remote
Rural
Urban
Metro

23. What is the highest license level you have achieved?

EMA FA/OFA/EMR
EMA 1
P1
PCP

EMA 2
ACP

24. How many years have you worked for BCAS?

1 to 2
3 to 4
5 to 6
7 to 10
11 to 15
More than 15

25. What is your current employment status with BCAS?

Full-time Paramedic with BCAS
Part-time Paramedic with BCAS, no other employment
Part-time Paramedic with BCAS as primary income, and another job
Part-time Paramedic with BCAS with another job as primary income
Manager with BCAS

26. Do you have dependent children?

None
One
Two
Three
More than three

27. What is your marital status?

Single
Separated or divorced
Married or other long-term co-habiting relationship

28. What is your gender?

Female
Male

29. What is the highest level of non-paramedic education you have attained?

Did not complete high school
High school graduation
Some post-secondary (university, college, or trade school)
Undergraduate degree
Postgraduate degree

30. Do you have any comments that you would like to add on the topic of recruiting ACPs from the current PCPs? (250 words maximum)

THIS QUESTION IS OPTIONAL

31. To enter the draw for a one-year subscription to the Journal of Emergency Medical Services, (JEMS), please enter your email address below. Whether you provide your address or not, I appreciate your participation and thank you for your time.

APPENDIX D – CONSENT FOR FOCUS GROUP

This research project is part of the requirement for the degree of Master of Arts in Leadership and Training. The title of the project is *Meeting the Advanced Care Paramedic Demand in the British Columbia Ambulance Service*.

The student concerned is Les Fisher. The authenticity of this research project can be verified by contacting Dr. Graham Dickson, Director of the School of Leadership Studies at Royal Roads University, at (250) 391-2572. Mr. Fisher's credentials with Royal Roads can be verified by contacting the project supervisor, Dr. Tony Williams at (250) 391-2600 local 4145. Although Mr. Fisher holds the position of Director, Provincial Operations Services for the British Columbia Ambulance Service (BCAS), his role in this research project is solely as a student of Royal Roads University. Mr. Fisher's role within BCAS does not imply that BCAS will support the recommendations of this research project.

This study seeks effective and efficient strategies that the BCAS can use to recruit and retain Advanced Care Paramedics (ACP) from the current Primary Care Paramedics. This will be done by gathering and analyzing survey data from BCAS staff. The survey will be designed with the input of a focus group, and the data analysis will be validated by the focus group. You are invited to participate in the focus group.

Your involvement is expected to be two sessions: The first will be a full day at a location to be determined, and the second will be a partial day, either in person or via teleconference. There will be approximately two hours of pre-reading and preparation for each session.

The focus group sessions will deal with issues surrounding accessing ACP training. You will determine the degree of personal disclosure involved. There will be no deceit. Information will be gathered and, where appropriate, summarized, in anonymous format, in the body of the

final report. At no time will any specific comments be attributed to any individual unless specific agreement has been obtained beforehand. Flip charts will be the primary means of recording focus group data. Flip charts will be stored in a locked and secure location. Focus group sessions will be audio recorded as a supplement, but the audio record will not be accessible to anyone other than the researcher. Once the study is complete and the final report submitted and approved, all data will be destroyed.

All focus group participants agree to maintain confidentiality of all communications relating to this project and will not disclose the identity of other participants to anyone outside of the research project.

The researcher will endeavor to ensure that no harm comes to participants. Guided by Article 8.04 of the Collective Agreement, the focus group members will receive pay or shift coverage for the time attending focus group sessions. Travel costs will also be reimbursed in accordance with Articles 22.09 and 22.10 of the Collective Agreement and all associated BCAS policies. Payment will come from your employer, the BCAS and is separate and distinct from this research project. This will be the one point at which anonymity will be lost. If you chose to submit for pay, your Unit Chief, Superintendent, Payroll Clerk and regional office administrative staff will become aware of your participation.

You are not compelled to take part in this project. Similarly if employees or other individuals elect not to take part in this research project, this information will also be maintained in confidence. If you do elect to take part, you are free to withdraw at any time with no prejudice.

The Final Report will be submitted to Royal Roads University. One copy will be sent to Library and Archives Canada and will be publicly available through that body and through the Royal Roads University Library. A copy will be delivered to the British Columbia Ambulance

Service. Focus group participants may receive a copy of the Final Report from the researcher, by request. Results of the research will be discussed with all focus group members prior to being submitted.

By signing this letter, the individual gives free and informed consent to participating in this project.

Name: (Please Print): _____

Signed: _____

Date: _____

APPENDIX E – RESPONDENT COMMENTS BY TOPIC

Comments Made	Frequency
Choice of Training Agency - Want Different	44
Mentoring/Precepting/Apprentice - Support	35
Instructors & Preceptors - Negative Comments	29
Loss of income - Negative Comments	26
Entry criteria - Need to be more stringent	20
Lack of Mobility to ALS Communities & Current Communities Inadequate	19
Tuition - Negative Comments	18
Loss of Full Funding	12
Field Marking - Negative Comments	11
Flexibility in Course Structure - Want More	9
Support of Current ACPs - Negative Comments	9
Entry criteria - Need to be less stringent	8
Survey Format - Negative Comments	7
Perceived Exclusion of Part-Time Employees	7
Licensing Process - Negative Comments	6
Looming ACP Shortages	6
Travel - Negative Comments	5

Time away from family - Negative Comments	5
Course Location - Negative Comments	5
Distance options vs. on-site - Support Current	5
Flexibility in Course Structure - Like Current	4
Concern about Future ACP Deployment & Shifts	4
Like Employee-Funded Model	4
Scheduling of ACP Students on BLS Cars	4
Low Success Rate	4
Implement Support (Deferred Salary, CTO)	4
Incidentals - Negative Comments	3
Instructors & Preceptors - Positive comments	3
Survey Format - Positive Comments	3
Outside Recruitment - Resist	3
Lead to a Degree Program	3
Credit for Existing Education	3
Keep Good People within BCAS	3
More Information Required on Expectations	3
Increase ACP Wage to Make More Appealing	3
Inability to Arrange Leaves from Work	2

Want Time & Ability to Earn While Training	2
Distance Options vs. On-Site - Increase Distance	2
Increase PCP-A Training	2
Concern about Overall Morale in BCAS	2
Choice of Training Agency - Like Current	1
Pay back after X years - Support	1
Current Course Delivery - Negative Comments	1
Outside Recruitment - Support	1
Loss of Experience Pay - Negative Comments	1
Concern for Current ACPs & Workload	1
Want to Depair ACPs More	1
Fund Independent Study as Part of Selection	1