

**British Columbia Rural Physicians
Continuing Professional Development /
Continuing Medical Education
(CPD/CME)
Needs Assessment**

FINAL REPORT

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FRAMING THE CONTEXT: WHY CPD, NOT CME?

The term 'CME' has traditionally been used to describe on-going professional education in medicine. Many organizations, however, are moving toward the term 'continuing professional development' (CPD). CPD encompasses a broader range of relevant areas such as practice management, interprofessional patient-centered care and teaching, in addition to clinical skills and evidence-based care. The term CPD also supports a wider variety of learning formats, such as small group and self-directed learning.

While CPD is the primary term used in this report, the term CME appears when directly quoted by survey respondents and interview/focus group participants.

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

BCMA	British Columbia Medical Association
CDM	Chronic Disease Management
CFPC	College of Family Physicians of Canada
CPSBC	College of Physicians and Surgeons of British Columbia
CMA	Canadian Medical Association
CME	Continuing Medical Education
CPD	Continuing Professional Development
IMG	International Medical Graduate
PDA	Personal Digital Assistant (i.e., hand-held computer)
RCPS	Royal College of Physicians and Surgeons
REAP	Rural Education Action Plan
RSA	Rural Service Agreement
SRPC	Society of Rural Physicians of Canada
UBC CPD-KT*	University of British Columbia Division of Continuing Professional Development and Knowledge Translation

* At the time of this needs assessment, the Faculty of Medicine division responsible for CPD was named the Division of Continuing Medical Education. In winter 2005, the division changed its name to the Division of Continuing Professional Development and Knowledge Translation to better reflect the scope of its educational and research activities.

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ABSTRACT

Very little data exists on the scope and content of the educational needs of rural physicians in British Columbia (B.C.). This has led to a number of challenges related to the design and implementation of CPD programs that are responsive to the needs of rural physicians. This needs assessment began to address these challenges by providing CPD providers with valuable insight into the types of educational activities, technologies, and resources that would most benefit rural physicians.

This project employed a combination of qualitative and quantitative methods. In July 2005, a comprehensive survey was distributed to rural physicians in B.C. A total of 307 rural GPs and 141 rural specialists responded to the survey. A series of interviews and focus groups with rural physicians were then conducted to validate and elaborate on the survey findings.

Four emergent themes were identified: challenges related to accessing CPD; preferred CPD content and delivery formats; roles and responsibilities of various CPD organizations; and suggested solutions and strategies for change. These findings provided a summary of what rural physicians need from their CPD, and an understanding of what educational activities, technologies and resources are most beneficial for rural physicians.

EXECUTIVE SUMMARY

Introduction

A general lack of data on the current educational needs of rural physicians has created significant challenges for CPD providers responsible for designing, organizing and implementing rural CPD. This needs assessment provided a comprehensive summary of the educational needs of rural physicians in B.C. Findings presented in this report will help to inform the development of future rural CPD programs and has an aim to promote the establishment of an educational support system for rural physicians.

Environmental Scan

Rural physicians in many countries face similar barriers to accessing and participating in CPD. Many of the barriers are due to factors of geographic distance, locum coverage and financial cost. These factors, combined with limited health resources in rural communities, make it challenging for rural physicians to develop and maintain a wide range of clinical skills as well as keep up to date on new medical knowledge.

Methods

A multi-method approach was used in this needs assessment. Two parallel surveys were developed – one for GPs, one for specialists. This was followed by a series of focus groups and interviews involving a cross-section of rural physicians from across the province. The purpose of the survey was to gain a comprehensive understanding of the educational needs of rural physicians. Topics such as barriers and incentives to CPD participation, clinical and non-clinical learning needs, interprofessional education, and preferred delivery formats were addressed in the survey. Data from the survey was analyzed using the computer program SPSS 13.0. In November 2005, interviews and focus groups were conducted to validate and contextualize the survey findings. Content analysis was conducted using a step-wise, thematic approach.

Sample Characteristics. A total of 307 GPs and 141 specialists responded to the survey, producing a response rate of 31% and 28%, respectively. Twenty percent of respondents were female. The number of years in practice ranged from 0 to 50 and respondents covered each of the five health authorities. Five GP focus groups, four GP interviews, and five specialist interviews were conducted. The focus groups and interviews provided a cross-section of the five health authorities and involved a total of 35 rural physicians.

Findings

Key CPD Challenges

Challenges identified included time, locum coverage, and costs; timing and location of CPD events; and, for specialists, feelings of professional isolation.

Preferred CPD Content and Delivery Formats

For GPs, the top three learning need areas were emergency medicine, obstetrics and gynaecology, and psychiatry. Specialists ranked obstetrics and gynaecology, anesthesia, and emergency medicine as their top three learning need areas. Approximately two thirds of GPs

expressed interest in CPD focused on incorporating chronic disease management (CDM) tools into their practice, and one quarter expressed interest in CPD related to using Clinical Practice Guidelines for enhancing patient care related to CDM.

Both GPs and specialists identified hands-on, small group sessions as the preferred mode of CPD delivery. Small group formats enabled more interactive participation and in-depth discussions to occur between instructors and learners. With regard to CPD content, physicians preferred CPD to be relevant to a rural context and focus on the essential elements of what they needed to know. CPD offerings that showed a clear linkage between the subject matter and its applicability to daily practice were viewed the most valuable type of CPD.

Technology

There was strong support among physicians to receiving training in using personal digital assistants (PDAs) for a variety of purposes, such as looking up clinical practice guidelines and pharmaceutical information. There was also significant interest in the increased use and training in the use of the internet and computers to access CPD. Important factors identified regarding the integration of technology into rural practice were *cost effectiveness* and *ease of use*. Many mentioned their 'limited comfort' with new technologies (such as videoconferencing) and viewed the demands of having to learn a large number of new technologies as overwhelming. Infrastructure limitations were cited as having a negative impact on physicians' use of and interest in learning new technologies.

Roles and Responsibilities of CPD Organizations

UBC CPD-KT was viewed as most responsible for developing content and organizing and delivering CPD. In terms of setting standards, GPs considered the CFPC and CPSBC as most responsible for this task, while specialists viewed this role as most appropriate for the RCPS and CFPC. The health authorities and the BCMA were seen as most responsible for funding CPD by both GPs and specialists. Many physicians commented that the administration of CPD funds was very bureaucratic, lacked adequate promotion and was generally insufficient for covering actual CPD costs. GPs saw the CFPC and UBC CPD-KT as most responsible for publicizing CPD while specialists cited the BCMA. Both GPs and specialists noted that keeping abreast of upcoming CPD events was a major challenge.

Solutions

Physicians offered many solutions for improving CPD. To promote local CPD, the suggestion was frequently made that local specialists be recruited to teach CPD. This would reduce travel time, costs and strengthen local GP-specialist relationships. Suggestions to improve locum coverage included developing a pool of locums to cover physicians' practice responsibilities while attending CPD and providing assistance with locum coverage as part of CPD registration. Advice on improving CPD content included offering regular electives at local hospitals and creating a feedback loop between CPD providers and rural physicians when designing CPD programs. Lastly, a centralized body to manage and administer CPD funding and/or publicize CPD events was another frequently mentioned suggestion.

Discussion and Recommendations

Based on the findings, the following set of recommendations was developed. The recommendations were organized around the fundamental questions of *what* do rural physicians need and *how* can CPD be improved?

Recommendations to address *what* rural physicians need:

1. Establish and nurture linkages between rural practitioners and specialists in their referral area to ensure CPD is responsive to the needs of a rural audience.
2. Offer more interactive, small group CPD sessions; increase the time allotted for questions and feedback.
3. Increase awareness of rural needs and realities to urban specialists teaching rural CPD.
4. Encourage more rural specialists to teach CPD with adequate financial compensation and/or CPD credits.
5. If not currently available in RSA communities, promote access to high speed internet and make available decision support tools such as "UpToDate", PDA programs and videoconferencing capability.
6. Provide support for training physicians in the use of technology-enabled CPD such as basic computer skills and PDA usage.

Recommendations on *how* CPD can be improved:

7. Develop and maintain a directory of 'rural savvy' CPD educators who are familiar with rural practice and possess sufficient teaching skills to communicate their knowledge in a practical and engaging manner.
8. Establish a feedback loop between CPD providers and rural physicians to ensure CPD is responsive to rural CPD needs.
9. Provide more opportunities for enhanced skills training for rural physicians; ideally this would occur locally and be taught by local specialists. These 'enhanced skills' physicians might allow specialists more time to attend out-of-town CPD, enhance local GP-specialist relations, and promote more local health care.
10. Create an accessible central registry of upcoming CPD events. This could be an internet-based, searchable database of upcoming CPD events throughout the province. Rural physicians could view upcoming CPD opportunities and select the best event to meet their learning needs and practice demands.
11. Establish and support a provincial rural CPD office to centrally coordinate CPD opportunities. This body would possess a strong understanding of rural issues including avenues for rural CPD funding and teaching opportunities. Other responsibilities could include developing and delivering new rural programs, ensuring effective advertising of quality CPD events, and serving as physician liaison to answer questions about funding and upcoming CPD events. UBC CPD-KT in association with

its Northern Medical Program in Prince George is one organization that may be well-situated to perform this function.

