The work and research of a single non-academic family physician

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This review of my own work over 30 years aims to help others decide whether they should and could pursue an interest in research in primary care. Lessons from failure are considered as well as how to be opportunistic in research. I suggest audit is a good place to start research as it requires several of the same disciplines. The difficult issue of working successfully with others is addressed along with a publication strategy. I illustrate some of the advantages and disadvantages of undertaking research from general practice. Finally, I discuss how personal research can lead to a higher degree.

Keywords. Research, audit, general/family practice, research methods, higher degrees.

Introduction

I am a British GP and have worked in urban practice in north-west England for 20 years, a service GP with only a temporary link to an academic department. Since studying biology at school I have been interested in the created world, which when pursued in an organized way is research.

General practice is an excellent place to carry out research, although there are several necessary lessons in order to be successful which I shall illustrate from my experience. My purpose is to help answer the questions, ‘Am I the sort of person who could carry out research?’ and ‘If I am, how might I best do this?’

As a student in 1975, I reviewed the results of an evaluation of biochemical screening in general practice. Since I did not then understand the basic disciplines of writing a scientific paper, the results from over 300 patients led nowhere. Seven years later, a review of the outcomes of pregnancy for 4000 women in the church hospital where I was working in Uganda similarly floundered, again because I lacked an experienced co-author and guide. These early attempts did not lead to publication and they made me realize the hard work that discoveries require, but I tasted the excitement of order appearing out of the chaos from masses of data.

I was obliged to do a small study while a GP registrar and I was provoked by an anonymous journal editorial which stated ‘it is accepted that patients visited at night seldom need subsequent follow-up’. This was not my experience so I reviewed a year’s night visits performed by the practice showing that many were seen in the next week. The few other studies of this narrow field were easily found and compared. I had stumbled across the need to find a sample that is neither too large nor too small which should also be easily accessible when records need revisiting. Publication in The Practitioner gave me the thrill of seeing my work in print and revealed how fortunate we are in having a large medical press where most good quality studies can reach publication.

My early years in general practice were too busy for research until in 1990 clinical audit was suddenly heavily resourced by the British government. I obtained an innovative 3-year, one-day-a-week Royal College of General Practitioners (RCGP) audit fellowship which gave me the protected time that is vital to make meaningful progress. Since then I have found further opportunities to run audit and quality projects, in all of which I have made sure there was time to compare, analyse and report the results. This time must be found and used for writing a paper.

Audit occupies the middle ground between daily practice and research. It is an attractive area for researchers, comparing the former with the latter. Ethical committees usually agree that it is not experimentation and therefore outside their remit. There were two crucial questions from those early years which I believe could be usefully considered by those attempting research.

(i) Do I have the drive to carry out a two-survey audit cycle? The second survey is commonly not completed, and if this cannot be achieved then neither will the harder discipline of research.

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So why research?

Life is short, the art long, the occasion fleeting, experience fallacious and judgement difficult.

Hippocrates

Higher education introduces us to the literature of our profession. To contribute ourselves to the literature is rewarding, even thrilling, but carries the considerable responsibility of having performed valid, reproducible work. Sometimes, the degree of thought required is almost painful, but it does refine our judgement and judgement remains one of the main reasons patients and others consult us.

Each week in general practice many interesting questions arise. I wanted to know how I compared to others in delivering local steroid injections. I gave patients a brief questionnaire and at the end of 8 years I had 435 replies collected. When a medical student was starting in general practice and it still remains a struggle. However, I had been given the chance to work with groups of motivated GPs, both locally and regionally, and they provided results from a wide variety of practices and large patient populations. Such results remain a valuable source of information about what can be achieved in normal practice rather than more heavily resourced experimental settings.

(ii) Do I have the determination that is required to see work published? In my experience, this will require at least as much time again as the project itself had taken.

It was 1994 before I had my second paper published in a peer-reviewed journal, but then in 1996 eleven were published. Our ignorance about audit at that time was great when audit-driven change was just starting in general practice and it still remains a struggle. However, I had been given the chance to work with groups of motivated GPs, both locally and regionally, and they provided results from a wide variety of practices and large patient populations. Such results remain a valuable source of information about what can be achieved in normal practice rather than more heavily resourced experimental settings.

papers of potential interest for sometime in advance. When I read journals I have a highlighter pen handy so that I do not lose useful information. My own collection of papers now includes far more ideas than I can follow-up, but serves me as a source of high quality background information. I have also collected ‘Instructions for Authors’ and samples of published papers from over 50 possibly relevant journals which have often suggested a place to send a paper.

My publication strategy was to start by checking that a journal published reports similar to mine. I usually aimed first at a journal of a quality a little higher than I expected to succeed with, moving downwards after rejection. The comments of reviewers are usually right, however upsetting they may initially be!

A provisional acceptance from the editor should be seized and the amendments made or discussed and then resubmitted as soon as possible. Slightly less than half our papers were rejected by the first journal but subsequently reached print. Rejection should mean some revision before sending it on to another journal, using the opportunity of reading it afresh to improve the paper. A rejected paper should not lie unattended for very long, otherwise all enthusiasm will die.

