

Challenges in rural GP research

Antony Irving MBBS FCFP(LM)

I have worked as a rural doctor in Pincher Creek, Alta, (population 3685) for 43 years. During that time it has become clear that my patients' health and welfare are affected greatly by their lifestyles. Although obesity has many causes, it made sense to try to at least make people aware of some of the causes and make suggestions for change.

The changes that have the biggest effect include reducing carbohydrate intake, especially of liquids; reducing fat intake; increasing consumption of coloured vegetables, fruits, and nuts; and getting out and exercising regularly. This advice is easily given in the office but likely forgotten quickly. I developed a small card that contained, in very simple words, the advice that I considered most important. Because I recognized that there were lifestyle problems besides obesity, I included advice on smoking cessation and improving sleep.

Examining the data

After a year or so of hammering away at this, I perceived that some of my patients were indeed losing weight and feeling much more energetic and happy. I was very fortunate to have an information technology worker in my practice, and this enabled me to look at my data objectively. Among those who lost weight, some lost as much as 30 kg, but we knew our data analysis would not stand up to scientific scrutiny.

At this stage our clinic was invited to become a sentinel site for the Canadian Primary Care Sentinel Surveillance Network (CPCSSN). The Southern Alberta Primary Care Research Network and CPCSSN teams asked if we had any topics that we would like to research. I put forward what I had been doing and proposed that we look at my data in a more scientific way.

Data challenges

Immediately there were challenges. We needed controls. We needed preexposure and postexposure data. We used the patients seen by my colleagues as controls, and we looked at data from before my use of the lifestyle card. There were many problems with doing this. Obesity had not been as well recorded as a health issue in the electronic file at the beginning of the time period as it was at the end. The data were not as "clean" as we had thought. For example, weight was sometimes recorded in pounds

and ounces, sometimes in kilograms. Height was sometimes recorded in inches, sometimes in centimetres. We had far fewer eligible participants than we would have had if we had planned a research project from the start. There were also some confounding variables: my hand-outs were borrowed by at least one of my colleagues, and smoking cessation advice was given to patients—there is evidence that people initially gain weight when they quit smoking.

The analysis took a long time even before we decided to extend the duration of the observational window. The final analysis was also slow. The published paper has merit, despite not showing the results I hoped it would show, because it demonstrates that work in general practice can be studied rigorously.¹ Research of this nature encourages primary care providers and their patients to strive for treatment success but at the same time encourages physicians to look at their data dispassionately.

Advantages

There were considerable advantages to our practice being involved with CPCSSN and to agreeing to have our data examined objectively. We were able to correct errors in our files. It prompted us to collect more data. It reminded us about the challenges in research, to ask the right questions, and not to make the project too large and all-encompassing. We will be much better equipped to do more research as a result of the improvements. There is huge value to be mined from real-life medical practice compared with much of the more staged research that is performed in academic centres. With the team from CPCSSN performing the analysis and doing the write-up, it did not take a lot of my time. Would I do it again? Yes!

Dr Irving is a retired family physician in Pincher Creek, Alta.

Competing interests

None declared

Reference

- Garies S, Irving A, Williamson T, Drummond N. Using EMR data to evaluate a physician-developed lifestyle plan for obese patients in primary care. *Can Fam Physician* 2015;61:e225-31. Available from: www.cfp.ca/content/61/5/e225.full.pdf+html. Accessed 2015 Nov 17.

Sentinel Eye is coordinated by CPCSSN, in partnership with the CFPC, to highlight surveillance and research initiatives related to chronic illness prevalence and management in Canada. Please send questions or comments to Dr Richard Birtwhistle, Chair, CPCSSN, at richard.birtwhistle@dfm.queensu.ca.

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