12. Funding should be requested from Health Authorities or the JSC to explore the development and implementation of road shows, particularly using simulation technologies and addressing the topics of emergency medicine and obstetrics and gynaecology.
13. Create a central agency for administering CPD funding as well as providing information on funding programs available. The establishment of one, single process and one set of forms to administer rural CPD funds would streamline the administrative workload of rural physicians to receive compensation.
14. Consider increasing the amount of CPD funding available to rural specialists who need to travel farther to obtain the highest quality CPD in their field
15. Advocate for unused CPD funds to be reallocated at the individual health authority level to meet the diversity of rural physicians' CPD needs.

Conclusion and Future Directions

This needs assessment provided a comprehensive summary of what rural physicians within B.C. need from their CPD and how they think CPD can be improved. It also provided a better understanding of what types of educational activities, technologies and resources are most beneficial for rural physicians, given the particular context of practicing in a rural area. Overall, this project provided insight into how rural GPs and specialists think about and experience CPD as well as outlined some practical directions to CPD providers on what is required to increase user satisfaction and success with CPD.

Future research initiatives can be envisioned in two main directions: (1) further in-depth analysis of existing data collected by this needs assessment; and (2) new research and areas of exploration based upon the current findings.

In-depth Analysis of Existing Data

Several areas of potential significance to rural CPD were not included in this report, given the comprehensive nature of the needs assessment, and hence represent key areas of further analysis and reporting. Specific areas of investigation arising from our existing data set include an examination of rural physicians' CPD needs related to: chronic disease management, interprofessional education, occupational health, enhanced skills training, and existing CPD funding programs.

A detailed examination of the differences between rural physicians' CPD needs, based upon demographic groupings, represents another potential area of further in-depth investigation. Rural physicians are not a homogenous group, but have varying perspectives based on such factors as age, gender, stage of professional practice, cultural background, and location.

Directions for New Research

This needs assessment also provided a valuable starting point for initiating future research projects related to rural CPD.

Potential future research directions include:

- Detailed examination of rural physicians' CPD needs. Rural physicians are not a homogenous group, but have varying perspectives based on such factors as age, gender, stage of professional practice, cultural background, and location.
- A comparative study between rural and urban CPD needs in order to identify similarities and differences between the educational needs of physicians in B.C. This type of study could have a considerable impact on the design of future CPD programs (e.g., identifying topics where rural and urban physicians share similar needs and interests, facilitating co-learning between urban and rural physicians, etc.).
- Evaluating the impact of implemented recommendations.

Dissemination of the results of this needs assessment to CPD providers, rural physicians, and local CPD coordinators is an important next step of this research initiative.

1. INTRODUCTION

It has frequently been observed that the educational needs of rural physicians vary considerably from those of urban physicians. There is, however, very little current data on the specific educational needs of rural physicians within Canada and particularly B.C. A November 1998 report entitled “Attracting and Retaining Physicians in Rural British Columbia” touched on this issue but provided little detail¹. A general 2001 CMA survey was conducted but did not specifically focus on CPD or rural physicians².

There are many groups providing and partaking in CPD events all across the province, but there is little co-ordination or networking between providers. In general, CPD providers are familiar with the physician learners’ perceived value of conferences, workshops and printed study material in delivering CPD, but less clear on the value of newer formats such as videoconferencing, PDAs, online education, clinical audits and the use of self-directed learning strategies. It is hoped that this project will lead to significant improvements in rural CPD program planning and delivery.

This report is directed toward those with an interest in coordinating locally-based CPD, organizing rural CPD, and developing CPD content. The results of this needs assessment provide insight into what types of educational activities, technologies and resources would be most beneficial to support rural physicians. It is hoped that the findings presented in this report will help CPD providers direct future CPD investments in more effective ways through the development of responsive CPD strategies that meet needs of rural physicians, clinical teachers and local CPD providers. The results of this needs assessment can also provide direction on physicians’ needs and desires for decision support tools and communication technologies such as videoconferencing, the Internet, and PDAs within the context of rural practice. Improving rural physicians’ access to more effective educational programs may also lead to improvements in recruitment and retention of physicians in rural communities.

2. PURPOSE OF THE NEEDS ASSESSMENT

This assessment focused on the needs of a range of rural physicians, including general practitioners (GP)/family physicians, locums, and specialists. The two **primary objectives** of this needs assessment were to:

1. Inform the direction of and investments into CPD strategies that are responsive to the needs of rural physicians as well as rural CPD providers; and
2. Develop strategies to engage physicians in an educational support system tailored to the needs of rural physicians.

This needs assessment asked rural physicians to identify their preferred learning topics and domains and the possible barriers and incentives that may affect their participation in CPD activities. In so doing, the needs assessment itself served as a tool to increase awareness of various CPD opportunities such as REAP opportunities for rural skills enhancement, current rural CPD funding programs, teaching opportunities and new CPD topics.

3. ENVIRONMENTAL SCAN

Although the repertoire of literature on the CPD needs of rural physicians is limited, a number of Canadian, American and Australian publications address this topic. Australian publications comprise the bulk of the literature on rural physicians' CPD needs. Despite the geographical distance between Australia and Canada, these publications are informative, considering the similarities between the two countries in terms of demographics (e.g., extensive First Nations populations) and geography. There is, however, a significant gap in the literature on the CPD needs of rural specialists.

Commonly noted throughout the rural CPD literature is the difficulty experienced by rural GPs in accessing CPD^{3,4,5,6,7}. By and large, rural GPs tend to access structured CPD at significantly lower rates than urban GPs. Curran et al. (2004) noted that, "The very factors which characterize rural medicine also present significant barriers to participating in CME activities," such as geographic distance and arranging locum coverage. In addition, rural physicians are generally recognized as having a heightened need for CPD because their geographic isolation compels them to develop and maintain a broader base of clinical skills.

A number of publications, both Canadian⁷ and Australian^{3,6}, concentrate on specific clinical skills or topic areas identified as essential or 'under serviced' in rural CPD. In both countries, emergency medicine was identified as an essential topic in need of much more CPD attention for rural physicians than urban physicians. Booth and Lawrance (2001, 270) suggested thematically grouping rural CPD needs into "procedural and clinical general practice," "professional development" and "public and community health" categories, rather than simple clinical skills, since rural physicians are generally required to provide a wider range of services⁴. Booth and Lawrance (271) also noted that rural and remote GPs prefer to access CPD during the evening (most preferred) and weekends, and prefer learning formats that include interactive lectures and practical sessions. Their study also concluded that "access to local high quality CME was significantly more highly rated by GPs in small rural centres than in any other ... classification".

Regardless of the study location, a number of recurrent themes emerge from the literature. First, rural physicians' experience heightened CPD needs, yet are often unable to access CPD at a sufficient level. Second, major barriers to CPD include geographic distance from educational resources, and lack of resources to support rural physicians' travel for education. Third, rural and remote physicians have a sense of "professional isolation"⁴. Lastly, in terms of clinical content, rural practitioners have a distinct and broader set of CPD needs because of the given context of rural practice.

4. METHODS

This needs assessment employed a multi-methodological approach. Data collection included: (1) separate comprehensive surveys for rural specialists and GPs, (2) interviews with key informants, and (3) focus groups. This approach enabled validation of key findings that emerged from the different types of data. It also served a developmental purpose, in that the initial survey data was used to inform the interview and focus group processes. Thematic analysis within and across data sources was performed to inform the discussion and subsequent recommendations. The following sections provide an overview of the research methods used in this project. For a detailed outline of the research process, please see the project timeline included in Appendix 1.

Steering Committee

A steering committee made up of various collegial, government and rural representatives was formed to help guide the needs assessment. Prior to initiating data collection, the Steering Committee was invited to contribute their expertise and insight to the development of the needs assessment tools. They provided direction on survey design and the development of the focus group and interview protocols. In addition, the Steering Committee played a vital role in validating and expanding upon the needs assessment findings. This, in turn, informed the recommendations included in this report.

Needs Assessment Survey

Two parallel surveys – one for specialists and one for GPs – were designed in consultation with experts from the project working group and steering committee. The surveys covered a wide range of relevant topics within the following categories: barriers and incentives to participating in CPD, clinical and non-clinical learning needs, preferred learning formats, financial resources, teaching and organizing CPD, chronic disease management, occupational health, and interprofessional education (see Appendix 2).

The GP and specialist surveys were very similar in form and overall content; however, the GP survey contained an additional section related to enhanced skills and areas of sub-specialization. In the specialist survey it was acknowledged that some questions (e.g., those related to chronic disease management) might not be relevant. In such cases, respondents were asked to skip to the next section.

Distribution. In July 2005, approximately 1500 surveys were distributed to physicians working within Rural Service Agreement (RSA) communities in B.C., with the assistance of the BCMA. Invitations and surveys were distributed by email (which provided an online internet link to the survey) and then by post mail several days later.

Quantitative Analysis. Survey data were analyzed using the statistical software program SPSS (version 13.0). Descriptive statistics such as variable frequencies and percentages were employed.

Interviews and Focus Groups

Following preliminary analysis of the survey data, a subsample of GPs and specialists participated in interviews and focus groups. The purpose of these sessions was to validate and contextualize the survey findings as well as to stimulate in-depth discussion about solutions and strategies to improve rural CPD.

Focus group and interview participants were identified in three ways: (1) survey respondents were invited to indicate their interest in participating in a follow up interview/focus group by completing a short form on the last page of the survey; (2) an advertisement and sign-up sheet were distributed at a provincial rural CPD conference; and (3) individuals who co-ordinate CPD in several rural communities were approached to 'nominate' participants. In total, five GP focus groups, four GP interviews, and five specialist interviews were conducted. The number of participants in each focus group ranged from two to nine participants. Two of the focus groups were conducted in a face-to-face meeting (in Prince George and Courtenay) while the remaining three were conducted by teleconference. One of the teleconference focus groups was specific to locum participants. All interviews were conducted by telephone. Appendix 3 presents the questions asked in the interviews and focus groups.

