

Chapter 2.4.1

CLINICAL RESEARCH IN RURAL PRACTICE

Len Kelly

Northern Ontario School of Medicine, Canada

Introduction

While rural areas provide fertile ground for clinical research, very little is being done as rural physicians¹ are typically short-handed and on call regularly, often for multiple services. Research is therefore often begun from 'away' by researchers who either need a rural component to diversify their data base or to meet funding requirements. This practice may help define some undocumented rural health issues, but does not build local capacity.

There seem to be three main limitations for the rural clinician doing research: *time*, *resources* and *expertise*. Concomitantly, there are numerous rural advantages: *curiosity*, *broad scope* of medical practice and *ingenuity* in programme development addressing local needs. How can we encourage and develop rural researchers?

The research-clinical divide

'Perspective'

One of the divides between the research community and the clinical one is their differing perspectives. A rural clinician knows that physicians shoulder a substantial workload. They may have been up all night with a sick child and come to morning clinic or even a research meeting with a more passionate sense of care-giving. This differs greatly from a more dispassionate, and even physician-critical, perspective researchers may bring. This divide is attitudinal and is reflected in an unspoken core value of rural physicians: 'respect is garnered by onerous on-call responsibilities and long-standing service'.

¹ Here a 'physician' is another term for 'doctor' or general practitioner, while in countries like South Africa and Australia, a 'physician' is a specialist in internal medicine.

Non-physician researchers often view this over-investment in their role as a false sense of superiority, when it may simply reflect their perception that when things are going medically wrong in the middle of the night, it is the physician who undertakes the unpleasant and necessary duties. If this brings some sense of ownership, so be it.

'Language'

Since each sub-culture has its own language and short forms, learning the lingo is a common entry requirement. We generally share the language of our peers, so entering the field of research requires encountering our new peers. This can be accomplished by arranged meetings at conferences attended by clinicians and researchers, by additional research training for the rural physician, and/or collaboration with experienced researchers.

Collaboration

Collaboration requires trust. Although many rural clinicians work closely with fellow physicians and nursing colleagues, they have an inherent distrust of academia. This reticence needs to be slowly addressed one relationship at a time.

We do not want to be used as a 'source of data', but need to be full participants in relevant research questions which may help our communities. Research has a bad connotation in many Aboriginal communities who have been used as interesting studies, but often do not hear back from the researchers after the data has been gathered or the project completed (1). Developing capacity and relationships needs to be a long term, two-way process.

Broader applicability and implementation

While there are many ways to consider developing rural research capacity, there are several which have been successful.

Investing in individuals

An inventive rural research fellowship programme has been developed in British Columbia, Canada. Interested rural clinicians can apply for a one- or three-year programme which 'buys' one or two days of their week for the allotted timeframe. The clinician can determine the time they are prepared to invest and the programme sets project completion and publication expectations. The rural clinician is provided with mentorship and several hours of statistical support monthly. They can travel into regional centres or work from home. While the programme investment is flexible and relatively short-lived, it results in the development of research capacity and the completion of relevant rural research questions (2).

Investing in communities

The Northern Ontario School of Medicine successfully piloted the allocation of research interns to numerous distributed researchers for a period of one year. In rural communities these university graduate interns were essentially a community resource working under the supervision of one clinician.

With an intern working daily for a year, interested rural clinicians could move forward questions and projects which otherwise would have remained 'what if's'. By the end of the year, most involved clinicians had succeeded in multiple peer reviewed publications. But, more importantly, a culture of research had developed in many rural areas, which took on a life of its own (3).

Rural location of research infrastructure

Flinders University Rural Clinical School has taken the establishment of rural research infrastructure a more permanent step forward. By placing rural research institutes in several rural regions, doctoral candidates live and work in these distributed sites and see firsthand how distance and geography affect the quality of life and services. Research questions are developed in this environment and it offers a unique opportunity for rural clinicians to rub shoulders with expert researchers and develop some of their own skills (4).

Practice Pearls

Time

A busy rural clinician needs to protect time. Typically this means regularly canceling an afternoon of clinical duties. Taking time away from family and friends may occur but is not a good starting point.

Resources

Research will cost you. Lost income accompanies time away from your practice. What you want to avoid is out-of-pocket expenses.

Small university grants are often available and can offer some funding for part-time clerical support. An excellent use of these funds is to hire a summer pre-med or medical student. In addition if you have an internship programme at a nearby university, providing a placement for an intern can provide substantial research assistance.

Expertise

We need low-level support from these summer students or interns to do much of the tedious data gathering (5). They may be willing to slog through medical records for hours, pulling and leafing through charts for a chance to be a part of a research project.

We will usually also need the expertise of experienced researchers and statisticians. Finding who these are can be a real challenge for rural clinicians. Our intermediary to academic medicine, our rural co-ordinator, may guide the way. Alternately, develop the expertise yourself. Working in a group is ideal, but going it alone may be required. Once your practice and family life is settled (often at the seven to ten year mark) look into the availability of short research courses or even distant education Masters degrees. That way any course assignments can address research questions of local interest or develop appropriate questions and research approaches.

