



PODIUM: DOCTORS SPEAK OUT LA PAROLE AUX MÉDICINS

Developing a rural research project

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For a chosen few, a facility and interest in research accompanies them into and out of medical school and beyond. For the rest of us it is a developmental process. The first 5–7 years of our professional lives are spent establishing a practice, a workable continuing medical education strategy and a balance with our selves, family and friends. By then we are in a rural practice. We have questions that arise from our patients, their treatment and what the medical literature does and does not tell us. How can we move these questions forward into a research project?

We may not develop into full-fledged researchers (i.e., don't give up your day and night job) but we are likely capable of very worthwhile contributions. After a career in rural medicine, most observers would consider us experts at being generalists. Some of us may take further training in research or simply partner with those who have.

Though not cast in stone, below are: the 1 undivided truth involved in developing a successful rural research project, the 2 paths to enlightenment, the 3 virtues, the 10 commandments and the 7 deadly sins.

THE 1 UNDIVIDED TRUTH

Research defines a discipline.¹ Highlighting specific rural issues that have an impact on patient care and outcomes is invaluable. Rural research can shed light on how patient care is provided in circumstances beyond urban centres, where most research presently originates.

THE 2 PATHS TO ENLIGHTENMENT

1. *Quantitative research*

Surveys, small trials, case reports, chart reviews, data set analysis. The scope need not be large for many office-based inquiries. Or one may initiate or participate in a larger, multivillage trial.

2. *Qualitative research*

Interviews, focus groups. This type of research has more to it than it appears, but with appropriate collaboration it is a good fit for family physicians. It often tries to get at patients' experiential thoughts and feelings.

THE 3 VIRTUES

1. *Increased confidence*

You are a scientist as well as a teacher and clinician. Why else do you think the way you do? Working on this aspect of your career broadens your sense of your professionalism.

2. *Increased professional/academic standing*

There are many ways of contributing to the profession; research is one way. This may be an area for you to explore.

3. *Less untilled fertile ground*

If medical writing or research is something you always wanted to do, then take some steps to accomplish it. Like

those many other things we want to see harvested in our life, this may be worth pursuing.

THE 10 COMMANDMENTS

1. *Curiosity*

Trust your gut. A question arises. You generally keep up with the relevant literature for your practice. If you do not know the answer, it likely hasn't been answered. So go ahead. Trust that instinct, as your type of practice may not be reflected in the general literature.

2. *Topic/question*

The type of question you ask determines the methodology needed to answer it. Many questions can be answered with relatively small sample sizes ($n = 100$); interesting case reports need only 1 patient. Try to define the question most succinctly. Talk to colleagues about it.

3. *Literature search*

A simple search may tell you if the question has already been answered. Medical librarians can often do that for you; if you continue, they can do a thorough search for relevant articles and send them to you. You may do a quick Medline search or even Google the question.

4. *Write the title*

This is harder than you might think. It is best to kick it around with several colleagues to get the correct wording. From this exercise you can clarify exactly what it is you want to zero in on. Since brevity is required in a title, it forces you to hone down the question of interest.

5. *Collaborate appropriately*

We are asked at times for access to our data or patient population, but are not really a part of a research team — this is not collaboration. If this occurs, consider asking for full participation in the project, if you want it. Otherwise, when deciding on how to proceed with your own project, find colleagues you trust who can bring energy, skills and perspectives you do not possess. Involving a medical student or other learner adds a lot of energy and can be a great boon to getting a project started — it

also gives you some incentive to complete it, as you will not want to see their labour go for naught. Always offer participation in authorship to colleagues who are willing to help you out. See the “Vancouver rules” for correct authorship attribution.² Collaboration may even take the form of joining or creating a network of similar-minded colleagues to address the question.

6. *Ethics*

You need to have ethics approval for almost all research projects. You may apply to ethics/research committees at hospitals, universities and even provincial colleges. Ethics approval needs to be in place before gathering any data. This is not a bad place to get help from someone who has gone through this before. Consider it a necessary evil and get it done. Research in Aboriginal topics has additional parameters outlined by the National Aboriginal Health Organization (NAHO) and the Canadian Institute for Health Research (CIHR).^{3,4}

7. *Data gathering*

Sounds like gardening, but much less colourful. In a small town, there is a power differential involving the physician and patient which may preclude certain topics or patients from research involvement. Your clinic staff can be invaluable in handing out surveys or collecting chart data for you. Electronic medical records open new doors.

8. *Analysis*

Using the correct statistics will require help from a professional who will be best served by being offered a participation in authorship. Always consult the chosen statistician before collecting data. If you collect data in widgets and their computer program counts digits, there will be issues, big issues. If statistical analysis will be needed, always find out what data will be required and in what form it needs to be collected and recorded.

9. *Write-up*

Always begin by choosing the journal you think is most appropriate and going to their website and downloading their instructions for authors. Do not write a “tome” in the Russian tradition and expect yourself, a friend or a busy journal editor to chop it down to size for you. Stick to the length and headings

they suggest. It will help to keep the paper organized, even if you ultimately submit it elsewhere.

10. Rewrite, resubmit

It got rejected by the journal. This is where collaborators are useful. You are disappointed and somewhat sick of the topic by now. Let others help to edit and change the paper. Every rejection will contain valuable suggestions from editors and reviewers who are experts in medical writing. Use that to improve on the work, even if you decide to submit the revision to another journal.

THE 7 DEADLY SINS

1. Not protecting time

You just have to choose an afternoon or morning that you will protect. No one will do this for you. Also, try working a bit when on call, if it is not too hectic. If you cannot put aside any protected time, then put the research off until later. Paid time off? Unlikely, but get it if you can.

2. Not asking for help

Ask for assistance, where you need it, early on, before you start hitting your head against the wall. Research is like any skill; you may come by it naturally, or more likely you will need some help along the way.

3. Not listening

More experienced researchers will often point out that you have bitten off more than you can chew and that the scope needs to be reduced. Listen to them. There may also be limitations imposed by the proposed methodology, patient access or geography. This may be a bit deflating, but being realistic early on is good.

4. Thinking the research is not important

Stay the course. If you thought it was a good project, it still is, even though you have met some hurdles.

You may decide that the project is worthwhile but not for you once you have a sense of what it involves, or you may find you need assistance.

5. Thinking you are not up to it

With a busy practice and a busy life, expect the project to sit and gather dust at times. This is unfortunate, but common; it is harder to get back into it once you have left it for a while. Major roadblocks may be not having enough time or needing more collaboration.

6. Trying to cover too much

What will it take to prove or elaborate your point? Would a well-written letter to the editor suffice where a research project may not be feasible?

7. NOT FINISHING

Dust it off, get help. Choose some time when you can take another run at it. Pare it down, go into salvage mode if you have to: does the literature review component have enough interest to stand alone as a submission?

If you follow these 10 commandments, avoid these 7 deadly sins, profit from these 3 virtues and wisely choose your path to enlightenment, we may all reap the benefits of the undivided truth.

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