Qualitative Analysis. All of the interviews and focus groups were tape-recorded and transcribed verbatim. Content analysis was conducted using a step-wise approach. Three members of the research team analyzed and coded the interview and focus group transcripts separately, initially using a broad set of codes. The researchers then met to discuss their findings and identify the most salient codes across transcripts. Each transcript was then re-coded, using a finalized list of codes. The coded units were assembled, refined and analyzed for emergent themes. A review of research field notes also helped to keep the analysis as true to the participants' ideas as possible. Saturation of data was met on many themes; that is, after a certain number of iterations of data analysis, no new themes emerged.

Characteristics of the Sample

Response rate to the surveys was 31% of rural GPs and 28% of rural specialists surveyed, resulting in a sample size of 307 GPs and 141 specialists. This is a significant response rate, particularly for a survey that requested over 30 minutes of physicians' time. Sixty-three percent of GP respondents and 59% of specialist respondents utilized the online survey.

Approximately 20% of all participants were female. The number of years in practice ranged from 0 to 50 years for GP respondents and 0 to 45 years for specialist respondents, with a median of 18 years in practice for GP respondents and 15.5 years for specialists.

The breakdown by health authority for GP respondents was as follows: Interior (32%); Northern (22%); Vancouver Island (17%); Vancouver Coastal (10%); and Fraser (1%). Eighteen percent did not indicate their Health Authority. Specialist respondents, broken down by health authority, were as follows: Vancouver Island (28%); Northern (27%); Interior (16%); Vancouver Coastal (7%); and Fraser (1%). Twenty percent did not indicate their Health Authority.

5. FINDINGS

This section presents the major findings of this needs assessment and is organized into four sections: (1) Description of key CPD challenges; (2) Needs and preferences related to CPD content and delivery; (3) Roles and responsibilities of various CPD organizations; and (4) possible solutions for improving CPD.

THEME AREA I: DESCRIBING RURAL CPD CHALLENGES

Several recurring CPD challenges specific to rural practice were identified. Key themes included: barriers to CPD participation, preferred location and timing of CPD events, and needs and preferences unique to rural specialists.

Major Barriers to CPD Participation

For both GPs and specialists, factors of *time, locum coverage, and sufficient funding to cover CPD costs* were identified as the most important barriers to participating in CPD. These factors were almost always mentioned together by GPs and specialists and were clearly interrelated. Respondents explained that due to family commitments and practice workload, their time available to attend CPD was extremely limited. Since most CPD offerings were out-of-town, this led to the additional difficulty of securing locum coverage and covering the costs of attending the event (e.g., travel costs, registration fee, and lost income).

Many respondents also mentioned that the notification time for upcoming CPD events was sometimes too short and did not allow enough time to secure adequate locum coverage. This concern was especially important to specialists who explained that some locums lacked the specialized skills necessary to act as a substitute. Specialists expressed hesitation to leave the community when they were the only specialist in the area.

Needs and Preferences related to Location and Timing of CPD

Survey respondents were asked to rank the preferred location of CPD activities from a list of five locations ('own community', 'Vancouver and Victoria', 'nearest referral centre', 'recreational setting', or 'another province'). The majority of GP and specialist respondents preferred to attend CPD within their own community, followed by Vancouver and Victoria. Respondents were least in favour of attending CPD in another province.

Local CPD events were primarily preferred during evenings and weekends. GPs indicated a desire to have increased interaction with local specialists, and suggested that local CPD offerings be taught by local specialists given their understanding of local needs and the realities of rural practice. Although specialist survey respondents acknowledged that they would like to attend more local CPD, their specialized knowledge requirements often dictated they travel long distances to obtain the best and most relevant CPD. This, however, led to the challenges of time, cost and locum coverage outlined above.

Professional Isolation

Both GPs and specialists indicated that professional isolation was a key challenge to their participation in CPD. Respondents frequently mentioned that in the absence of peers to challenge, stimulate, and support one another, keeping up to date and staying motivated to learn new skills or acquire new information was difficult. This concern was particularly significant for specialists, given the geographical distance between specialist colleagues in rural areas. Many wanted better access to tertiary care specialists for consultation, explaining that current access to other specialists from the office or emergency room was not available. Others expressed frustration with the frequent cancellation of CPD events due to low enrollment, even though attendance numbers reflected all or most of the specialists in the area. The problem of professional isolation, compounded with the low number of specialists in rural areas, was noted as a major barrier to specialists' participation and "buy in" to CPD in general.

THEME AREA II: NEEDS AND PREFERENCES RELATED TO CPD CONTENT AND DELIVERY

Expressed Clinical Learning Need Areas

GPs and specialists were asked to identify their top three clinical learning need areas, including knowledge, skills, and procedures. In total, GP respondents listed 617 different clinical learning need areas. Approximately two thirds of GPs expressed interest in CPD focused on incorporating chronic disease management (CDM) tools into their practice, and one quarter expressed interest in CPD related to using Clinical Practice Guidelines for enhancing patient care related to CDM. Diabetes and cardiovascular disease, followed by palliative care and depression were areas of most interest. For GPs, emergency medicine, obstetrics and gynaecology, and psychiatric medicine were the most frequently mentioned learning need areas (see Table 5.1).

Table 5.1 Clinical Learning Need Areas – GPs

Learning Need Area	Number of Responses (out of 608)	Specific Topics Mentioned
Emergency medicine	173	<ul style="list-style-type: none"> ▪ Airway management/Intubation ▪ Trauma ▪ ACLS/ATLS ▪ Cardiology ▪ Paediatrics ▪ Drugs
Obstetrics and gynaecology	56	<ul style="list-style-type: none"> ▪ Labour complications ▪ C-sections ▪ Induction at term ▪ Newborn resuscitation ▪ Breast cancer management ▪ Menstrual problems
Psychiatry	28	n/a
Cardiology	24	n/a
Family medicine updates and/or general medical review	23	n/a
Geriatrics	19	n/a
Paediatrics	17	n/a
Anaesthesiology	16	n/a
Internal medicine	16	n/a
Dermatology	15	n/a
Palliative	15	n/a
Orthopaedics	13	n/a
Oncology	9	n/a
Sports medicine	8	n/a
Diabetes	7	n/a
Endocrinology	6	n/a
Computer skills	5	n/a
Plastic surgery	5	n/a
Surgery	5	n/a
Travel medicine and tropical disease	5	n/a

Specialist respondents listed 282 clinical need areas covering a wide variety of topics. Topics related to obstetrics and gynaecology were most frequently mentioned, followed by anaesthesia and emergency medicine (see Table 5.2).

Table 5.2 Clinical Learning Need Areas- Specialists

Learning Need Area	Number of Responses (out of 282)	Specific Topics Mentioned
Obstetrics and gynaecology	28	<ul style="list-style-type: none"> ▪ Breast cancer ▪ Advanced gynaecological surgery ▪ Female urology, ▪ Mammography/breast/gynaecological ultrasound ▪ Breast MRI
Anaesthesia	18	n/a
Emergency medicine	16	n/a
Psychiatry	13	n/a
Orthopaedics	12	<ul style="list-style-type: none"> ▪ Tibial fractures ▪ Joint arthroplasty
Paediatrics	12	<ul style="list-style-type: none"> ▪ Deformities ▪ Emergencies
Surgery	10	<ul style="list-style-type: none"> ▪ Adult reconstructive ▪ Arthroscopic ▪ Hand surgery
Ophthalmology	9	<ul style="list-style-type: none"> ▪ Retinal disease ▪ Age-related macular degeneration ▪ Glaucoma ▪ Uveitis
Pharmacology update and advances	8	<ul style="list-style-type: none"> ▪ Psychopharmacology ▪ Advances in drug interactions
Cardiology	7	<ul style="list-style-type: none"> ▪ Cardiac radiology ▪ Resuscitation
Laparoscopic surgery	7	n/a
Radiology	6	n/a
Child and adolescent psychiatry	5	n/a
CT upgrade	5	n/a
Internal medicine	5	n/a
Urology - recent advances	5	n/a
Trauma	5	<ul style="list-style-type: none"> ▪ CPR ▪ Head injury ▪ Shock (all types)

CPD Content Must be Practical, Hands-on and Relevant to Rural Practice

A specific challenge highlighted by both GP and specialist respondents was the desire for CPD content to be more relevant to rural practice. This included an awareness of health concerns specific to rural areas, significantly limited resources and the general social context of rural practice. As explained by one participant, urban specialists delivering CPD need to be aware of these rural realities in order to engage rural physicians:

Often, even when [specialists] are putting on a lecture, they want to talk about what they think we have to know, rather than spending time finding out what is happening in our sector of the community, what are the realities we deal with, like

heart disease and diabetes in outlying areas. It does not seem to cross their minds too much (GP, focus group, Nov 18, 2005).

Many GP and specialist participants emphasized their desire for practical, hands-on CPD. They were less interested in theoretical knowledge or the latest research, than in how that knowledge could lead to improvements in practice. Given the scope of the information rural physicians need to know, many participants felt that honing their skills on the essential elements of their practice was the main purpose of attending a CPD event, as one GP participant stated:

You do not care about why or what the theory behind it is. All you want to know is what to do in a certain situation. It is a very reductionist point of view in medicine, but when you are dealing with a very broad spectrum and you cannot possibly expect to remember all the details of all those different things. You just have to try and remember the things that are the most important (GP, interview, Nov 22, 2005).

