

Appendix A: Survey Items

Current Fellows

- Background questions
 - How many years of critical care fellowship have you completed? (1, 2, 3+)
 - Are you a fellow in a Royal College Program or are you a Clinical Fellow (with external funding) (*Royal College Fellow, Clinical Fellow*)
 - Where is your primary training site? (*List all critical care sites*)
 - What is your primary specialty? (*Medicine, Anaesthesia, General Surgery, Pediatrics, Other: please specify*)
 - Are you training in Adult or Pediatric Critical Care? (*Adult, Pediatric*)
 - Do you have any advanced degrees (Masters or PhD) (*yes/no*)
 - If yes, in what field? (Free text)
 - Are you interested in a research career? (Defined by at least 0.5 FTE dedicated to research) (*yes/no*)
 - Do you already have a job lined up for when you finish? (*yes/no*)
 - If yes to above, how much protected non-clinical time (administrative, teaching or research) will you have? (<0.2 FTE, 0.2-0.5 FTE, >0.5 FTE)
- Research Questions
 - Are you currently working on a research project? (*yes/no*)
 - What stage is your project in? (*select one or multiple*)
 - *Protocol development/literature review*
 - *REB application*
 - *Application for external funding*
 - *Patient recruitment/data collection*
 - *Data analysis*
 - *Development of manuscript*
 - *Other _____*
 - What aspects of research do you find most challenging?
 - *Protocol development/literature review*
 - *REB application*
 - *Application for external funding*
 - *Patient recruitment/data collection*
 - *Data analysis*
 - *Development of manuscript*
 - *Other _____*
 - Do you have an identified research supervisor? (*yes/no*)
 - If yes, was this supervisor assigned or self-selected? (*Assigned/self-selected*)
 - If yes, how involved has your research supervisor been in your research project? (5 point Likert – not at all, somewhat, neutral, involved, very involved)

- What has he/she done to help? (open ended)

- The Canadian Critical Care Trials Group (CCCTG) hosts an annual research education program where members of the CCCTG present on research topics and then provide feedback for fellow research projects.
 - Have you participated in the CCCTG program in the past? (yes/no)
 - What would you like to learn about in a research program? Select all that apply
 - *Research methodology/study design*
 - *Statistics*
 - *Database management*
 - *Ethics in research/working with REB*
 - *Developing a budget*
 - *Writing a grant proposal*
 - *Writing a manuscript*
 - *Other – please specify _____*

 - What do you think would be the best way to present material?
 - *In-person*
 - *Web-based*
 - *Combination of in-person and web-based*
 - What length of research training offered by the CCCTG would be ideal?
 - *1 day*
 - *1 week*
 - *Longitudinal over course of fellowship*

- Have you participated in any formal research education in your fellowship other than that offered by the CCCTG? (i.e. organized by your program, outside clinical time, specifically focused on research) yes/no
 - If no, was a course offered? (yes/no)
 - If a course was offered, why was it declined? (Select all that apply)
 - *No interest in research*
 - *Unable to get time off clinical work,*
 - *Have previously taken similar research course*
 - *Already feel proficient in research*
 - *Other – please specify: _____*

 - If yes, what have you learned about? (select all that apply)
 - *Research methodology/study design*
 - *Statistics*
 - *Database management*
 - *Ethics in research/working with REB*
 - *Developing a budget*
 - *Writing a grant proposal*
 - *Writing a manuscript*

- *Other – please specify* _____
- Who was this course taught by
 - Members of the critical-care faculty
 - University-wide program
 - *Other – please specify* _____
- Approximately how much total time have you spent on this formal research education?
 - *One afternoon*
 - *One day*
 - *One week*
 - *One month*
 - *Other – please specify* _____
- Was this protected time? (*yes/no*)

Junior Faculty

- Background:
 - Are you currently in a research position? (at least 0.5 FTE protected) (*yes/no*)
 - Is your research time protected? (*yes/no*)
 - If no, why is it not protected (free text)
 - What type of research are you currently involved in?
 - *Clinical*
 - *Translational/basic science*
 - *Medical education*
 - *Health economics*
 - *Knowledge translation*
 - *Health technology assessment*
 - *Other – please specify* _____
 - How long ago did you finish clinical ICU training? (1, 2, 3, 4, 5 years)
 - Where was your primary site of critical care training?
 - (Canada: please specify institute, United States: please specify institute, International: please specify country)
 - Do you have any advanced degrees (Masters or PhD) (*yes/no*)
 - If yes, in what field? (Free text)
 - Within your department/division of critical care, what percentage of staff have protected time for research?
- Did you have any formal research education as fellow? (see questions from fellow list)
- Trained enough or not in each area in list (5 point Likert)
- Where/how did you learn about each area?
 - Formal training as fellow
 - During training as part of advanced degree