Curiosity

Rural clinicians see families and illnesses develop over time. It is a unique experience and a valuable research perspective. Delivering the baby of one of your earlier deliveries, or even the grandchild in the following generation is an honoured experience. This longitudinal overview of social, medical and genetic determinants of health is unique to the long-standing generalist. It affects the way we think of medicine and the research questions we may formulate.

The curiosity in rural medicine is ongoing. Since we are involved in so many branches of medicine, intellectual stimulation comes from many directions (6, 7).

Ingenuity

Rural physicians need to meet community needs. This often involves developing programmes which may not fit ideally into funding templates and therefore may require creative local solutions. One learns early in a rural medical career that problem solving needs to be done locally, as solutions arriving from afar can be problematic. Rural physicians will typically be involved in developing protocols, policies and formularies for their local hospital. Ingenuity in problem solving is by necessity an acquired skill.

Broad scope of practice

Some medications have been found to be useful in several disparate branches of medicine, even where their mechanism is incompletely understood. For example while Metformin is used for regulation of menses and its anti-androgenic effects in polycystic ovarian syndrome, it is also widely used as an oral hypoglycemic for diabetes. Primary care physicians will prescribe it for either disease, while it might otherwise fall into the practices of endocrinologists and gynaecologists. Treating across diseases with a single medication can give one a unique familiarity with that drug.

Treating the many medical illnesses which can arise during pregnancy often falls to the rural physician who also manages the delivery itself. This perspective of how interconnected treatment, compliance, cost and practicality all affect the patient and her health outcomes is unique. Everything ends at the patient, and since we are

committed to them, rather than one disease or aspect of their care, we may see different issues. For example, if compliance to recommended guidelines is too challenging for a given patient due to concomitant disorders, social responsibilities or poverty, we need to negotiate a manageable treatment plan.

Conclusion

Research is not for everyone, but many rural clinicians have much to offer. Capacity development may have to occur on their terms as their primary clinical duties will be constant. Solutions need to recognise the 'part-time' aspect of the participation of busy rural clinicians and the sub-cultural gap separating them from the research community, whose members rarely visit distant clinical locations.

References

1. Kelly L, Rourke J. Research Electives in Rural Health Care. *Canadian Family Physician*. 2002; 48:1476-80.
2. Kelly L. Chapter 20. In: *Community Based Medical Education: A teacher's handbook*. Oxford: Radcliffe Publishing; 2011.
3. Kelly L. Developing rural research project. *Canadian Journal of Rural Medicine* 2008; 13(4):194-6.
4. Canadian Institutes of Health Research. *CIHR guidelines for health research involving Aboriginal people*. Ottawa: Her Majesty the Queen in Right of Canada; 2007. www.cihr-irsc.gc.ca/e/documents/ethics_aboriginal_guidelines_e.pdf (accessed 13 March 2008).
5. The University of British Columbia. *The Vancouver Foundation (BCMSF) community-based clinician investigator salary award request for applications*. www.familypractice.ubc.ca/research/documents/cbci_rfa_2007.pdf (accessed 13 March 2008).
6. Kelly L, St Pierre-Hansen N. Researching Rural. *CJRM* 2008;13(2):86-9.
7. Greenhill J. *Flinders University Rural Clinical School*. furcs.flinders.edu.au/clinical/Research_unit/research_unit.htm (accessed Jan 6, 2014).

This article is a chapter from the **WONCA Rural Medical Education Guidebook**.
It is available from www.globalfamilydoctor.com.

Published by:
WONCA Working Party on Rural Practice
World Organization of Family Doctors (WONCA)
12A-05 Chartered Square Building
152 North Sathon Road
Silom, Bangrak
Bangkok 10500
THAILAND



manager@wonca.net

© Kelly L, 2014.

The author has granted the World Organization of Family Doctors (WONCA) and the WONCA Working Party on Rural Practice permission for the reproduction of this chapter.

The views expressed in this chapter are those of the author and do not necessarily reflect the views and policies of the World Organization of Family Doctors (WONCA) and the WONCA Working Party on Rural Practice. Every effort has been made to ensure that the information in this chapter is accurate. This does not diminish the requirement to exercise clinical judgement, and neither the publisher nor the authors can accept any responsibility for its use in practice.

Requests for permission to reproduce or translate WONCA publications for commercial use or distribution should be addressed to the WONCA Secretariat at the address above.



Suggested citation: Kelly L. Clinical research in rural practice. In Chater AB, Rourke J, Couper ID, Strasser RP, Reid S (eds.) *WONCA Rural Medical Education Guidebook*. World Organization of Family Doctors (WONCA): WONCA Working Party on Rural Practice, 2014. www.globalfamilydoctor.com (accessed [date]).