Approximately half of GP respondents indicated that they currently participate in or are interested in increasing their participation in interprofessional educational activities. Interprofessional topics must be appropriate to the local healthcare provider team context, and information must be delivered at a level appropriate to all disciplines involved. Respondents noted better organization of such events would most increase participation in interprofessional CPD. Suggestions for achieving this included engaging strong local physician presenters, better administration of the events from the regional level, and maintenance of structured, small-group learning sessions.

Interactive, small group sessions are the most preferred delivery format

Many GP survey respondents commented on preferred formats of CPD delivery. Most respondents preferred interactive, 'hands-on' training in a small group setting, as opposed to large didactic lecture format CPD. Again, comments centered on respondents' desire to obtain CPD from local specialists who have an awareness of local needs and deficiencies. Several respondents indicated they would like to avoid engagements with pharmaceutical companies due to ethical implications and/or limited educational return. Specific suggestions from the interviews and focus groups included having a maximum of 20 people to a group, incorporating role-playing exercises, and working out case-based problems. The opportunity to have in-depth discussion amongst the physician learners and instructor(s) was considered highly valuable by most participants, as one GP explained:

The key thing about how adults learn is that when they participate in an event, they need to be able to express their ideas and get immediate feedback from it...If somebody is going to call you back in two to three days you've forgotten what your questions were. It has to be part of the group discussion (GP, focus group, Nov 23, 2005).

In terms of learning in the practice setting, several GPs proposed one-on-one "specialist shadowing" as a preferred learning format. For example, having a GP spend half a day to a few days with a specialist (e.g., rheumatologist, anaesthetist, orthopaedic surgeon) to gain hands-on, practical experience in that area. This format was considered ideal because it kept the CPD local, minimized the need to travel, and also allowed for hands-on learning.

Availability, Use and Training Demand for Various CPD Technologies

Survey respondents were asked to consider a list of 15 different technological education delivery modalities and rate each item on *availability*, *use*, and *desire for more training*. Both GPs and specialists responded similarly to these questions. “Using a computer within your practice setting” and “using the internet at home” as well as “at the office” elicited the highest percentages of “yes” responses in terms of availability and use. Respondents indicated that they use the internet primarily for accessing CPD opportunities, and looking up clinical practice guidelines as well as pharmaceutical information. In terms of chronic disease management, the most preferred patient tracking systems identified were computer database and the Provincial CDM toolkit*. The least frequently *available* CPD modalities were telephone tutoring and live internet CPD sessions (i.e., webcasting). Fewer than 5% of respondents indicated that these resources were available for CPD. There was considerable interest among GPs and specialists in receiving *training* in the use of PDAs (in general as well as for looking up clinical practice guidelines and pharmaceutical information). These findings are illustrated in Figures 5.1 and 5.2.

Benefits and Limitations of Technology

Cost effectiveness and ease of use were highlighted as important factors in attitudes towards the use of technologies in educational contexts. Additionally, participants indicated that technology-enabled CPD needs to mesh with established work patterns to be effective. PDAs were described positively as a portable, point of care information resource. Programs such as “UpToDate”, “Epocrates” and “MD Consult” were often mentioned as quick, easy to access educational resources. Nevertheless, limited comfort with technology was cited as a barrier to its use in educational contexts. The demands of having to learn an overwhelming number of new technologies coupled with existing practice demands also presented a significant challenge to rural physicians.

Another barrier, particularly highlighted in the interviews and focus groups, relates to technological infrastructure. Several participants noted that their communities lacked ISDN connections and/or adequate internet capability to support technology-enabled CPD. Limited connectivity had a negative impact on communication quality in both video and audio communications and contributed to a sense of ‘artificiality’ in communication. Upgrading existing technological infrastructure and increasing the quality of audio/video interactions was identified as a significant improvement to delivering rural CPD. Lastly, simulation technologies (e.g., mannequins which imitate human physiology) in the context of traveling road shows were frequently mentioned as an effective way of acquiring more ‘hands on’ skills in CPD.

* About half of GP respondents said they currently have a system of identifying patients with chronic diseases. Approximately 20 percent of specialist respondents said they currently have a system of identifying patients with chronic diseases.

Figure 5.1 Desired Training in Technology – GPs (n=307)

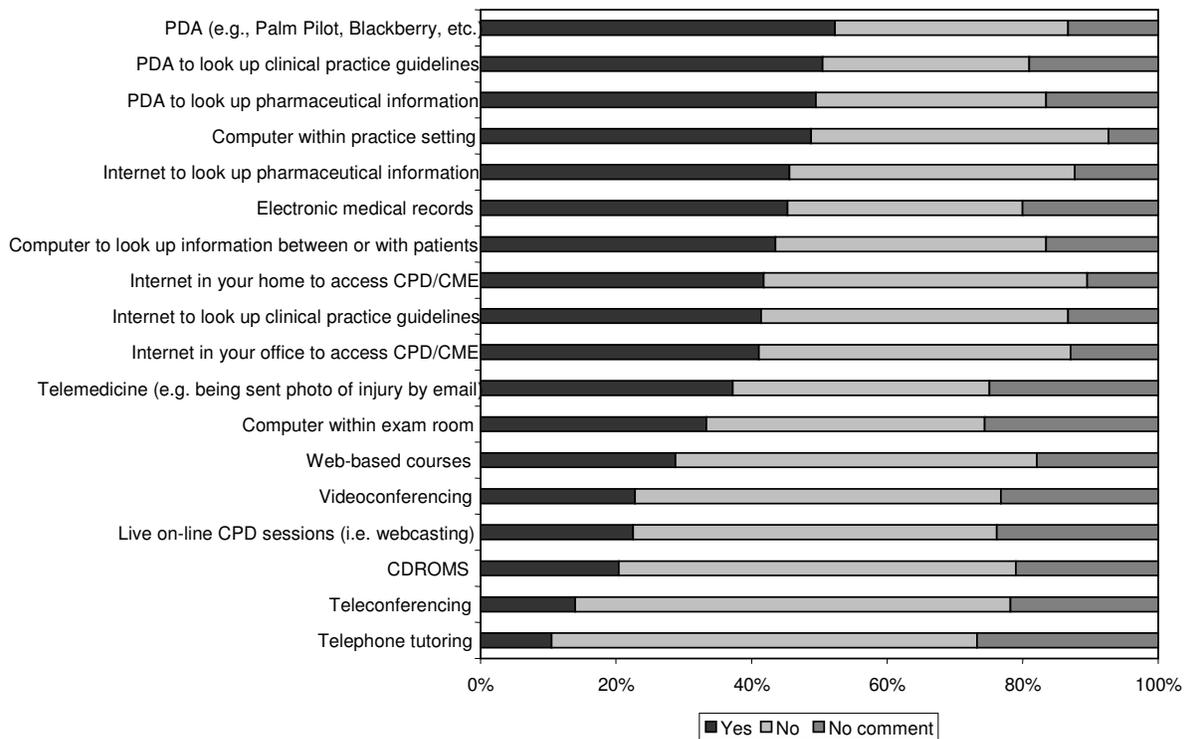
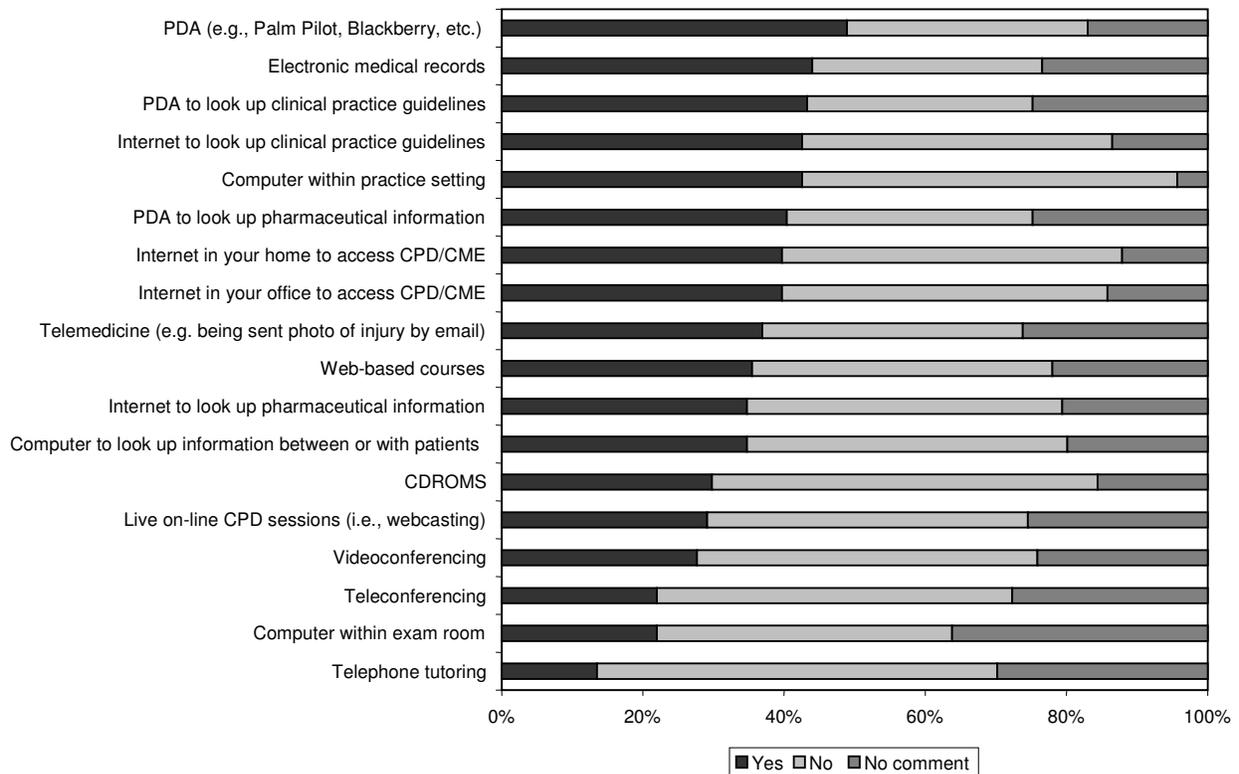


Figure 5.2 Desired Training in Technology – Specialists (n=141)



THEME AREA III: ROLES AND RESPONSIBILITIES RELATED TO CPD

Survey respondents were asked to consider a list of 13 CPD-related organizations and indicate what roles(s) they believed each organization should play in terms of: developing CPD content; organizing and delivering CPD; setting standards; funding; and publicizing CPD. Respondents were asked to “check all that apply,” since each organization could potentially fulfill multiple roles within CPD.