- Informal training as fellow
- Learned yourself after started on faculty
- Other _____
- Roadblocks to starting successful research career? (open ended)
- CCCTG education program:
 - Did you attend? y/n
 - Value of course (now that can look back on what needed to learn about) 5 point Likert
 - List specifics that you learned that have been proven to be useful
 - List specifics that you learned that have been proven not to be useful
 - What role can CCCTG have in fellow research education? (open ended)
 - Expand program:
 - How should it look (like questions on fellow list)
 - What topics should be covered
- What are local research resources that you currently have access to? Select all that apply:
 - Research institute,
 - methods centre,
 - biostatistician,
 - epidemiologist,
 - database management,
 - coordinators (full time in ICU or funded per project)
- Do you currently have a research mentor? (*yes/no*)
 - If yes, was this mentor assigned or self-selected? (*Assigned/self-selected*)
 - How often do you meet with your mentor?
 - Weekly
 - Monthly
 - Biannually
 - Annually
 - Other: please specify _____
 - How helpful have you found this mentor from a research perspective? (5 point Likert - not at all, somewhat, neutral, helpful, very helpful)

Program Directors

- How many fellows are in your program?
- Do residents participate in any research in your program? y/n
 - If yes, what percentage of the residents?
- Do they have any protected time for research? y/n
 - If yes, how much?
- What are the research expectations in the program? (check all)
 - Present poster/abstract at a meeting
 - Published manuscript
 - Grant funding

- Completion of study
- No research expectation
- Is there any formal research training in your program? y/n (see fellow list for questions)
- What resources at your local university are available? (see other list under fellows questions)
- Are there any university or department based funding sources available for fellow-driven research? y/n
- List any resources that you would like to have available for your fellows research education that are not currently available
- Do you currently send your fellows to the CCCTG 1 day course? y/n
 - If yes, do you fund them to go?
- Role of CCCTG in research education of fellows:
 - Any role? (5 point Likert)
 - What topics/resources should CCCTG provide
- Feasibility of sending fellows to: (5 point likert)
 - Current 1 day in person course
 - 1 day web-based course
 - Week long in-person course
 - Week long web-based course
 - Longitudinal in-person course
 - Longitudinal web-based course
 - Longitudinal combination in-person and web-based course

Trials group members

- background:
 - In a research position? (at least 0.5 FTE protected)
 - Research Interests (open-ended) – clinical, translational, education, health economics, knowledge translation and health technology assessment, other?
 - Is this time actually being protected?
 - If not, why? (open ended)
 - How long ago did you finish clinical ICU training
 - Where?
 - Do you have an advanced degree (Masters, PhD)? In what?
 - Within department/division of critical care, % other staff who have protected time with a primary research focus
- Do you teach in a formal research course at your local site?
- Current local research resources (check all apply):
 - Research institute, methods centre, biostatistician, epidemiologist, database management, coordinators (full time in ICU or funded per project)
- Are you involved in mentorship of residents or junior faculty?
- What areas of research do you find mentees to have most difficulty?
 - Research methodology/study design
 - Statistics
 - Database management
 - Ethics in research/working with REB
 - Developing a budget
 - Writing a grant proposal

- Writing a manuscript
 - Other _____
- Have you presented at or attended the CCCTG research day?
- If yes, how useful did you find it (Likert scale)
- What additional topics/resources should the CCCTG training provide?
- Feasibility of: (5 point likert)
 - Current 1 day in person course
 - 1 day web-based course
 - Week long in-person course
 - Week long web-based course
 - Longitudinal in-person course
 - Longitudinal web-based course
 - Longitudinal combination in-person and web-based course

Research Coordinators

- Do you currently work with fellows on their research project? y/n
- Do you currently work with junior critical care faculty on their research projects? y/n (less than 5 years in practice)
- What are trainees trained well on in your institution with respect to research? (list from fellows questions)
- What do they need more training on? (list from fellows questions)