It is necessary to date all updated files and manuscripts since it is easy to confuse the 10–20 versions that will have typically evolved through the constant ‘repolishing’ process (this paper has had about 15 versions). Author and date (Harvard) references are best used until the final version has been completed since numbers alone quickly become utterly confusing. It is vital to be able to reference any statement made. After my first paper was published, a letter challenged a statement I could not reference. Several years later, and frustratingly much too late for a reply, by chance I rediscovered the evidence I needed.

Barriers to be overcome

In general practice, the daily pressure of demands from patients makes research work at the surgery
difficult and I found I had to be away to get research work done. It needs confidence to take time for research and writing and this can feel selfish when compared to consulting with patients, which in medicine is still often seen as the really hard work. The alternative can be to try to squeeze an unreasonable amount into each week. As a workaholic myself I have found keeping weekends clear of work enables me to return with a clear mind on Mondays.

General practice workload is characterized by its varied pace. Quieter times must be seen as opportunities to take projects forward—this paper was completed in the quieter month of August. Laptop computers have made work away from the practice much easier. Indeed, I relish train journeys for the amount I can get done and my writing has often been fitted in and around journeys. I find it difficult to concentrate on academic writing for more than a few hours at a time and learning my own most effective places and patterns of work have helped my productivity enormously.

Over time, I learnt to discern the few people who would also contribute to analysing and writing up results. Authorship requires good will without naivety since others will be attracted by the chance to co-author a paper but then cannot or will not contribute to the hard, often frustrating work it entails. I would now agree a publication strategy at the start of a project.

Higher up the mountain
Chris Boardman, Olympic cycling gold medallist in 1992, said: ‘All cyclists want to win the Tour de France, the winner needs to win the Race’. The degree of drive required to publish is also considerable and our motives are often deep. For myself these included being stung into needing to prove my academic credentials at doctorate level.

After 10 years of exploring audit and research, the distant goal of writing a MD thesis gradually came closer. The little-publicized National Health Service sabbatical scheme allowed me to work at the National Primary Care Research and Development Centre at Manchester University. There I encountered much more focussed research discipline. I took the recommendation of my advisor and used a strategy of building the thesis from individual, separately published, projects. This had the merit of keeping me focussed on discrete pieces of work and gave me publications which would have remained even if my thesis had been ultimately unsuccessful (over 80% of the thesis was also published as individual papers).

The journey to the thesis seemed unending. The deadline from original notification in 1996 was met in 2002 with 90 minutes to spare! Along the way, I had several points when I felt at a standstill through discouragements from rejected papers or general lack of progress. I found the maxim of the former Royal Marine, Pete Goss, quoted as he sailed to rescue a fellow yachtsman, very helpful: ‘be professional at all times; never give up; make intelligent use of everything at your disposal’.

An illustration of the third point was the offer of a colleague and friend to critique this paper. His comments gave me much greater clarity of thought and structure and the stimulus to return to the drafts when I was bored and ready to quit. There have been many occasions when I have wanted to give up on projects but by having several in hand at any time there was usually something I could feel motivated about, sometimes just the sheer relief of finally sending a paper to a journal. In preparing this reflection I have, as usual, carried the drafts around with me, often to be worked on in short intervals between meetings.

Conclusion
My involvement in RCGP schemes for assessing GPs and their practices introduced me to more inspiring colleagues, people whose example remains when the projects and papers fade. It also gave me new areas for publication since the assessment schemes I was supporting gave me useful data for potential publication, which in turn enhanced the schemes themselves, to mutual benefit.

Over 30 years, this journey of discovery has benefited me greatly, and I hope many more people will embark upon it too. My papers have not radically changed medicine, which much more often proceeds by incremental steps rather than major discoveries. The ideas I could pursue far exceed those I have the time to follow. Above all, it has helped me think more clearly, best expressed in the words of fellow-Christian TS Eliot

And the end of all our exploring
Will be to arrive where we started
And know the place for the first time

TS Eliot Four Quartets

Summary points
(i) Care has to be taken to specify the conditions of the project, such as start date and duration, otherwise comparisons are very difficult.
(ii) Ask whether you have the drive to carry out a two-survey audit cycle? The second survey is commonly not completed, and if this cannot be achieved then neither will the harder discipline of published research.
(iii) Include sufficient writing up time when planning projects.
(iv) Piloting recording forms is essential as there are always ambiguities in their first draft.
(v) Seize quieter times to drive projects forward.
(vi) A rejected paper should not lie unattended for very long otherwise it will rot.
(vii) Publication strategy starts by checking that a journal published reports similar to yours.
(viii) Try and recruit an experienced co-author for early projects.
(ix) Some initial failures are inevitable.
(x) Work with collaborators who produce results rather than those who promise much and deliver little. This needs some ruthlessness.

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Declaration

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