Note that the data presented here represents the number of responses or ‘votes’ respondents placed under each category for each organization. The findings do not represent the attitudes of a certain percentage of GPs or specialists nor are they mutually exclusive across or within categories. For example, if a respondent checked the BCMA as “responsible for funding CPD”, this did not exclude them from selecting another organization as “responsible for funding CPD” or selecting the BCMA for another role posed by the question. All references to number of responses are out of the totals n=307 (GPs) and n=141 (specialists).

Developing CPD Content

Respondents were largely in favour of UBC CPD-KT having responsibility for developing CPD content. Among GPs, this preference was followed by the CFPC and the SRPC. For specialists, other UBC departments, specialty organizations and the RCPS were all ranked highly in terms of responsibility for developing CPD content. To see a full ranking of all the CPD organizations for both GP and specialist respondents, refer to Figures 5.3 and 5.4.

Pharmaceutical companies were consistently ranked very low and were seen to have little or no place whatsoever in developing content, organizing, delivering publicizing, or setting CPD standards.

Figure 5.3 CPD Roles: Developing Content – GPs

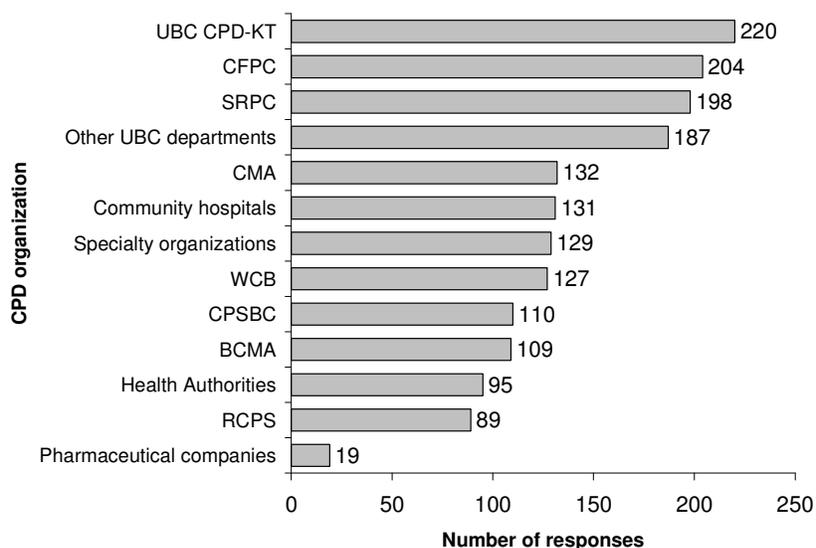
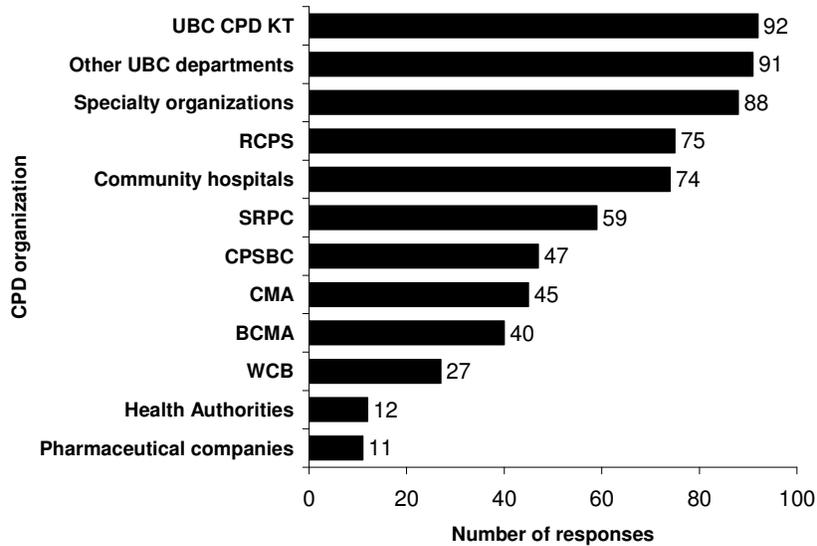


Figure 5.4 CPD Roles: Developing Content – Specialists



Organizing and Delivering CPD

UBC CPD-KT was the highest ranked organization in terms of responsibility for delivering and organizing CPD. For GPs, community hospitals, the SRPC and the CFPC were also viewed favorably in terms of CPD organization and delivery. Health authorities, the RCPS and pharmaceutical companies were viewed as the organizations least favoured for organizing and delivering CPD (Figure 5.5). Specialists viewed specialty organizations, other UBC departments and the RCPS as the main organizations responsible for organizing and delivering CPD (Figure 5.6). Specialists were particularly concerned that CPD offer approved Royal College study credits.

Figure 5.5 CPD Roles: Organizing and Delivering – GPs

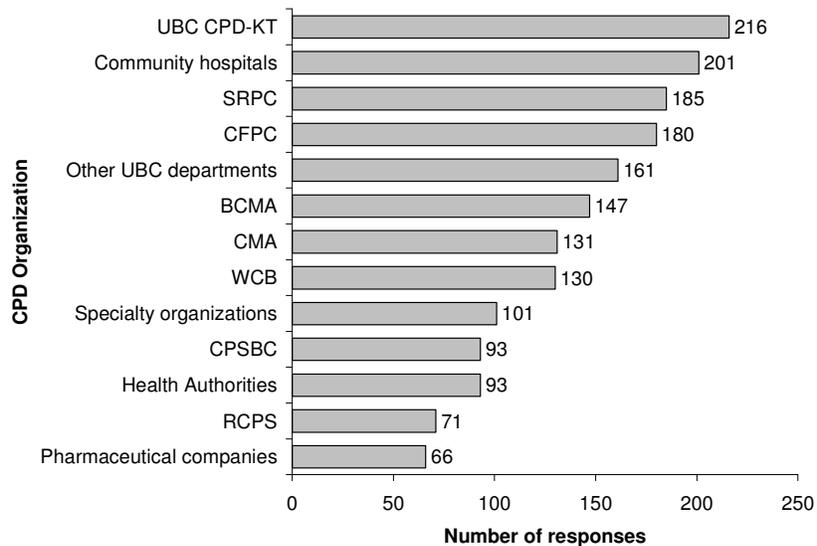
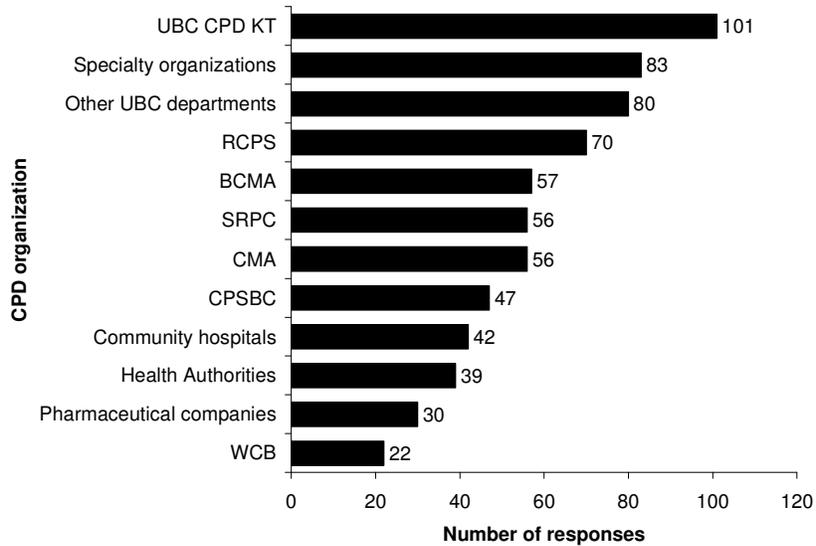


Figure 5.6 CPD Roles: Organizing and Delivering – Specialists



Setting Standards

For GPs, the CFPC and the CPSBC were rated as most responsible for setting standards followed by the SRPC and UBC CPD-KT (Figure 5.7). Specialists rated the RCPS and the CPSBC as the organizations most responsible for setting CPD standards. This was followed by specialty organizations and community hospitals (Figure 5.8).

Figure 5.7 CPD Roles: Setting Standards – GPs

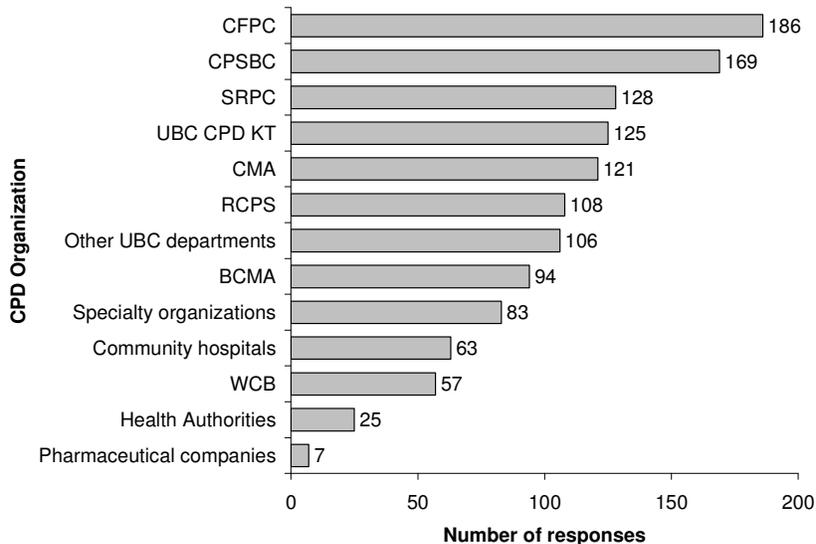
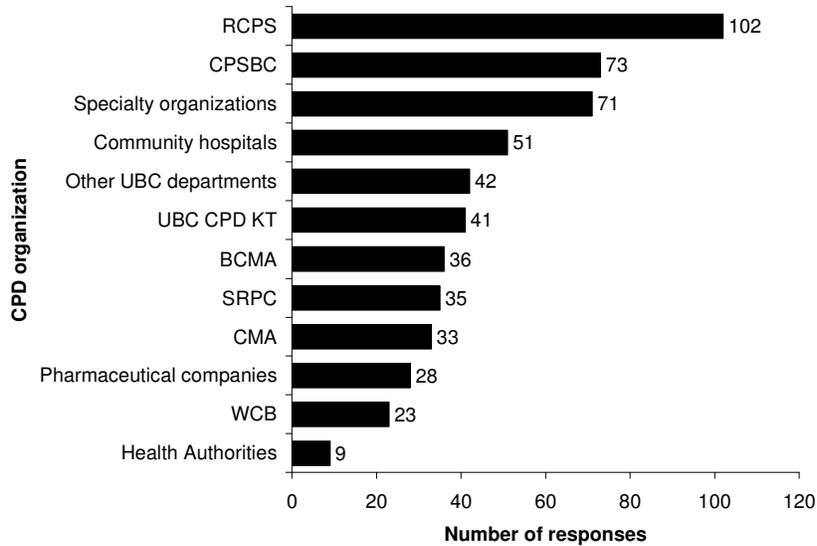


Figure 5.8 CPD Roles: Setting Standards – Specialists



Funding CPD

As mentioned earlier, funding CPD was identified as a major theme. As such, the next section explores the issue of funding CPD in further detail. Figure 5.9 depicts how GP participants view the roles of various organizations in funding rural CPD, while Figure 5.10 depicts the specialist findings. As illustrated by the figures, respondents favoured the Health Authorities followed by the BCMA as responsible for funding CPD. Pharmaceutical companies also received some support for a role in funding CPD.

Figure 5.9 CPD Roles: Funding – GPs

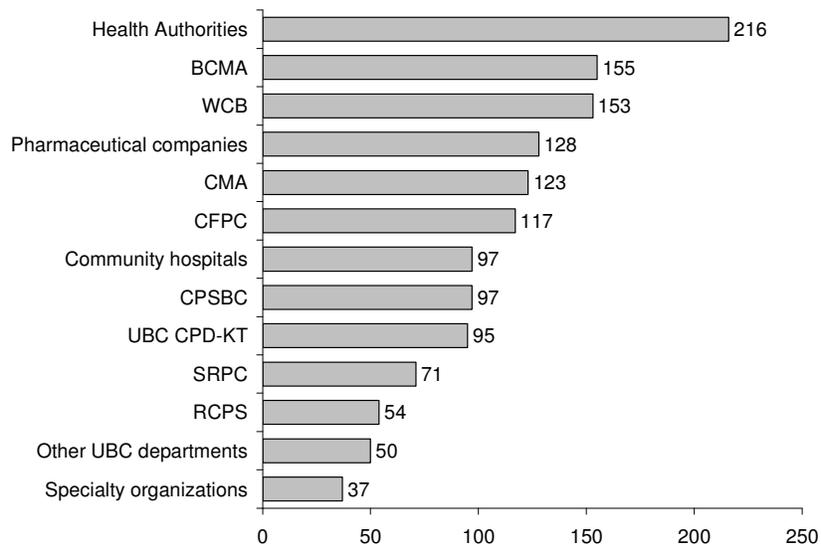
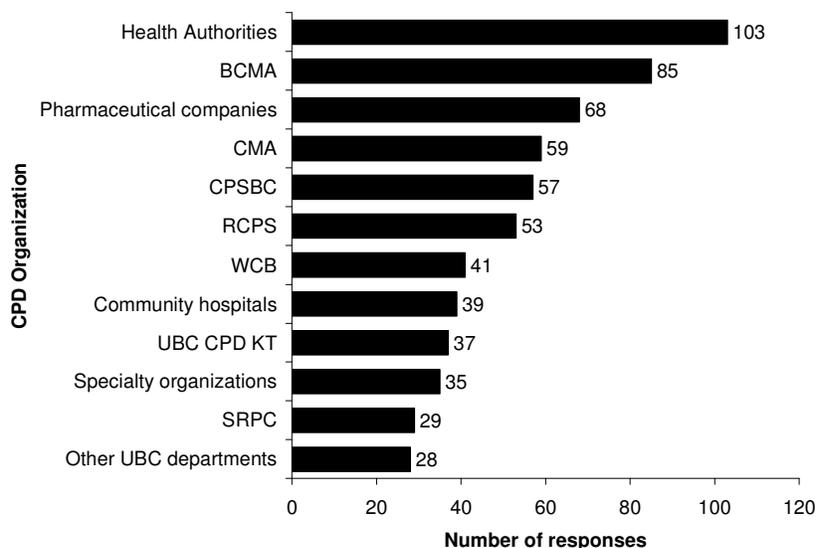


Figure 5.10 CPD Roles: Funding – Specialists



Funding Concerns and Suggested Solutions

Many of the funding related concerns centered on the administration of CPD funding. Frustration with current administrative systems related to funding was frequently noted. Many concerns related to the need to carry out administrative requirements for several different agencies in order to receive funding. This involved the filling out of multiple forms and submitting various documents (e.g., receipts, letters of support) in order to receive funds. This was noted as being very time-consuming, with agencies often taking months to process the requests. A commonly suggested solution to this challenge was to assign or establish a centralized body to administer CPD funding throughout the province. This body would be responsible for processing applications as well as promoting and coordinating the various funding programs. This would reduce bureaucracy, simplify paperwork for applicants, and streamline the funding process.

Findings revealed that many respondents were not aware of CPD funding opportunities available to rural physicians. This included a lack of knowledge about existing CPD funding programs, the specific criteria for funding eligibility, and how to apply and receive funding. The need for better advertising of funding programs in both online and paper formats was suggested. Another common concern was that current CPD funding did not reflect or cover the true costs of CPD. Specific costs not accounted for included loss of income while away from practice (exacerbated by the time required for the actual travel) and the higher cost of travel associated with greater distances and more remote communities of origin.

Concerns Specific to Specialists

Funding concerns unique to specialists focused on the need to travel out of province to obtain the best and most relevant CPD, with a majority of CPD events occurring in the United States. In general, tuition fees for specialists' CPD tend to be more expensive. As one respondent explained, "Some of the best courses are expensive and current funding programs do not sufficiently reimburse or keep pace with increasing costs."

Promotion and Awareness – Publicizing CPD

Figures 5.11 and 5.12 illustrate the ratings assigned to various organizations in terms of level of responsibility for publicizing CPD. Among GPs, the CFPC was perceived to be the organization most responsible for publicizing CPD, followed by UBC CPD-KT, the BCMA, and the CMA. For specialists, the BCMA was rated as the organization most responsible for publicizing CPD, followed by UBC CPD-KT, specialty organizations, and the CMA.

Figure 5.11 CPD Roles: Publicizing – GPs

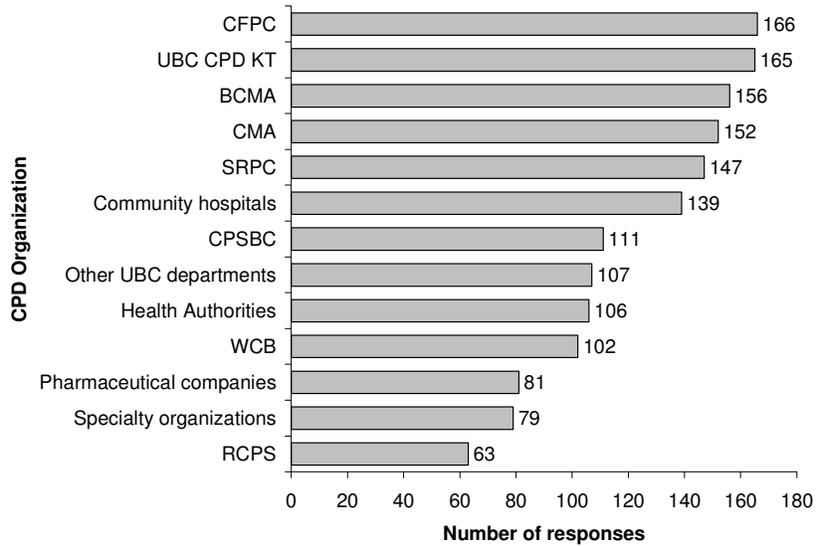
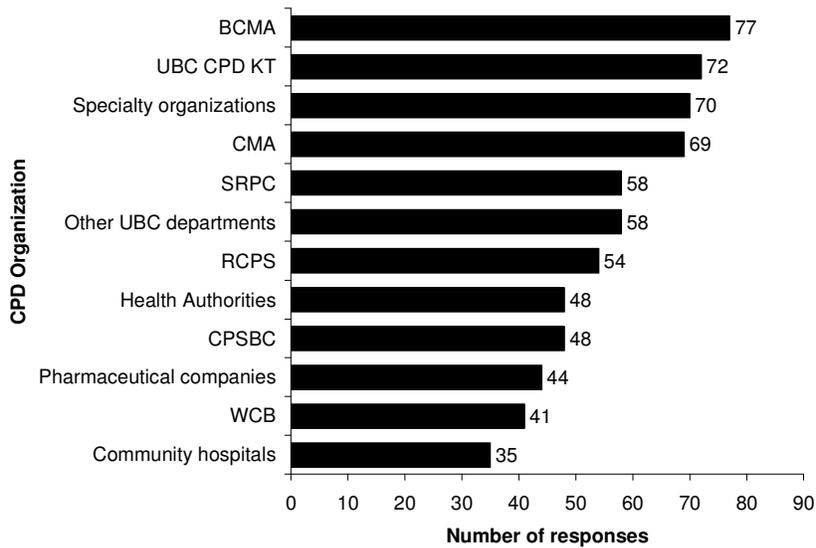


Figure 5.12 CPD Roles: Publicizing – Specialists



Promoting CPD Events and the Difficulties Created by ‘Information Overload’

Practice Demands Limit Opportunities for CPD

Many GPs and specialists felt that keeping abreast of upcoming CPD opportunities in the province was a major challenge. This was compounded by the intense demands of their practice, in terms of workload and the diversity of clinical responsibilities inherent to rural practice. Survey and interview/focus group findings confirmed that the challenges of balancing medical practice responsibilities with other responsibilities such as family and recreation left little time to pursue CPD.

Information Overload

Another major theme that emerged from the data was that rural physicians felt overwhelmed with both the amount of knowledge they were expected to assimilate in order to effectively practice medicine as well as the number of potential sources for CPD. As one participant reflected:

One of the challenges is that you have to know a little bit of everything. With the technology that's out there and the amount of knowledge that's out there, I often feel totally overwhelmed as to where I am going to start (GP, interview, Nov 24, 2005).

THEME AREA IV: INNOVATIVE SOLUTIONS FOR IMPROVING CPD

Rural physicians suggested solutions and strategies for enhancing rural CPD. Solutions addressed: improving access to CPD opportunities for rural physicians; raising physician awareness of existing CPD opportunities; improving the ‘rural relevancy’ of CPD content; and changes at the systems level to better support rural CPD. Although these themes have been addressed in previous sections of this report, this section provides a comprehensive, high level view of participants’ suggested solutions to inform subsequent rural CPD program design and development.

Proposed Solutions to Challenge of Time, Locum Coverage and Travel Costs

Local CPD offered by specialists within local referral centres was proposed as an opportunity to reduce the need to travel to CPD while simultaneously building up the relationship between GPs and specialists. *Road shows* were suggested as an innovative way to bring CPD to rural physicians. GP respondents were especially supportive of this idea. As explained by one physician, certain programs do offer road shows and the concept was well received:

The Canadian Association of Emergency Physicians has some traveling road shows that they organize, and we got them to come and put on a course here last Friday, which worked really well. But that is an anomaly. They are one of the few associations that make an effort to make themselves available to travel to smaller communities, whereas most of the time, they are all geared to events being presented in the big city (GP, interview, Nov 22, 2005).

Although many specialists agreed that traveling road shows were a good idea, they acknowledged that they may not be a cost-effective way to deliver CPD to specialists due to the geographical distance between specialists in rural areas.

Technology. Both GPs and specialists noted that an increase in technologies suitable to the rural environment would allow them to attend CPD closer to home. User competency and need for infrastructure upgrades to high-speed internet were cited as limitations to physicians' uptake of newer and particularly web-based technologies. If these barriers could be overcome, online access to CPD programs, PDAs and MP3s were all suggested as ways to accommodate physicians' work schedules.

Videoconferencing was specifically mentioned as an effective way of connecting rural physicians with other colleagues to promote collegiality and mitigate the effects of professional isolation. However, physicians cautioned that the effectiveness of videoconferencing was dependent on the level of interaction between the teacher and learner. Physicians recommended that half the videoconferencing time be allocated to a question and answer period. Other technological suggestions made by specialists included running a journal club by videoconference, and having a professional organization organize by email or via a website a weekly illustrated review topic with the latest developments and 'self review' questionnaire.

Locum Coverage. Many solutions related to securing locums were provided. Suggestions included the following:

- Developing a registry of locums available in the different specialties for rural areas;
- Having the Royal College develop and administrate a nation-wide specialist locum pool;
- Better promotion of the existing rural GP locum system that provides locums specifically for rural physicians in RSA communities;
- Having a roster of locums available on short notice for emergencies; and
- Having locum coverage included or tied into CPD course registration.

Lastly, one specialist respondent suggested that rural specialists try to have a second, less-specialized colleague they could rely on to take over more routine responsibilities, thus allowing the specialist more time to travel to CPD yet feel comfortable they had "left their practice in capable hands."

Proposed Solutions to Improve the Content of Rural CPD

GP survey respondents proposed several solutions for making rural CPD delivery more practical and relevant to their practice. These included:

- Offering regular electives at local hospitals to allow physicians to practice and enhance their skills in a rural setting;
- Better promotion of existing partnering programs that connects rural physicians with specialists for job shadowing to learn specific procedural skills; and

- Establishing a feedback loop between CPD providers and their rural audience. For example, CPD providers could submit their programs to a local CPD coordinator to determine whether the programming was suitable for the needs of the community. This would help build a positive relationship between CPD providers and rural physicians that is responsive to the needs of rural physicians.

Systemic Support for Rural CPD

Respondents consistently articulated the need for a single, centralized body to perform several functions which would improve the content of and access to CPD opportunities. Suggestions as to who this body could be included: UBC CPD-KT, the Northern Medical Program in Prince George, or another rural centre. Most agreed that the function of this body would be to tailor CPD topics to the needs of rural physicians and recruit CPD instructors with rural experience (or at least an awareness of rural CPD challenges).

Finally, many respondents stated that CPD events need to be publicized more effectively in order to increase physician access and maximize participation. A proposed solution was to create and maintain a centrally coordinated website that profiled upcoming CPD events. Physicians could review available CPD opportunities and select the offering that best accommodates their learning needs and schedule. The database could be flexible to accommodate both rural and urban, GP and specialist needs. The website could also serve a 'filtering' function to ensure that high quality CPD was well advertised. Also, this might reduce the prominence or visibility of pharmaceutical-sponsored CPD. Some suggestions as to what organizations should create and/or administer this type of resource included: UBC CPD-KT, CMA or the BCMA.

6. DISCUSSION AND RECOMMENDATIONS

The main objective of this research was to gain a comprehensive understanding of the educational needs of rural physicians in B.C. The findings presented in this report raise a number of clear messages. The following section presents these messages in response to the following questions: *Why* is CPD a challenge; *What* do rural physicians need from CPD; *Who* should be involved in CPD; and *How* can CPD be improved? A set of recommendations is also provided in response to the questions of *what* rural physicians need and *how* CPD can be improved. These recommendations were validated and expanded upon by the Steering Committee.

WHY is CPD a Challenge?

Logistical Challenges

Rural physicians face consistent challenges in meeting their CPD needs including time constraints, family commitments, difficulty finding locum coverage, and the cost of traveling to CPD events far away from their home community.

Making Informed Decisions when Selecting CPD Events

In the context of these challenges, rural physicians can feel overwhelmed by the number of CPD activities available to choose from; since they may only choose a few events, it is critical that the events they select are of high quality and value. Family physicians in particular prefer events where they can learn about a variety of skills and health domains, as rural physicians are often faced with a diverse array of cases and situations.

Professional Challenges

Professional isolation can have a significant impact on physicians' motivation to attend and participate in CPD events. This problem is heightened for specialists, whose peers are spread out across large distances and do not have the benefits of stimulating and supporting one another or attending CPD events together.

Technological Challenges

Rural physicians are interested in increasing their use of technology-enabled CPD; however, their ability to take advantage of these options is often constrained by the technological resources available to rural areas. These challenges could be mitigated by improving slow internet connections, videoconferencing quality and providing more training in basic computer/internet skills and PDA use.

WHAT do Rural Physicians Identify as Needs?

CPD must be Practical and Responsive to "Rural Realities"

Rural physicians desire *practical, hands-on information* that is *relevant* to their practice. This makes sense in light of the logistical challenges mentioned above. Given these constraints, it is understandable that when rural physicians do attend CPD, they would like what they learn to be directly applicable to their practice. Rural CPD must take into account the technological infrastructure and informational resources available to the rural physicians. Case-based learning activities are highly favoured.

Small Group Learning is the Preferred Delivery Format

Rural GPs prefer small group formats, where they can ask questions, and there is a significant level of interaction between the speaker and participants. This was echoed by the steering committee, who suggested that even conferences were not necessarily undesirable for rural CPD, as long as their size and organizational plan allowed for interaction between learners and teachers.

Keep CPD Local

Rural physicians would also appreciate more local CPD offerings taught by local specialists. In this way, rural physicians could learn about topics of greater relevance to their setting, attend CPD closer to home, while building better relationships with local GPs and specialists. Ensuring that CPD providers are aware of these specific educational needs should be an integral part of rural CPD planning and delivery.

Clinical Content

There was a tremendous desire among GPs and specialists for CPD on *emergency medicine* and *obstetrics and gynaecology*. These topics could ideally be delivered through a road show, with an emphasis on hands-on learning. Other topic areas to consider for future CPD offerings include psychiatry for GPs and anesthesiology for specialists.

Technology Training in PDAs and Basic Computer Use

Although a large majority of GPs and specialists had access to a computer and the internet, there was a clear desire among rural physicians to improve their basic computer and internet skills. Most importantly, GPs and specialists expressed an overwhelming desire to receive more training in PDA use, including basic PDA skills, and PDA applications to facilitate access to clinical practice guidelines and pharmaceutical information. In order for technology-enabled CPD to be effective, timing needs to be flexible with rural physician work schedules (e.g. minimal real-time attendance required, evening and weekends preferred with provisions for family activities if appropriate).

Proposed Recommendations to Address Rural Content and Delivery Needs:

1. Establish and nurture linkages between rural practitioners and specialists in their referral area to ensure CPD is responsive to the needs of a rural audience.
2. Offer more interactive, small group CPD sessions; increase the time allotted for questions and feedback.
3. Increase awareness of rural needs to urban specialists teaching rural CPD.
4. Encourage more rural specialists to teach CPD with adequate financial compensation and/or CPD credits.
5. If not currently available in RSA communities, promote access to high speed internet and make available decision support tools such as "UpToDate", PDA programs and videoconferencing capability.
6. Provide support for training physicians in the use of technology-enabled CPD, particularly basic computer skills and PDA use.

WHO Should be Involved in CPD?

The needs assessment provided valuable insight into how rural physicians view the roles of various organizations involved in CPD. In terms of *developing content, organizing and delivering* CPD, UBC CPD-KT received the most support from GPs and specialists. Health authorities and the BCMA were viewed as most responsible for *funding* CPD. The CFPC was viewed by GPs as most responsible for *setting standards* while specialists viewed the RCPS as most responsible for this task. GPs also viewed the CFPC as most responsible for *promoting* CPD while specialists saw the BCMA as most responsible for this role.

Interestingly, pharmaceutical companies received the least amount of support for all of the CPD roles, with the exception of funding. This is consistent with specific comments made by GPs and specialists. For the most part, GPs and specialists did not like the idea of industry-sponsored CPD and expressed concern about the growing presence of the pharmaceutical industry within rural CPD. These findings can provide a useful starting point for discussion on coordinating CPD activities among various CPD organizations and also facilitate organizational self-reflection in terms of organization goals and priorities.

HOW Can CPD be Improved?

Rural physicians provided many practical suggestions on how to address the logistical, professional and other CPD challenges outlined above. CPD providers should consider the following recommendations when planning and organizing CPD:

Recommendations to Ensure Rural Relevance and Local Feasibility:

7. Develop and maintain a directory of 'rural savvy' CPD educators who are familiar with rural practice and possess sufficient teaching skills to communicate their knowledge in a practical and engaging manner.

8. Establish a feedback loop between CPD providers and rural physicians to ensure CPD is responsive to rural CPD needs.

9. Provide more opportunities for enhanced skills training for rural physicians; ideally this would occur locally and be taught by local specialists. These 'enhanced skills' physicians might allow specialists more time to attend out-of-town CPD, enhance local GP-specialist relations, and promote more local health care.

Recommendations for Publicizing CPD:

10. Create an accessible, central registry of upcoming CPD events. This could be an internet-based, searchable database that profiled upcoming CPD events throughout the province. Rural physicians could view upcoming CPD opportunities and select the best event to meet their learning needs and practice demands.

11. Establish and support a provincial rural CPD office to centrally coordinate CPD opportunities. This body would possess a strong understanding of rural issues including avenues for rural CPD funding and teaching opportunities. Other responsibilities could include developing and delivering new rural programs, ensuring effective advertising of quality CPD events, and serving as a physician liaison to answer questions about funding and upcoming CPD events.

UBC CPD-KT in association with its Northern Medical Program in Prince George is one organization that may be well-situated to perform this function.

Recommendations for Funding CPD:

12. Funding should be requested from Health Authorities or the JSC to explore the development and implementation of road shows, particularly using simulation technologies and addressing the topics of emergency medicine and obstetrics and gynaecology.

13. Create a central agency for administering CPD funding as well as providing information on funding programs available. The establishment of one single process and one set of forms to administer rural CPD funds would streamline the administrative workload of rural physicians to receive compensation.

14. Consider increasing the amount of CPD funding available to rural specialists who need to travel farther to obtain the highest quality CPD in their field.

15. Advocate for unused CPD funds to be reallocated at the individual health authority level to meet the diversity of rural physicians' CPD needs.

7. CONCLUSION AND FUTURE DIRECTIONS

This needs assessment contributed to rural CPD research in two major areas. First, it provided a comprehensive summary of what rural physicians within B.C. need from their CPD and how they think CPD can be improved. Second, it provided a better understanding of what types of educational activities, technologies and resources are most beneficial for rural physicians, given the particular context of practicing in a rural area. While many of the results obtained in this project were similar to past findings, having data specific to rural physicians in B.C. helped create a “lens” to guide and support the recommended solutions to respond to their particular challenges. Overall, this project provided insight into how rural GPs and specialists think about and experience CPD as well as outlined some practical directions to CPD providers on what is required to increase user satisfaction and success with CPD.

This project also made significant strides in engaging rural physicians, both in terms of involving rural physicians in CPD development processes and also promoting awareness of specific CPD programs. Further, the needs assessment survey produced a surprisingly high response rate for physicians (28-31%) suggesting that this project touched on an issue of significant concern and importance to rural physicians.

Other Available Data and Future Research Directions

Future research directions include two main categories: (1) further in-depth analysis of existing data collected in this comprehensive needs assessment; and (2) new research and areas of exploration based upon the current findings. Each will be discussed in turn in the remainder of this section.

Other Available Data

Given the comprehensive nature of this needs assessment, several areas of potential significance to rural CPD were not included in this report but represent areas for further analysis and reporting. These are outlined here and in the survey instrument itself (see Appendix 2). In short, this needs assessment addressed and collected quantitative and qualitative data on the following research areas:

- The range of rural physicians’ learning styles, preferences and activities
- CPD needs and preferences including format and clinical content
- Organizational roles in CPD service and delivery
- Clinical learning needs, including chronic disease management and occupational health
- Enhanced skills and sub-specialization areas for GPs
- Perceived needs for CPD related to non-clinical skills including interprofessional team development and communication
- Barriers and incentives to CPD participation
- Participants’ interest in the organization, planning and delivery of CPD
- Perceptions and participation related to interprofessional education
- Views related to financial and other CPD resources

- Qualitative data regarding the range of rural practice settings and patient populations served

Specific future research initiatives arising from this current data repository include an in-depth examination of the data on rural physicians' needs related to chronic disease management, interprofessional CPD, and occupational health information. We have collected data on level of interest in interprofessional CPD, and recommendations on delivering effective interprofessional CPD. These areas were briefly described in this report; however, in-depth qualitative analysis of key informant and focus group data would yield potential strategies for implementation.

In addition, detailed examination of the differences among rural physicians' CPD needs, based upon demographic groupings represents a potential area of further in-depth investigation. Rural physicians are not a homogenous group, but have varying perspectives based on such factors as age, gender, stage of professional practice, cultural background, and location.

Directions for New Research

Directions for new/additional research based on the findings of this needs assessment include the following:

- A comparative study between rural and urban CPD needs in order to identify similarities and differences between the educational needs of physicians in B.C. This type of study could have a considerable impact on the design of future CPD programs (e.g., identifying topics where rural and urban physicians share similar needs and interests, facilitating co-learning between urban and rural physicians, etc.).
- Qualitative examination of the more subtle differences between rural physicians; extension of this research to include the needs and preferences of new grads, international medical graduates (IMGs), physicians close to retirement; and evaluation of the effectiveness of specific CPD programs (related to funding, enhanced skills education etc.).
- On a longitudinal scale, future directions include an evaluation of the extent to which recommendations included in this report – if implemented – lead to better health outcomes from improved rural physician education and address the challenge of rural recruitment and retention.

Next Steps

Next steps for action include disseminating the findings of this study to inform and direct future CPD offerings. These results need to be shared at the community, practitioner, decision-maker, and program planning levels for successful knowledge translation. Support should also be provided to current CPD providers and programs to assist in implementing the above mentioned recommendations as best possible given the framework of current practices.

Continuing Professional Development is not only a means for physicians to improve the effectiveness of their practice, but also is a way to promote professional satisfaction and build

professional connections within communities. The broader significance of CPD learning opportunities for rural GPs and specialists is evident from the findings of this study. The implementation of the input received from this needs assessment can significantly assist with the development of appropriate rural CPD opportunities to improve rural health care for medical practitioners and their communities.

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